**As filed with the Securities and Exchange Commission on January 31, 2014**

**Registration No. _____**

**UNITED STATES**
**SECURITIES AND EXCHANGE COMMISSION**
**Washington, D.C. 20549**

**FORM S-1**

**REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933**

**ACTINIUM PHARMACEUTICALS, INC.**
(Exact name of registrant as specified in its charter)

| **Delaware** | **2834** | **88-0378336** |
|---|---|---|
| (State or other jurisdiction of incorporation or organization) | (Primary Standard Industrial Classification Code Number) | (I.R.S. Employer Identification Number) |

**501 Fifth Avenue, 3rd Floor**
**New York, NY 10017**
**(646) 459-4201**
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

**Action Stock Transfer Corporation**
**2469 E. Fort Union Blvd., Suite 214**
**Salt Lake City, UT 84121**
**(801) 274-1088**
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

**Thomas Slusarczyk, Esq.**
**Hiscock & Barclay LLP**
**One Park Place**
**300 South State Street**
**Syracuse, New York 13202**
**Tel No.: (315) 235-2299**
**Fax No.: (315) 624-7359**

**Approximate date of commencement of proposed sale to the public:** As soon as practicable after this Registration Statement becomes effective.

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

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

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b2 of the Exchange Act.

| | | | |
|---|---|---|---|
| Large accelerated filer | ☐ | Accelerated filer | ☐ |
| Non-accelerated filer | ☐ | Smaller reporting company | ☒ |

(Do not check if a smaller reporting company)

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**CALCULATION OF REGISTRATION FEE**

| Title of Each Class Of Securities to be Registered | Amount to be Registered (1) | Proposed Maximum Offering Price per share (2) | Proposed Maximum Aggregate Offering Price | Amount of Registration Fee |
|---|---|---|---|---|
| Common stock, $0.001 par value per share | 1,106,120 | $ 5.45(2) | $ 6,028,354 | $ 776.45 |
| Common stock, $0.001 par value per share, issuable upon exercise of the common stock warrants | 276,529 | $ 5.45(2) | $ 1,507,083 | $ 194.11 |
| **Total** | 1,382,649 | | | $ 970.56 |

(1) This registration statement includes an indeterminate number of additional shares of common stock issuable for no additional consideration pursuant to any stock dividend, stock split, recapitalization or other similar transaction effected without the receipt of consideration, which results in an increase in the number of outstanding shares of our common stock. In the event of a stock split, stock dividend or similar transaction involving our common stock, in order to prevent dilution, the number of shares registered shall be automatically increased to cover the additional shares in accordance with Rule 416(a) under the Securities Act of 1933, as amended.

(2) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(c) under the Securities Act of 1933, as amended, using the average of the high and low prices as reported on the OTC Bulletin Board on January 24, 2014 which was $5.45 per share.

**The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the registration statement shall become effective on such date as the commission, acting pursuant to said Section 8(a), may determine.**

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

**PRELIMINARY PROSPECTUS SUBJECT TO COMPLETION DATED January 31, 2014**

**1,382,649 Shares of Common Stock**

**ACTINIUM PHARMACEUTICALS, INC.**

This prospectus covers the sale by the selling stockholders of up to (i) 1,106,120 shares of common stock, par value $0.001 per share, held by the selling stockholders, and (ii) 276,529 shares of our common stock issuable upon exercise of common stock warrants held by the selling stockholders named in this prospectus at an exercise price of $9.00 per share. The shares being sold by the selling stockholders were issued to them in private placement transactions which were exempt from the registration and prospectus delivery requirements of the Securities Act of 1933, as amended (the "Securities Act"). Our common stock and warrants are more fully described in "Description of Securities."

We also have a resale registration statement that was declared effective by the Securities and Exchange Commission on November 8, 2013. The November 2013 prospectus covers the sale by the selling stockholders of up to (i) 16,162,319 shares of common stock, par value $0.001 per share, held by the selling stockholders, (ii) 1,559,438 shares of our common stock issuable upon exercise of Series B warrants held by the selling stockholders at an exercise price of $2.48 per share, (iii) 2,673,652 shares of our common stock issuable upon exercise of the 2011 stock offering warrants held by the selling stockholders at an exercise price of $0.78 per share, (iv) 3,755,562 shares of our common stock issuable upon exercise of consulting firm warrants held by the selling stockholders at an exercise price of $0.01 per share, (v) 1,120,499 shares of our common stock issuable upon exercise of placement agent warrants held by the selling stockholders at an exercise price of $0.78 per share, (vi) 464,027 shares of our common stock issuable upon exercise of placement agent warrants held by the selling stockholders at an exercise price of $2.48 per share.

We are not selling any common stock under this prospectus and will not receive any of the proceeds from the sale of shares by the selling stockholders. These shares will be offered for sale by the selling shareholders in accordance with the "Plan of Distribution." We will not receive any proceeds from sales of shares of our common stock or warrants by the selling stockholders. However, to the extent the warrants are exercised for cash, if at all, we will receive the exercise price of the warrants. We will pay the expenses incurred in connection with the offering described in this prospectus, with the exception of brokerage expenses, fees, discounts and commissions, which will be paid by selling stockholders.

Our common stock is presently traded on the OTCQB under the symbol ATNM. On January 30, 2014, the last sale price of our shares as reported by the OTCQB was $5.70 per share. The prices at which the selling stockholders may sell the shares of common stock that are part of this offering may be market prices prevailing at the time of sale, at negotiated prices, at fixed prices, or at varying prices determined at the time of sale. See "Plan of Distribution."

**An investment in our common stock may be considered speculative and involves a high degree of risk, including the risk of a substantial loss of your investment. See "Risk Factors" beginning on page 6 to read about the risks you should consider before buying shares of our common stock.**

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

The date of this prospectus is _____, 2014

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Please read this prospectus carefully. It describes our business, our financial condition and results of operations. We have prepared this prospectus so that you will have the information necessary to make an informed investment decision.

You should rely only on information contained in this prospectus. We have not authorized any other person to provide you with different information. This prospectus is not an offer to sell, nor is it seeking an offer to buy, these securities in any state where the offer or sale is not permitted. The information in this prospectus is complete and accurate as of the date on the front cover, but the information may have changed since that date.

## PROSPECTUS SUMMARY

*This summary highlights selected information contained elsewhere in this prospectus. This summary does not contain all the information that you should consider before investing in the common stock. You should carefully read the entire prospectus, including "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements, before making an investment decision. Our actual results may differ significantly from the results discussed in these forward-looking statements as a result of certain factors, including those described in "Risk Factors" and "Cautionary Note Regarding Forward-Looking Statements." All references to "we," "us," "our," and the "Company" mean Actinium Pharmaceuticals, Inc. and its subsidiary Actinium Corporation.*

### 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. Based on the successful Iomab-B End of Phase 2 (EOP-2) meeting and subsequent discussions with the U. S. Food and Drug Administration (FDA), the Company established an agreement on the path to a Biologics License Applications (BLA) submission which included a single pivotal Phase 3 clinical study design. The key clinical study design primary and secondary endpoints and study size were confirmed. Iomab-B is to be used in preparing patients for HSCT. The trial population in this two arm randomized controlled multicenter trial will be refractory AML patients over the age of 55. The trial size was set at 150 patients (75 patients per arm). The Company is developing its cancer drugs using its expertise in radioimmunotherapy. In addition, the Ac-225 based drugs 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 the Company. 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. The Company intends 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.

Since our inception on June 13, 2000, we have not generated any revenues, and as of September 30, 2013, we have incurred net losses of $60.6 million. As of December 31, 2012 and September 30, 2013 our cash balance was $5.7 million, and $4.0 million, respectively, and we need up to $25 million in cash to finance research and development and to cover our ongoing working capital needs through the first quarter of 2016. In December 2013 and January 2014, the Company closed on total gross proceeds of approximately $6.6 million from the private placement of common stock and warrants to new and existing accredited investors. If we do not raise any additional funding, we will be able to continue our operations through 2014 and into the first quarter of 2015**.** As we have raised 25% of the needed funds, we will be able to conduct our planned operations through 2014 and into the first quarter of 2015. If we raise 50% of the needed funds, we will be able to conduct our planned development programs through the second half of 2015. If we raise 75% or more of the needed funds, we will be able to accelerate our planned development programs through 2015 and into the second quarter of 2016. Our first product is not expected to be commercialized until at least 2017. In the second quarter of 2013 we issued shares of common stock pursuant to the exercise of A-Warrants originally issued in connection with a private placement that closed in January 2013. The warrants were exercised at $1.65 per share, resulting in gross proceeds of approximately $3.5 million for the Company. As the remainder of the outstanding warrants are exercisable on a cashless basis there can be no assurance that we will be able to realize any proceeds from their exercise.

### Corporate Information

Our principal executive offices are located at 501 Fifth Avenue, 3 rd Floor, New York, NY 10017 and our telephone number is (646) 459-4201. Our website address is *www.actiniumpharmaceuticals.com*. The information contained therein or connected thereto shall not be deemed to be incorporated into this prospectus or the registration statement of which it forms a part. The information on our website is not part of this prospectus.

## THE OFFERING

| | |
|---|---|
| **Common stock offered by selling stockholders** | 1,382,649 shares of our common stock including: up to (i) 1,106,120 shares of common stock, par value $0.001 per share, held by the selling stockholders, and (ii) 276,529 shares of our common stock issuable upon exercise of common stock warrants held by the selling stockholders at an exercise price of $9.00 per share. |
| **Common stock outstanding before the offering** | 24,903,150 shares of common stock (1) |
| **Common stock outstanding after the offering** | 25,179,682 shares of common stock (2) |
| **Use of proceeds** | We will not receive any proceeds from the sale of the common stock by the selling stockholders. However, we may receive up to approximately $2.5 million in the aggregate upon the exercise of the common stock warrants if the holders exercise them for cash. The registration of common stock pursuant to this prospectus does not necessarily mean that any of those shares will ultimately be offered or sold by the selling stockholders. We intend to use the proceeds, if any, received from any cash exercise of the warrants 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. See “Risk Factors”. |

(1) Based upon the total number of issued and outstanding shares as of January 22, 2014

(2) Based upon the total number of issued and outstanding shares as of January 22, 2014, and including 276,529 shares of our common stock issuable upon exercise of common stock warrants held by the selling stockholders at an exercise price of $9.00 per share.

## 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 Registration Statement, 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. See "Cautionary Note Regarding Forward Looking Statements" above for a discussion of forward-looking statements and the significance of such statements in the context of this Registration Statement.*

### 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 December 31, 2012 and September 30, 2013, we had a deficit accumulated during development stage of approximately $55.7 million and $60.6 million, respectively. 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 September 30, 2013 was $4.0 million. In December 2013 and January 2014, the Company closed on total gross proceeds of approximately $6.6 million from the private placement of common stock and warrants to new and existing accredited investors. We expect that we will need approximately $7 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 U.S. Food and Drug Administration (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 API 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 ("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 the Company 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.***

Only two product candidates of the Company are currently in clinical development. There is an ongoing physician sponsored Phase 1 AML trial at MSKCC with a single dose of Actimab™-A. The Company has 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. Neither the Company 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 New Drug Application (NDA) approvals.***

The NDA 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 Company 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 NDA 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 an 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 in New York City. 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, the Company 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 the Company 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. After these patents expire, others may be eventually able to use an antibody with the same sequence in alpha particle drug products based on alpha particle emitters other than actinium 225 and bismuth 213. Any process that would enable such a competition as described above 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, the Company expects that in order to attract a commercialization partner for that product candidate, it will 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 the Company's ability to find a commercialization partner for Actimab™-A which may materially harm our business.

***The BC8 antibody utilized in Iomab™-B is not patent protected.***

The antibody we use in the conjugated Iomab™ product candidate is not covered by the claims of any issued or pending patents. Accordingly, others may be eventually able to use an antibody with the same sequence in alpha particle drug products based on alpha particle emitters. Any process that would enable such a competition as described above 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 the Company is Oak Ridge National Laboratory (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, the Company has developed what it believes 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. The Company is 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, the Company does 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. The Company's contract for supply of this isotope from ORNL extends through the end of 2014, is renewable for future years. However, there can be no assurance that ORNL will decide to renew the contract or that the U.S. 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. The Company's 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.

***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 NDA for that product and may not be granted until many months after NDA 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.

***Our Business as a "Going Concern"***

In expressing an opinion on our 2012 financial statements, our auditor has expressed its opinion as to our business being a "going concern". Such an opinion indicates that the business lacks sufficient liquidity to remain operating as a business entity for the next 12 months. Our ability to continue operations is dependent on the successful execution of our plans, which include the expectation of raising debt or equity based capital, with some additional funding from other traditional financing sources, including term notes, until such time that funds provided by operations are sufficient to fund working capital requirements. We may need to issue additional equity and incur additional liabilities with related parties to sustain our existence although no commitments for funding have been made and no assurance can be made that such commitments will be available.

***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 II 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.

***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 guaranty 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.

***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.

***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, in particular, Dr. Dragan Cicic, our Chief Operating Officer and Chief Medical Officer. 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 may be on our business of the Patient Protection and Affordable Care Act.***

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.

***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.

***Because we were formerly an SEC-reporting shell company, we are subject to SEC rules on seasoning requirements.***

The Company, since it was formerly an SEC-reporting shell company, is also subject to SEC rules which require such companies to trade in the over-the-counter markets (or some other national exchanges) for one full fiscal year and to file all periodic reports with the SEC before seeking to "uplist" to a national securities exchange like NASDAQ or NYSE MKT. The Company can only bypass the one year over-the-counter trading requirement if it can complete a firm commitment underwritten public offering with gross proceeds of at least $40 million. As a result, our stockholders may find it more difficult to dispose of shares or obtain accurate quotations as to the market value of our common stock.

***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.

***The filing of our Registration Statement on Form S-1 on March 15, 2013 could have potentially affected our exemption from registration with the SEC for the share exchange that commenced on December 28, 2012, in connection with our exchange of common stock with the shareholders of Actinium Corporation (fka, Actinium Pharmaceuticals, Inc.).***

On December 28, 2012, we completed a share exchange, that was approved by 78% of our shareholders (100% of those voting approved the share exchange), with Cactus Ventures, Inc. ("Cactus"), whereby Cactus acquired 21% of the issued and outstanding capital stock of Actinium Corporation from the shareholders of Actinium Corporation (the "Actinium Shareholders") in exchange for the issuance of 4,309,015 shares of Common Stock of the Company to the Actinium Shareholders (the "Share Exchange"). We continued the physical process of exchanging shares with the Actinium Shareholders with closings on March 11, 2013 (with a total of 55.5% shares of Actinium Corporation exchanged) and August 22, 2013 (with a total of 93.7% shares of Actinium Corporation exchanged). On September 25, 2013 all of the remaining Actinium Shareholders shares were exchanged for our common stock pursuant to a merger under Delaware law whereby we merged into our self Actinium Corporation (our subsidiary that was 93.7% owned by us). Under Section 5 of the Securities Act of 1933, unless there is a valid exemption from registration of the securities sold in an offering. All issuers must register non-exempt securities with the SEC. The securities in the Share Exchange were offered and sold in reliance upon exemptions from registration pursuant to Section 4(2) of the Securities Act and Rule 506 of Regulation D ("Regulation D") promulgated under the Securities Act. On March 15, 2013, we filed a Registration Statement on Form S-1 (the "Registration Statement") with SEC to register shares of certain selling shareholders who had purchased shares of the Company in various private placements (the "2013 offering"). If the 2013 Offering were deemed integrated with the Share Exchange we may not be able to rely upon the exemptions from registration pursuant to Section 4(2) of the Securities Act and/or Regulation D, since the filing of the Registration Statement may be deemed general solicitation, which is prohibited for reliance on an exemption from registration under Regulation D. As a result, investors in the Share Exchange may potentially be entitled to bring suit against the Company for offering a non-exempt security without registering it, and such investor may be able to obtain rescission with interest, or damages if the investor sold the securities for less that he or she purchased them.

***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 quoted on the OTCQB which may have an unfavorable impact on our stock price and liquidity.***

Our common stock is quoted on the OTCQB, which is a significantly more limited trading market than the New York Stock Exchange or The NASDAQ Stock Market. The quotation of the Company's shares on the OTCQB may result in a less liquid market available for existing and potential stockholders to trade shares of our common stock, could depress the trading price of our common stock and could have a long-term adverse impact on our ability to raise capital in the future.

***There is limited liquidity on the OTCQB which may result in stock price volatility and inaccurate quote information.***

When fewer shares of a security are being traded on the OTCQB, volatility of prices may increase and price movement may outpace the ability to deliver accurate quote information. Due to lower trading volumes in shares of our common stock, there may be a lower likelihood of one's orders for shares of our common stock being executed, and current prices may differ significantly from the price one was quoted at the time of one's order entry.

***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.***

Currently, the Company's common stock is quoted in the OTCQB and future trading volume may be limited by the fact that many major institutional investment funds, including mutual funds, as well as individual investors follow a policy of not investing in OTCQB stocks and certain major brokerage firms restrict their brokers from recommending OTCQB stocks because they are considered speculative, volatile and thinly traded. The OTCQB market is an inter-dealer market much less regulated than the major exchanges and our common stock is subject to

abuses, volatility and shorting. Thus, there is currently no broadly followed and established trading market for the Company's common stock. An established 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 the Company's common stock on the OTCQB may not necessarily be a reliable indicator of its fair market value. Further, if we cease to be quoted, holders would find it more difficult to dispose of our common stock or to obtain accurate quotations as to the market value of the Company's common stock and as a result, the market value of our common stock likely would decline.

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. In addition, the OTCQB is subject to extreme price and volume fluctuations in general. 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.

***We are subject to penny stock regulations and restrictions and you may have difficulty selling shares of our common stock.***

We are subject to the provisions of Section 15(g) and Rule 15g-9 of the Exchange Act, commonly referred to as the "penny stock rule." Section 15(g) sets forth certain requirements for transactions in penny stock, and Rule 15g-9(d) incorporates the definition of "penny stock" that is found in Rule 3a51-1 of the Exchange Act. The SEC generally defines a penny stock to be any equity security that has a market price less than $5.00 per share, subject to certain exceptions. We will be subject to the SEC's penny stock rules.

Since our Common Stock is deemed to be penny stock, trading in the shares of our common stock is subject to additional sales practice requirements on broker-dealers who sell penny stock to persons other than established customers and accredited investors. "Accredited investors" are persons with assets in excess of $1,000,000 (excluding the value of such person's primary residence) or annual income exceeding $200,000 or $300,000 together with their spouse. For transactions covered by these rules, broker-dealers must make a special suitability determination for the purchase of such security and must have the purchaser's written consent to the transaction prior to the purchase. Additionally, for any transaction involving a penny stock, unless exempt the rules require the delivery, prior to the first transaction of a risk disclosure document, prepared by the SEC, relating to the penny stock market. A broker-dealer also must disclose the commissions payable to both the broker-dealer and the registered representative and current quotations for the securities. Finally, monthly statements must be sent disclosing recent price information for the penny stocks held in an account and information to the limited market in penny stocks. Consequently, these rules may restrict the ability of broker-dealer to trade and/or maintain a market in our common stock and may affect the ability of the Company's stockholders to sell their shares of common stock.

There can be no assurance that our shares of common stock will qualify for exemption from the Penny Stock Rule. In any event, even if our common stock was exempt from the Penny Stock Rule, we would remain subject to Section 15(b)(6) of the Exchange Act, which gives the SEC the authority to restrict any person from participating in a distribution of penny stock if the SEC finds that such a restriction would be in the public interest.

***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 the Company's 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. We have been assessing our internal controls to identify areas that need improvement. 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.

At December 31, 2012, management concluded that our disclosure controls and procedures and our internal control over financial reporting were not effective due to several material weaknesses. In addition, at September 30, 2013, management concluded that our disclosure controls and procedures were not effective due to several material weaknesses. To address these weaknesses, management is seeking a full time Chief Financial Officer who is familiar with the public company reporting rules. The Company in December 2012 also established an Audit Committee to address these issues. In September 2013, we hired a VP of Finance who has served in a variety of core finance and business development functions over the span of 12 years at three NASDAQ listed biopharmaceutical companies who is being tasked with remediating such weaknesses. We expect to remediate such weaknesses by the end of the fiscal year 2013. In May 2013, we also engaged an outside third party financial reporting consulting firm to assist with our public company reporting requirements. In November 2013, Richard Steinhart joined the Company's Board of Directors and became the chairman of the Audit Committee. Mr. Steinhart is a CPA and was employed by MELA Sciences, Inc, as their Vice President, Finance and Chief Financial Officer, Treasurer and Secretary from April 2006 through December 30, 2013. We expect to incur costs of $0.2 million in connection with our remediation plan.

***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 NDA 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.

## CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward looking statements that involve risks and uncertainties, principally in the sections entitled "Description of Business," "Risk Factors," and "Management's Discussion and Analysis of Financial Condition and Results of Operations." All statements other than statements of historical fact contained in this prospectus, including statements regarding future events, our future financial performance, business strategy and plans and objectives of management for future operations, are forward-looking statements. We have attempted to identify forward-looking statements by terminology including "anticipates," "believes," "can," "continue," "could," "estimates," "expects," "intends," "may," "plans," "potential," "predicts," "should," or "will" or the negative of these terms or other comparable terminology. 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.

You should not place undue reliance on any forward-looking statement, each of which applies only as of the date of this prospectus. Before you invest in our securities, you should be aware that the occurrence of the events described in the section entitled "Risk Factors" and elsewhere in this prospectus could negatively affect our business, operating results, financial condition and stock price. Except as required by law, we undertake no obligation to update or revise publicly any of the forward-looking statements after the date of this prospectus to conform our statements to actual results or changed expectations.

## DIVIDEND POLICY

We plan to retain any earnings for the foreseeable future for our operations. We have never paid any dividends on our common stock and do not anticipate paying any cash dividends in the foreseeable future. Any future determination to pay cash dividends will be at the discretion of our Board of Directors and will depend on our financial condition, operating results, capital requirements and such other factors as our Board of Directors deems relevant. In addition, our credit facility restricts our ability to pay dividends.

## USE OF PROCEEDS

We will not receive any proceeds from the sale of the common stock by the selling stockholders. However, we may receive up to approximately $14.8 million in the aggregate upon the exercise of the warrants if the holders exercise them for cash. However, as these warrants also include a cashless exercise feature there can be no assurance that we will receive any capital from the exercise of such warrants. The registration of common stock pursuant to this prospectus does not necessarily mean that any of those shares will ultimately be offered or sold by the selling stockholders. We intend to use the proceeds received from any cash exercise of the warrants for working capital and general corporate purposes.

## DILUTION

We are not selling any of the shares of our common stock in this offering. All of the shares sold in this offering will be held by the selling stockholders at the time of the sale, so that no dilution will result from the sale of the shares.

## PENNY STOCK CONSIDERATIONS

Our common stock will be a penny stock, therefore, trading in our securities is subject to penny stock considerations. Broker-dealer practices in connection with transactions in "penny stocks" are regulated by certain penny stock rules adopted by the SEC.

Penny stocks generally are equity securities with a price of less than $5.00 (other than securities registered on certain national securities exchanges or quoted on the NASDAQ system). Penny stock rules require a broker-dealer, prior to a transaction in a penny stock not otherwise exempt from the rules, to deliver a standardized risk disclosure document that provides information about penny stocks and the risks in the penny stock market. The broker-dealer also must provide the customer with current bid and offer quotations for the penny stock, the compensation of the broker-dealer and its salesperson in the transaction, and monthly account statements showing the market value of each penny stock held in the customer's account. The broker-dealer must also make a special written determination that the penny stock is a suitable investment for the purchaser and receive the purchaser's written agreement to the transaction. These requirements may have the effect of reducing the level of trading activity, if any, in the secondary market for a security that becomes subject to the penny stock rules. The additional burdens imposed upon broker-dealers by such requirements may discourage broker-dealers from effecting transactions in our securities, which could severely limit their market price and liquidity of our securities. These requirements may restrict the ability of broker-dealers to sell our common stock and may affect your ability to resell our common stock.

## SELLING STOCKHOLDERS

The common shares being offered for resale by the selling stockholders consist of 1,382,649 shares of our common stock that are issued and outstanding, including up to (i) 1105,120 shares of common stock, par value $0.001 per share, held by the selling stockholders, and (ii) 276,529 shares of our common stock issuable upon exercise of common stock warrants held by the selling stockholders at an exercise price of $9.00 per share. These holders include investors in private placement offerings of the Company that closed (A) on December 27, 2013 for the sale of units consisting of an aggregate of (i) 554,310 shares of common stock, and (ii) common stock warrants to purchase up to 138,577 shares of common stock, and (B) on January 10, 2014 for the sale of units consisting of an aggregate of (i) 551,810 shares of common stock, and (ii) common stock warrants to purchase up to 137,952 shares of common stock.

We also have a resale registration statement that was declared effective by the Securities and Exchange Commission on November 8, 2013. The November 2013 prospectus covers the sale by the selling stockholders of up to (i) 16,162,319 shares of common stock, par value $0.001 per share, held by the selling stockholders, (ii) 1,559,438 shares of our common stock issuable upon exercise of Series B warrants held by the selling stockholders at an exercise price of $2.48 per share, (iii) 2,673,652 shares of our common stock issuable upon exercise of the 2011 stock offering warrants held by the selling stockholders at an exercise price of $0.78 per share, (iv) 3,755,562 shares of our common stock issuable upon exercise of consulting firm warrants held by the selling stockholders at an exercise price of $0.01 per share, (v) 1,120,499 shares of our common stock issuable upon exercise of placement agent warrants held by the selling stockholders at an exercise price of $0.78 per share, (vi) 464,027 shares of our common stock issuable upon exercise of placement agent warrants held by the selling stockholders at an exercise price of $2.48 per share. The selling stockholders listed in the November 2013 prospectus are not included in this prospectus.

The following table sets forth certain information regarding the selling stockholders and the shares offered by them in this prospectus. Each selling stockholder's percentage of ownership is based upon 24,903,150 shares of common stock outstanding as of January 22, 2014 and all securities which the person has the right to acquire within 60 days through the exercise of any option or warrant or through the conversion of a convertible security.

| Name of Selling Stockholder | Shares Beneficially Owned prior to Offering | Percentage (%) Beneficially Owned prior to Offering | Shares to Offer (1) | | Shares Beneficially Owned after Offering | Percentage Beneficially Owned After Offering |
|---|---|---|---|---|---|---|
| Adam Biedrzycki | 31,250 | * | 31,250 | (1) | - | - |
| Alan Greenhalgh & Angela Greenhalgh (JTWROS) | 312,491 | * | 312,491 | (2) | | |
| Alberto Sadde & Leonella Olivieri de Sadde (JTWROS) | 5,209 | * | 5,209 | (3) | - | - |
| Andreas Wawrla | 636,053 | 2.55 | 416,659 | (4) | 219,394 | * |
| Andrew Bellamy | 88,743 | * | 33,334 | (5) | 55,409 | * |
| Andrew Ferrett | 5,209 | * | 5,209 | (6) | - | - |
| Andrew Kelly | 2,501 | * | 2,501 | (7) | - | - |
| Anthony Athanas, Jr. | 25,000 | * | 25,000 | (8) | - | - |
| Anthony D'Amato & Marianne D'Amato (JTWROS) | 11,250 | * | 11,250 | (9) | - | - |
| Benoit Dumont | 1,228 | * | 1,228 | (10) | - | - |
| Cesar Fernandez Cardenas | 6,875 | * | 6,875 | (11) | | |
| Charles Moore | 3,125 | * | 3,125 | (12) | - | - |
| Christopher Charles Hugh Phillips | 5,000 | * | 5,000 | (13) | - | - |
| Christopher G. Davison | 10,000 | * | 10,000 | (14) | - | - |
| Daniel Huber | 6,250 | * | 6,250 | (15) | - | - |
| Danny Sergeant | 4,166 | * | 4,166 | (16) | - | - |
| David Scott | 6,250 | * | 6,250 | (17) | - | - |
| Dean Beaver | 47,500 | * | 47,500 | (18) | - | - |
| Dr. Thomas J. Rutherford | 12,500 | * | 12,500 | (19) | - | - |
| Eamon Judge | 1,041 | * | 1,041 | (20) | - | - |
| Eduardo Guemez Sarre | 12,500 | * | 12,500 | (21) | - | - |
| Enguerrand de Ponteves | 41,766 | * | 17,603 | (22) | 24,163 | * |
| Fran Rooney | 31,250 | * | 31,250 | (23) | - | - |
| Frank R. Deis & Donna R. Deis (JTWROS) | 1,959 | * | 1,959 | (24) | - | - |

| | | | | | | |
|---|---|---|---|---|---|---|
| Garfield W. Hardeman TOD | 1,250 | * | 1,250 | (25) | - | - |
| Gary Mossman | 15,000 | * | 15,000 | (26) | | |
| Georges Zanellato | 12,500 | * | 12,500 | (27) | | |
| Gerhard Plaschka | 97,235 | * | 50,000 | (28) | 47,235 | * |
| Gregory Alexander | 9,166 | * | 19,166 | (29) | - | - |
| Graham M. Bones | 3,541 | * | 3,541 | (30) | - | - |
| Gurpreet Ahluwalia | 12,500 | * | 12,500 | (31) | - | - |
| Gustavo Almeida De Almedia | 1,041 | * | 1,041 | (32) | - | - |
| James N. White | 2,603 | * | 2,603 | (33) | - | - |
| James W. Anthony & Delisa Anthony (JTWROS) | 20,834 | * | 20,834 | (34) | - | - |
| Jared Sullivan & Shannan Sullivan (JTWROS) | 33,294 | * | 1,041 | (35) | 32,253 | * |
| Jan Backvall | 2,291 | * | 2,291 | (36) | - | - |
| Jeffrey C. Boggs | 7,709 | * | 7,709 | (37) | - | - |
| Jodi Bennett Cabler | 2,084 | * | 2,084 | (38) | - | - |
| Lawrence Solomon Revocable Living Trust, Lawrence Solomon Trustee | 6,250 | * | 6,250 | (39) | - | - |
| Luis Rafael Nunes | 9.062 | * | 9,062 | (40) | - | - |
| Malcolm C.S. Leslie & Hilary Jane Leslie (JTWROS) | 31,250 | * | 31,250 | (41) | - | - |
| Matura Family Trust UA 05-26-1998 | 46,799 | * | 8,959 | (42) | 37,840 | * |
| Michael C. Fox Revocable Trust DTD 05/05/05 | 20,834 | * | 20,834 | (43) | - | - |
| Michael J. Maher | 1,500 | * | 1,500 | (44) | - | - |
| Nicholas Osorio & Paulina Veytia (JTWROS) | 2,709 | * | 2,709 | (45) | - | - |
| P. Casey Fallon | 7,291 | * | 7,291 | (46) | - | - |
| Palisade Productions LLC | 6,250 | * | 6,250 | (47) | - | - |
| Paul Knowlson | 5,000 | * | 5,000 | (48) | - | - |
| Paul T. Fallon | 5,209 | * | 5,209 | (49) | - | - |
| Pedro B. Torres | 4,166 | * | 4,166 | (50) | - | - |
| Pieter M. Duplessis | 2,500 | * | 2,500 | (51) | - | - |
| Richard Burgess | 32,911 | * | 10,209 | (52) | 22,702 | * |
| Richard P. Maves | 7,791 | * | 7,791 | (53) | - | - |
| Simon C. Guscott | 61,769 | * | 10,416 | (54) | 51,353 | * |
| Solvay Bank as Custodian for Paul T, Fallon IRA | 12,500 | * | 12,500 | (55) | - | - |
| Sten Anders Fellman | 12,500 | * | 12,500 | (56) | - | - |
| Sterne Agee & Leach Inc. C/F Karen Hale SEP IRA | 4,250 | * | 4,250 | (57) | - | - |
| Sterne Agee & Leach Inc. C/F W. Garner McNett IRA | 12,500 | * | 12,500 | (58) | - | - |
| Sterne Agee & Leach Inc. C/F Ralph Wallis Kettell II SEP IRA | 6,250 | * | 6,250 | (59) | - | - |
| Steven W. Poe and Judith L. Poe (JTWROS) | 19,202 | * | 2,084 | (60) | 17,118 | * |
| Tim D. Lea | 12,500 | * | 12.500 | (61) | - | - |
| Tim Wells | 6,250 | * | 6,250 | (62) | - | - |
| Timothy Fallon | 5,209 | * | 5,209 | (63) | - | - |
| William Bellinger | 6,250 | * | 6,250 | (64) | - | - |
| TOTAL | | | 1,382,649 | | | |

* Indicated less than 1%.

1 Includes (i) 25,000 shares of common stock and (ii) 6,250 shares of common stock issuable upon the exercise of the common stock warrants (Adam Biedrzycki).
2 Includes (i) 249,993 shares of common stock and (ii) 62,498 shares of common stock issuable upon exercise of the common stock warrants. Alan Greenhalgh and Angela Greenhalgh may be deemed to be the beneficial owner of the shares of our common stock held by the Alan Greenhalgh & Angela Greenhalgh (JTWROS) (Alan Greenhalgh & Angela Greenhalgh (JTWROS).
3 Includes (i) 4,167 shares of common stock and (ii) 1,042 shares of common stock issuable upon the exercise of the common stock warrants. Alberto Sadde and Leonella Olivieri de Sadde may be deemed to be the beneficial owner of the shares of our common stock held by the Alberto Sadde & Leonella Olivieri de Sadde (JTWROS). (Alberto Sadde & Leonella Olivieri de Sadde (JTWROS)).
4 Includes (i) 333,327 shares of common stock and (ii) 83,332 shares of common stock issuable upon exercise of the common stock warrants. (Andreas Wawrla).
5 Includes (i) 26,667 shares of common stock and (ii) 6,667 shares of common stock issuable upon exercise of the common stock warrants. (Andrew Bellamy).
6 Includes (i) 4,167 shares of common stock and (ii) 1,042 shares of common stock issuable upon exercise of the common stock warrants (Andrew Ferrett).
7 Includes (i) 2,000 shares of common stock and (ii) 501 shares of common stock issuable upon the exercise of the common stock warrants (Andrew Kelly).
8 Includes (i) 20,000 shares of common stock and (ii) 5,000 shares of common stock issuable upon exercise of the common stock warrants. (Anthony Athanas, Jr.).
9 Includes (i) 9,000 shares of common stock, (and ii) 2,250 shares of common stock issuable upon exercise of the common stock warrants. Anthony D'Amato and Marianne D'Amato may be deemed to be the beneficial owner of the shares of our common stock held by the Anthony D'Amato & Marianne D'Amato (JTWROS). (Anthony D'Amato & Marianne D'Amato (JTWROS).
10 Includes (i) 983 shares of common stock and (ii) 245 shares of common stock issuable upon exercise of the common stock warrants. (Benoit Dumont).
11 Includes (i) 5,500 shares of common stock and (ii) 1,375 shares of common stock issuable upon the exercise of the common stock warrants. (Cesar Fernandez Cardenas).
12 Includes (i) 2,500 shares of common stock and (ii) 625 shares of common stock issuable upon exercise of the common stock warrants. (Charles Moore).
13 Includes (i) 4,000 shares of common stock and (ii) 1,000 shares of common stock issuable upon exercise of the common stock warrants (Christopher Charles Hugh Phillips).
14 Includes (i) 8,000 shares of common stock and (ii) 2,000 shares of common stock issuable upon the exercise of the common stock warrants (Christopher G. Davison).
15 Includes (i) 5,000 shares of common stock and (ii) 1,000 shares of common stock issuable upon exercise of the common stock warrants (Daniel Huber).
16 Includes (i) 3,333 shares of common stock and (ii) 833 shares of common stock issuable upon the exercise of the common stock warrants. (Danny Sergeant).
17 Includes (i) 5,000 shares of common stock and (ii) 1,250 shares of common stock issuable upon exercise of the common stock warrants. (David Scott).
18 Includes (i) 38,000 shares of common stock and (ii) 9,500 shares of common stock issuable upon exercise of the common stock warrants. (Dean Beaver).
19 Includes (i) 10,000 shares of common stock and (ii) 2,500 shares of common stock issuable upon exercise of the common stock warrants (Dr. Thomas J. Rutherford).
20 Includes (i) 833 shares of common stock and (ii) 208 shares of common stock issuable upon exercise of the common stock warrants. (Eamon Judge).
21 Includes (i) 10,000 shares of common stock and (ii) 2,500 shares of common stock issuable upon exercise of the common stock warrants (Eduardo Guemez Sarre).
22 Includes (i) 14,083 shares of common stock, and (ii) 3,520 shares of common stock issuable upon exercise of the common stock warrants. (Enguerrand de Ponteves).
23 Includes (i) 25,000 shares of common stock and (ii) 6,250 shares of common stock issuable upon exercise of the common stock warrants. (Fran Rooney).
24 Includes (i) 1,567 shares of common stock and (ii) 392 shares of common stock issuable upon exercise of common stock warrants. Frank R. Deis and Donna R. Deis may be deemed to be the beneficial owner of the shares of our common stock held by the Frank R. Deis & Donna R. Deis (JTWROS). (Frank R. Deis & Donna R. Deis (JTWROS)).
25 Includes (i) 10,000 shares of common stock and (ii) 2,500 shares of common stock issuable upon exercise of the common stock warrants (Garfield W. Hardeman TOD).
26 Includes (i) 12,000 shares of common stock and (ii) 3,000 shares of common stock issuable upon exercise of the common stock warrants (Gary Mossman).
27 Includes (i) 10,000 shares of common stock and (ii) 2,500 shares of common stock issuable upon exercise of the common stock warrants. (Georges Zanellato).
28 Includes (i) 40,000 shares of common stock and (ii) 10,000 shares of common stock issuable upon exercise of the common stock warrants (Gerhard Plaschka).
29 Includes (i) 7,333 shares of common stock and (ii) 1,833 shares of common stock issuable upon exercise of the common stock warrants (Gregory Alexander).
30 Includes (i) 2,833 shares of common stock and (ii) 708 shares of common stock issuable upon exercise of the common stock warrants (Graham M. Bones).
31 Includes (i) 10,000 shares of common stock and (ii) 2,500 shares of common stock issuable upon the exercise of the common stock warrants (Gurpreet Ahluwalia).
32 Includes (i) 833 shares of common stock and (ii) 208 shares of common stock issuable upon exercise of the common stock warrants (Gustavo Almeida De Almedia).
33 Includes (i) 2,083 shares of common stock and (ii) 520 shares of common stock issuable upon exercise of the common stock warrants (James N. White).

34 Includes (i) 16,667 shares of common stock and (ii) 4,167 shares of common stock issuable upon the exercise of the common stock warrants. James W. Anthony and Delisa Anthony may be deemed to be the beneficial owner of the shares of our common stock held by the James W. Anthony & Delisa Anthony (JTWROS). (James W. Anthony & Delisa Anthony (JTWROS)).

35 Includes (i) 833 shares of common stock and (ii) 208 shares of common stock issuable upon exercise of the common stock warrants. Jared Sullivan & Shannan Sullivan may be deemed to be the beneficial owner of the shares of our common stock held by the Jared Sullivan & Shannan Sullivan (JTWROS). (Jared Sullivan & Shannan Sullivan (JTWROS)).

36 Includes (i) 1,833 shares of common stock and (ii) 458 shares of common stock issuable upon exercise of the common stock warrants. (Jan Backvall).

37 Includes (i) 6,167 shares of common stock and (ii) 1,542 shares of common stock issuable upon the exercise of the common stock warrants (Jeffrey C. Boggs).

38 Includes (i) 1,667 shares of common stock and (ii) 417 shares of common stock issuable upon the exercise of the common stock warrants. (Jodi Bennett Cabler).

39 Includes (i) 5,000 shares of common stock and (ii) 1,250 shares of common stock issuable upon exercise of the common stock warrants. Lawrence Solomon may be deemed to be the beneficial owner of the shares of the common stock held by the Lawrence Solomon Revocable Living Trust, Lawrence Solomon Trustee. (Lawrence Solomon Revocable Living Trust, Lawrence Solomon Trustee).

40 Includes (i) 7,250 shares of common stock and (ii) 1,812 shares of common stock issuable upon the exercise of the common stock warrants (Luis Rafael Nunes).

41 Includes (i) 25,000 shares of common stock and (ii) 6,250 shares of common stock issuable upon exercise of the common stock warrants. Malcolm C.S. Leslie and Hilary Jane Leslie may be deemed to be the beneficial owner of the shares of the common stock held by the Malcolm C.S. Leslie & Hilary Jane Leslie (JTWROS). (Malcolm C.S. Leslie & Hilary Jane Leslie (JTWROS)).

42 Includes (i) 7,167 shares of common stock and (ii) 1,792 shares of common stock issuable upon exercise of the common stock warrants. Margaret I. Matura and Gary D. Matura may be deemed to be the beneficial owner of the shares of the common stock held by the Matura Family Trust UA 05-26-1998. (Matura Family Trust UA 05-26-1998).

43 Includes (i) 16,667 shares of common stock and (ii) 4,167 shares of common stock issuable upon exercise of the common stock warrants. (Michael C. Fox Revocable Trust DTD 05/05/05).

44 Includes (i) 1,200 shares of common stock and (ii) 300 shares of common stock issuable upon exercise of the common stock warrants (Michael J. Maher).

45 Includes (i) 2,167 shares of common stock and (ii) 542 shares of common stock issuable upon exercise of the common stock warrants. Nicholas Osorio & Paulina Veytia may be deemed to be the beneficial owner of the shares of the common stock held by the Nicholas Osorio & Paulina Veytia (JTWROS). (Nicholas Osorio & Paulina Veytia (JTWROS)).

46 Includes (i) 5,833 shares of common stock and (ii) 1,458 shares of common stock issuable upon exercise of the common stock warrants (P. Casey Fallon).

47 Includes (i) 5,000 shares of common stock and (ii) 1,250 shares of common stock issuable upon the exercise of the common stock warrants. Ralph Kettell may be deemed to be the beneficial owner of the shares of the common stock held by Palisade Productions LLC. (Palisade Productions LLC).

48 Includes (i) 4,000 shares of common stock and (ii) 1,000 shares of common stock issuable upon the exercise of the common stock warrants (Paul Knowlson).

49 Includes (i) 4,167 shares of common stock and (ii) 1.042 shares of common stock issuable upon exercise of the common stock warrants. (Paul T. Fallon).

50 Includes (i) 3,333 shares of common stock and (ii) 833 shares of common stock issuable upon exercise of the common stock warrants. (Pedro B. Torres).

51 Includes (i) 2,000 shares of common stock and (ii) 500 shares of common stock issuable upon exercise of the common stock warrants. (Pieter M. Duplessis).

52 Includes (i) 8,167 shares of common stock and (ii) 2,042 shares of common stock issuable upon the exercise of the common stock warrants (Richard Burgess).

53 Includes (i) 6,233 shares of common stock and (ii) 1,558 shares of common stock issuable upon the exercise of the common stock warrants (Richard P. Maves).

54 Includes (i) 8,333 shares of common stock and (ii) 2,083 shares of common stock issuable upon the exercise of the common stock warrants (Simon C. Guscott).

55 Includes (i) 10,000 shares of common stock and (ii) 2,500 shares of common stock issuable upon exercise of the common stock warrants. Paul T. Pallon may be deemed to be the beneficial owner of the shares of the common stock held by Solvay Bank as Custodian for Paul T, Fallon IRA. (Solvay Bank as Custodian for Paul T, Fallon IRA).

56 Includes (i) 10,000 shares of common stock and (ii) 2,500 shares of common stock issuable upon exercise of the common stock (Sten Anders Fellman).

57 Includes (i) 3,400 shares of common stock and (ii) 850 shares of common stock issuable upon exercise of the common stock warrants. Karen Hale may be deemed to be the beneficial owner of the shares of the common stock held by Sterne Agee & Leach Inc. C/F Karen Hale SEP IRA. (Sterne Agee & Leach Inc. C/F Karen Hale SEP IRA).

58 Includes (i) 10,000 shares of common stock and (ii) 2,500 shares of common stock issuable upon the exercise of the common stock warrants. Garner McNett may be deemed to be the beneficial owner of the shares of the common stock held by Sterne Agee & Leach Inc. C/F W. Garner McNett IRA. (Sterne Agee & Leach Inc. C/F W. Garner McNett IRA).

59 Includes (i) 5,000 shares of common stock and (ii) 1,250 shares of common stock issuable upon the exercise of the common stock warrants. Ralph Wallis Kettell may be deemed to be the beneficial owner of the shares of the common stock held by Sterne Agee & Leach Inc. C/F Ralph Wallis Kettell II SEP IRA. (Sterne Agee & Leach Inc. C/F Ralph Wallis Kettell II SEP IRA).

60 Includes (i) 1,667 shares of common stock and (ii) 417 shares of common stock issuable upon the exercise of the common stock warrants. Steven W. Poe and Judith L. Poe may be deemed to be the beneficial owner of the shares of our common stock held by Steven W. Poe and Judith L. Poe (JTWROS). (Steven W. Poe and Judith L. Poe (JTWROS)).

61 Includes (i) 10,000 shares of common stock and (ii) 2,500 shares of common stock issuable upon the exercise of the common stock warrants. (Tim D. Lea).

62 Includes (i) 5,000 shares of common stock and (ii) 1,250 shares of common stock issuable upon exercise of the common stock warrants. (Tim Wells).

63 Includes (i) 4,167 shares of common stock and (ii) 1,042 shares of common stock issuable upon exercise of the common stock warrants (Timothy Fallon).

64 Includes (i) 5,000 shares of common stock and (ii) 1,250 shares of common stock issuable upon exercise of the common stock

warrants (William Bellinger).

Except as disclosed in the table above, to our knowledge, none of the selling stockholders or beneficial owners:

- has had a material relationship with us other than as a stockholder at any time within the past three years;
- has ever been one of our officers or directors or an officer or director of our affiliates; or
- are broker-dealers or affiliated with broker-dealers.

With respect to those selling stockholders noted above who are or were affiliated with registered broker-dealers, each has represented to us that the shares being registered for resale were purchased in the ordinary course of business and, at the time of purchase, such selling stockholder had no agreements or understandings, directly or indirectly, with any person to distribute the shares.

## DESCRIPTION OF BUSINESS

### 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. The Company is currently designing a trial which the Company intends to submit for registration approval in HSCT in the settings of refractory and relapsed acute myeloid leukemia in older patients. The Company is developing its cancer drugs using its expertise in radioimmunotherapy. In addition, the Ac-225 based drugs 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 the Company. 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. The Company intends 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 U.S.

### Our Corporate History and Background

We were formed as a Nevada corporation on October 6, 1997, originally under the name Zurich U.S.A., Inc. On July 10, 2006, we changed our name to Cactus Ventures, Inc. and began pursuing our business of marketing sunglasses. The Company encountered numerous problems with various vendors and ceased its operations. The Company shifted its efforts to seeking a business combination opportunity with a business entity, and negotiated a merger of a target company into the Company. Upon ceasing its operations, the Company was considered a "blank check" or "Shell" company as such term is defined under the Securities Act. Upon completing the Share Exchange (as defined below), the Company ceased being considered a "blank check" or "Shell" company and is now a clinical-stage biopharmaceutical company developing certain cancer treatments.

On April 11, 2013, the change of domicile from the State of Nevada to the State of Delaware and the change of Cactus Ventures, Inc.'s name from Cactus Ventures, Inc. to Actinium Pharmaceuticals, Inc. became effective in accordance with Articles of Merger filed with the State of Nevada and a Certificate of Merger filed with the State of Delaware. In connection with the name change we also changed (i) the name of our subsidiary Actinium Pharmaceuticals, Inc. to Actinium Corporation, (ii) our par value to $0.001 per share, and (iii) the number of authorized shares of preferred stock to 10 million shares. Effective April 18, 2013 our new trading symbol became ATNM. On September 25, 2013, we merged into our self our subsidiary, Actinium Corporation. In January 2014 we increased our authorized shares of common stock to 200 million shares and authorized shares of preferred stock to 50 million shares.

#### *Acquisition of Actinium*

On December 28, 2012, Actinium Pharmaceuticals, Inc. ("Actinium") completed a share exchange with Cactus, whereby Cactus acquired 21% of the issued and outstanding capital stock of Actinium Corporation from the shareholders of Actinium Corporation (the "Actinium Shareholders") in exchange for the issuance of 4,309,015 shares of Common Stock of the Company to the Actinium Shareholders (the "Share Exchange"). As part of the Share Exchange, Actinium Corporation paid $250,000 to the shareholders of Cactus before the consummation of the Share Exchange.

The Share Exchange was treated as a recapitalization effected through a share exchange, with Actinium Corporation as the accounting acquirer and the Company the accounting acquiree. Unless the context suggests otherwise, when we refer in this Registration Statement to business and financial information for periods prior to the consummation of the Share Exchange, we are referring to the business and financial information of Actinium Corporation.

Effective following the expiration of the ten day period following the mailing of the information statement required by Rule 14f-1 under the Exchange Act, Diane S. Button resigned from her position as member of the Board of Directors of the Company. Effective upon the closing of the Share Exchange, Diane S. Button resigned as an officer of the Company. Also effective upon the closing of the Share Exchange, Jack V. Talley was appointed to our Board of Directors. Effective as of the expiration of the ten day period following the mailing of the information statement required by Rule 14f-1 under the Exchange Act Dr. Rosemary Mazanet, David Nicholson, Sandesh Seth and Sergio Traversa were appointed to our Board of Directors. In addition, our Board of Directors appointed Jack V. Talley to serve as our President and Chief Executive Officer, Dragan Cicic to serve as our Chief Operating Officer and Chief Medical Officer, and Enza Guagenti to serve as our Chief Financial Officer, effective immediately upon the closing of the Share Exchange. On February 28, 2013, Mr. Talley resigned as the President and Chief Executive Officer, and Director of the Company and Actinium. On March 1, 2013, the Board of Directors of the Company unanimously approved the appointment of Dr. Sergio Traversa as the Company's interim President and Chief Executive Officer. Dr. Traversa is also currently a member of the Board of the Company. On September 16, 2013 Dr. Kaushik J. Dave was appointed by the Board of Directors as President, Chief Executive Officer and Director of the Company and at that time Dr. Traversa reverted back his role to as being a Director and interim Chief Financial Officer.

On March 9, 2013, Ms. Guagenti resigned as the Chief Financial Officer of the Company and Actinium. On March 11, 2013, the Board of Directors of the Company unanimously approved the appointment of Sergio Traversa as the Company's interim Chief Financial Officer. The Board is actively looking for a candidate to fill the Chief Financial Officer position of the Company. On March 13, 2013, the Board approved the appointment of Brio Financial Group as the Company's interim Controller, responsible for the Company's treasury and accounting functions. On September 16, 2013 Corey Sohmer was hired as the Company's Vice President of Finance.

As a result of the Share Exchange, the Company assumed the business and operations of Actinium Corporation. On April 11, 2013, the change of domicile from the State of Nevada to the State of Delaware and the change of Cactus Ventures, Inc.'s name from Cactus Ventures, Inc. to Actinium Pharmaceuticals, Inc. became effective in accordance with Articles of Merger filed with the State of Nevada and a

Certificate of Merger filed with the State of Delaware. Effective April 18, 2013 the Company's new trading symbol is ATNM.

As the Company is a "reporting company" under the Exchange Act of 1934, it is required to file periodic filings with the SEC.

On March 11, 2013, Actinium Corporation continued its Share Exchange with the Company, whereby the Company acquired an additional 36% of the issued and outstanding capital stock of Actinium Corporation from the Actinium Corporation Shareholders in exchange for the issuance of 7,344,390 shares of Common Stock of the Company to the Actinium Shareholders. On August 22, 2013, Actinium Corporation continued its Share Exchange with the Company, whereby the Company acquired an additional 38.2% of the issued and outstanding capital stock of Actinium Corporation from the Actinium Corporation Shareholders in exchange for the issuance of 8,009,550 shares of Common Stock of the Company to the Actinium Shareholders. On September 25, 2013 in accordance with a Certificate of Ownership Merging Actinium Corporation into the Company, the Company merged into itself Actinium Corporation, and Actinium Corporation ceased to exist. As a result of the merger, Actinium Corporation stock owned by the Company has been cancelled and each share of Actinium Corporation not owned by the Company was exchanged for 0.333 shares of Company common stock.

***Corporate History of Actinium***

Actinium Corporation was incorporated in 2000 in the state of Delaware. Until the Share Exchange, Actinium Corporation was a clinical-stage, privately held biopharmaceutical company with:

- Two clinical-stage products, Iomab™-B and Actimab™-A, in development for blood borne cancers;
- Preclinical data in additional cancer indications;
- A proprietary technology platform for novel radioimmunotherapy cancer treatments; and
- A proprietary process for manufacturing of the alpha particle emitting radioactive isotope actinium 225 (Ac-225).

Iomab™-B has completed a Phase 1/2 design trial as a preparatory regimen in conjunction with fludarabine and reduced intensity radiation conditioning in patients who are ineligible for standard myeloablative conditioning for hematopoietic stem cell transplantation (HSCT) and the Company expects it to enter a regulatory approval trial in 2014, subject to input from the FDA concerning the design and conduct of a pivotal trial. This trial was conducted in 68 human subjects at the Fred Hutchinson Cancer Research Center (FHCC) in Seattle, WA, USA. Currently, the IND for this drug is held by the licensor, FHCC. The Company intends to file its own separate IND for the purpose of conducting a Phase 3 trial in 2014. Actimab™-A is currently in a Phase 1/2 trial in newly diagnosed elderly acute myeloid leukemia (AML). In addition, using its patented Alpha Particle Immunotherapy Technology (APIT) platform and via its collaboration with the Memorial Sloan Kettering Cancer Center (MSKCC), the Company has preclinical data on potential drug candidates in several other cancer indications and expects to further develop these into clinical stage drug candidates.

Actinium Corporation has one wholly owned subsidiary, MedActinium, Inc., a Delaware corporation, which is party to certain isotope related licenses and contracts on which the Company relies.

Upon Actinium Corporation's formation in 2000, it acquired Pharmactinium, Inc. and MedActinium, Inc., and through Pharmactinium, Inc. acquired certain rights to the APIT platform. Core technology patents were in-licensed from N.V. Organon which also provided seed funding. Pharmactinium, Inc. was party to a research and development agreement with MSKCC beginning in 1996. In 2002, this agreement and relationship was significantly expanded and now includes research and development, preclinical development, clinical trials and commercial technology licenses. In 2007, Pharmactinium, Inc. was merged with and into the Company. In 2007, the Company also acquired its sister company, Actinium Pharmaceuticals, Limited (Bermuda) (the "Bermuda Company"), by a merger of the Bermuda Company into the Company and thereby also acquired certain patent licenses relating to APIT previously licensed by the Bermuda Company to the Company.

In 2000, the Company also began what has become a long term relationship with General Atlantic Investments Limited (GAIL), an entity which provided most of the Company's investment capital since 2000, totaling $50.7 million. In 2010, the parent of GAIL contributed and transferred its ownership of GAIL (now renamed Actinium Holdings, Limited), whose only asset at that time was the shares of API, to an indirect subsidiary of MSKCC. In January 2012, the Company closed on $6,685,418 in net funding through the sale of the Company's stock and a Senior Convertible Note financing. On December 19, 2012, Actinium completed a private offering of units, consisting of common stock, Series A warrants and Series B warrants. The price per unit was $1.65 for aggregate net proceeds of $4.5 million. The Series A Warrants had a 120 day term from January 28, 2013 and were exercisable for an aggregate of up to 3,118,968 shares of the Company's common stock at an initial per share exercise price of $1.65, subject to adjustment. The Series A Warrants expired on May 28, 2013. The Series B Warrants have a five year term from January 28, 2013 and are exercisable for an aggregate of up to 1,59,484 shares of the Company's common stock at an initial per share exercise price of $2.48, subject to adjustment. In the second quarter of 2013, we issued shares of common stock pursuant to the exercise of A-Warrants originally issued in connection with a private placement that closed in January 2013. The warrants were exercised at $1.65 per share, resulting in gross proceeds of $3.5 million for the Company.

On September 25, 2013 in accordance with a Certificate of Ownership Merging Actinium Corporation into the Company, the Company merged into itself Actinium Corporation, and Actinium Corporation ceased to exist. As a result of the merger, Actinium Corporation stock owned by the Company has been cancelled and each share of Actinium Corporation not owned by the Company was exchanged for 0.333 shares of Company common stock.

Our executive office is located at 501 Fifth Avenue, 3rd Floor, New York, NY 10017 and our telephone number is (212) 300-2131. Our website address is http://www.actiniumpharmaceuticals.com. Except as set forth below, the information on our website is not part of this Registration Statement.

**Summary of Scientific and Business Achievements:**

The Company's scientific and business achievements to date include:

- In-licensing a Phase 2 clinical stage monoclonal antibody, BC8, with safety and efficacy data in more than 250 patients in need of Hematopoietic Stem Cell Transplantation (HSCT), currently in 7 active Phase 1 and Phase 2 clinical trials;
- Commencing a Company sponsored multi-center Phase 1/2 clinical trial for Actimab™-A in elderly AML;
- Developing and organizing manufacturing of Actinium's lead drug candidate Actimab™-A which was accepted by the FDA for

multi-center human use;

- Supporting three physician sponsored clinical trials, including a Phase 1 and a Phase 1/2 trial with the alpha emitting radioactive isotope bismuth 213 (Bi-213) based AML drug and a Phase I clinical trial with the alpha emitting radioactive isotope actinium 225 (Ac-225) based AML drug;
- In-licensing the AML targeting monoclonal antibody known as HuM195 or Lintuzumab;

- Establishing clinical and preclinical development relationships with world-class institutions such as MSKCC, FHCRC and University of Texas MD Anderson Cancer Center (the MD Anderson Cancer Center relationship includes clinical trials only), as well as leading clinical experts in the fields of AML and HSCT;
- Securing rights to an intellectual property estate that covers key aspects of the Company's proprietary technology platform;
- Supporting a number of pipeline projects, including preclinical experiments in metastatic prostate cancer, metastatic colon cancer, antiangiogenesis and breast cancer models;
- Maintaining contractual relationship with ORNL of the Department of Energy (DOE) which gives API access to most of the current world supply of Ac-225; and
- Successfully developing commercial production methods for actinium 225.

**Business Strategy**

We intend to potentially develop its 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 its 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, the Company intends to identify and begin initial human trials with additional actinium-225 drug candidates in other cancer indications. We intend to retain marketing rights for its products in the United States whenever possible and outlicense marketing rights to its 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 per IMS Health 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). The Company uses 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 the Company is 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 Non-Hodgkin's Lymphoma (NHL). These are all follow-on indications for which Iomab™-B can be developed and it is the Companies intention to explore these opportunities.

There are currently no FDA approved treatments for either Actimab™-A or Iomab™-B targeted patients.

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 FDA approved to create more efficacious and/or safer drugs ("biobetters").

**Clinical Trials**

The Company has completed a Phase 1 and Phase 1/2 physician trial in AML at MSKCC using Bismab®-A, The Company's first generation AML drug that consists of bismuth-213 attached to the antibody Lintuzumab™. The Phase II 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 Company has commenced its 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. The Company intends to conduct these trials 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.

The Company also continues to sponsor a Phase 1 AML trial at MSKCC with a single-dose administration of Actimab™-A. Initial data shows elimination of leukemia cells from blood in 67% of all evaluable patients who received a full dose and in 83% of those treated at dose levels above 0.5 microcuries (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. Dose levels in that trial have been reduced as we continue our work on establishing a maximum tolerated dose.

This Phase I trial builds on the experience with Company's first generation drug Bismab®-A that contains the same antibody used in Actimab™-A but labeled with bismuth 213, a less potent alpha emitting daughter of actinium 225 used in Actimab™-A. Bismab®-A trials and the Phase I Actimab™-A trial were focused on relapsed, refractory and other difficult to treat acute myeloid leukemia patients. The new 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.

**Operations**

The Company's current operations are primarily focused on furthering the development of its lead clinical drug candidates Actimab™-A and Iomab™-B. In the case of Actimab™-A, key ongoing activities include progressing a multi-center Phase 1/2 trial, support for an ongoing Phase 1 clinical trial at MSKCC in New York, managing isotope and other materials supply chain, and managing the manufacturing of the finished drug candidate product. The Company has secured access to much of the currently available world reserves of Ac-225 and Bi-213 through a renewable contractual arrangement with the United States Department of Energy (DOE). The Company projects that these quantities are sufficient to support early stages of commercialization of alpha isotopes based products. The Company has also developed its own proprietary process for industrial scale Ac-225 production in a cyclotron in quantities adequate to support full product commercialization.

Operations related to Iomab™-B include planning for a registration trial which will include development of commercial scale manufacturing to be suitable for an approval trial and preparation of appropriate regulatory submissions.

For the fiscal years ended December 31, 2012 and December 31, 2011, we spent approximately $3.4 million $0.3 million, respectively, on research and development activities. The first nine months of 2013, the Company incurred $2.4 million on research and development. These expenditures consisted of materials maintenance and purchases, supply chain development and implementation, drug candidate manufacturing expenditures, clinical trials costs and intellectual property portfolio related expenses. Since we have no customers, none of the costs of such research and development activities were borne by our customers.

In the second quarter of 2013 we issued shares of common stock pursuant to the exercise of Series A Warrants originally issued in connection with a private placement that closed in January 2013. The warrants were exercised at $1.65 per share, resulting in gross proceeds of $3.5 million for the Company. In December 2013 and January 2014, the Company closed on total gross proceeds of approximately $6.6 million from the private placement of common stock and warrants to new and existing accredited investors. As of the end of the third quarter 2013 and the additional finances through this latest offering, we believe that we have sufficient cash to continue our operations for the balance of 2014 and into the first quarter of 2015.

We estimate that we will need approximately up to $25 million cash for the period of 2014 to 2016, i.e. until we receive our first product approval. We intend to fund these expenses from a combination of equity and/or debt funding raises and payments obtained from licensing partners.

Failure to raise additional equity or debt funding in the amounts necessary to complete our programs and/or failure to out license our programs on the projected terms may result in a slowing down of our projected development plan or our inability to complete one or more of the planned programs.

Our business plan has not been impacted by our accountants' going concern opinion. Due to our receipt of gross proceeds of $6.6 million in December 2013 and January 2013 from the latest offering, we believe that we have sufficient funds to fund our operations through the first quarter of 2015 and will seek to raise additional funds through equity and/or debt offerings to fund our operations in 2015 to 2016.

***Summary of Material Agreements Related to Our Business***

a. *Abbott Biotherapeutics Corp.* We entered into a Product Development and Patent License Agreement with Abbott Biotherapeutics Corp. (formerly Facet Biotech formerly known as Protein Design Labs) in 2003 to secure exclusive rights to a specific antibody when conjugated with alpha emitting radioisotopes. Upon execution of the agreement, we made a license fee payment of $3.0 million.

   We agreed to make milestone payments totaling $7.8 million for the achievement of the following agreed to and contracted milestones:

| Milestones | Payments |
|---|---|
| (1) when Company initiates a Phase 1 Clinical Trial of a licensed product | $ 750,000 |
| (2) when Company initiates a Phase 2 Clinical Trial of a licensed product | 750,000 |
| (3) when Company initiates a Phase 3 Clinical Trial of a licensed product | 1,500,000 |
| (4) Biological License Application filing with U.S. FDA | 1,750,000 |
| (5) First commercial sale | 1,500,000 |
| (6) after the first $10,000,000 in net sales | 1,500,000 |

Under the agreement, we agreed to pay to Abbott Biotherapeutics Corp on a country-by-country basis a royalty of up to 12% of net sales of all licensed products until the later of: (1) 12.5 years after the first commercial sale, or (2) when the patents expire.

As of December 31, 2012, we met our first milestone and upon reaching the milestone we paid Abbott Biotherapeutics Corp. a milestone payment of $750,000 on July 24, 2012.

b. *Memorial Sloan Kettering Cancer Center (MSKCC).* In February 2002, we entered into a license agreement with MSKCC that requires a technology access fee of $50,000 upon execution, an annual maintenance fee of $50,000 and an annual research funding of $50,000 for as long as the agreement is in force.

| Milestones | Payments |
|---|---|
| (1) filing of an New Drug Application ("NDA") or regulatory approval for each licensed product | $ 750,000 |
| (2) upon the receipt of regulatory approval from the U.S. FDA for each licensed product | 1,750,000 |

Under the agreement, we agreed to pay to MSKCC on a country-by-country basis a royalty of 2% of net sales of all licensed products until the later of: (1) 10 years from the first commercial sale, or (2) when the patents expire. We expect to file the NDA for regulatory approval in 2016.

c. *Oak Ridge National Laboratory (ORNL)* – We have contracted to purchase radioactive material to be used for research and development through December 2012. We contracted to purchase $233,100 of radioactive material to be used for research and development, with a renewal option at the contract end.

d. *Aptiv Solutions.* Aptiv Solutions provides project management services for the study of the drug Ac-225-HuM195 (Actimab™-A) used in our clinical trials, Phase 1 and Phase 2. The total project is estimated to cost $1,859,333 and requires a 12.5% down payment of the total estimated project cost. The down payment totaling $239,000 was paid in 2007 and 2012. The agreement was amended to provide for additional services on August 6, 2012, October 22, 2012 and May 16, 2013. The total project is now estimated at $2,173,955.

e. *Fred Hutchinson Cancer Research Center (FHCRC).* On June 15, 2012, we entered into a license and sponsored research agreement with FHCRC. We will build upon previous and ongoing clinical trials, with BC8 (licensed antibody) and eventually develop a clinical trial with Actinium 225. FHCRC has currently completed Phase I and Phase II of the clinical trial and we intend to start preparation for a pivotal trial leading to an FDA approval. We have been granted exclusive rights to the BC8 antibody and related master cell bank developed by FHCRC. The cost to develop the trial will range from $13.2 million to $23.5 million, depending on the trial design as required by the FDA. Under the terms of the sponsored research agreement, we will fund the FHCRC lab with $150,000 per year for the first two years and $250,000 thereafter. Payments made toward funding the lab will be credited toward royalty payments owed to FHCRC in the given year. A milestone payment of $1 million will be due to FHCRC upon FDA approval of the first drug. Upon commercial sale of the drug, royalty payments of 2% of net sales will be due to FHCRC.

f. *MSKCC.* On March 27, 2012, we entered into a clinical trial agreement with Memorial Sloan Kettering Cancer Center. The Company will pay $31,185 for each patient that has completed the clinical trial. Upon execution of the agreement, the Company is required to pay a start-up fee of $79,623. The amount due of $79,623 was paid on July 10, 2012.

g. *FHCRC.* On July 19, 2012, we entered into a clinical trial agreement with FHCRC. We will pay $31,366 for each patient that has completed the clinical trial. Upon execution of the agreement, we are required to pay a start-up fee of $19,749.

h. *The University of Texas M.D. Anderson Cancer Center*. On August 28, 2012, we entered into a clinical trial agreement with The University of Texas M.D. Anderson Cancer Center. The total estimated cost of conducting the clinical trial is $481,204, which includes a non- refundable institutional fee of $14,500. The estimated cost is based on treating 24 patients through 2013. Upon execution of the agreement, we were required to make a payment of $33,946.

i. *Johns Hopkins University*. On September 26, 2012, we entered into a clinical trial agreement with Johns Hopkins University. The Phase 1/2 clinical trial will be conducted with Actinium 225. The clinical trial will be conducted under the protocols established by us and pursuant to an Investigational New Drug Exemption (IND 10807) held by us. We will pay $38,501 per patient, who has completed the clinical trial. We are required to pay a start-up fee of $22,847, an annual pharmacy fee of $2,025 and an amendment processing fee of $500, when applicable.

j. *University of Pennsylvania*. On November 21, 2012, we entered into a clinical trial agreement with the University of Pennsylvania. The Phase 1/2 clinical trial will be conducted with Actinium 225. The clinical trial will be conducted under the protocols established by us and pursuant to an Investigational New Drug Exemption (IND 10807) held by us. We will pay $31,771 per patient, who has completed the clinical trial. We will be required to pay a start-up fee of $16,000 and additional administrative fees, when applicable.

**Intellectual Property Portfolio**

The Company has a patent portfolio with 8 issued patents and 60 pending patents in various jurisdictions as follows: United States: 17 and international: 51. Most of the patents are in-licensed from third parties and some are held by the Company. These patents cover key areas of the Company's activity, including use of the actinium 225 and other alpha emitting isotopes attached (labeled) to cancer specific carriers like monoclonal antibodies, methods for manufacturing key components of the Company's drug candidates including actinium 225 alpha emitting radioisotope and carrier antibodies, methods for manufacturing finished drug candidates for use in cancer treatment, and methods for mitigating potential toxicities of the Company's drug candidates. These patents are classified in families of related patents per the table below:

| Area | Claims | Expiration | Status | Licensor |
|---|---|---|---|---|
| Platform technology | Metastases larger than 1 mm | 2020 | Allowed | MSKCC |
| Platform technology | Use of the DOTA chelator for drug manufacturing | 2021 | Issued | MSKCC |
| Drug preparation methods | Actinium 225 labeling method | 2029 | Pending | Owned |
| Drug preparation methods | Bismuth 213 labeling method | 2017/2020 | Issued | MSKCC |
| Isotope production methods | Actinium 225 manufacturing in a cyclotron | 2023/2025 | Pending/Allowed | Owned |
| Monoclonal antibody composition and production | Manufacturing of leukemia targeting antibody | 2015 | Issued | Abbott Laboratories |
| Methods of treatment | Protection from actinium 225 toxicity | 2023 | Pending | MSKCC |

**Key Strengths**

The Company believes that the key elements for its market success include:

- **Clinical results to date imply lower development risk for its lead drug candidates:** The Company's lead drug candidates have been tested in over 300 patients and demonstrated favorable safety and efficacy profiles. Iomab™-B has been administered to more than 250 patients in a number of Phase I and Phase II trials and has shown a clear survival benefit in the indication for which it is being developed. Bismab®-A and Actimab™-A, drugs based on the APIT platform have so far been tested in over 60 patients in 3 clinical trials. In each trial they exhibited few side effects and have shown indications of efficacy. The current proof-of-concept Actimab™-A Phase 1/2 clinical trial is directed at a patient population that is generally easier to treat (newly diagnosed vs. relapsed/refractory in previous trials), and employs a more potent treatment regimen (low dose chemotherapy plus two doses of Actimab™-A plus low dose chemotherapy vs. a single dose of Actimab™-A in the physician sponsored trial).
- **Additional product opportunities from the APIT platform:** The Company's Alpha Particle Immunotherapy technology has the potential for broad applicability for the treatment of many cancer types, which allows the Company to add new product candidates to its pipeline based on well-defined patent protected methods.
- **Collaboration with MSKCC:** The Company's collaboration with MSKCC includes licensing, research and clinical trial arrangements involving MSKCC labs and clinicians and included financial support with respect to certain pre-2012 R&D-related expenses.
- **Scientific backing of leading experts:** The Company's clinical advisory board and collaborators include some of the best recognized clinicians and scientists working at some of the highest regarded medical institutions in the U.S. and the world, including MSKCC, Johns Hopkins University, University of Pennsylvania, FHCC and MD Anderson Cancer Center. This is expected to be beneficial to the Company both in clinical development and market acceptance assuming its drug candidates are approved.
- **Isotope supply secured for clinical trials:** The Company has a contractual relationship with ORNL of the Department of Energy (DOE)) that provides the Company access to the largest known supply reserves of actinium 225. Iodine 131 is readily available from a number of qualified pharmaceutical supply vendors.
- **Proprietary alpha emitting isotope manufacturing technology fully developed:** The Company has developed its own proprietary technology for commercial scale manufacturing of actinium 225. This is expected to ensure commercial supply of Ac-225 for Actimab™-A, Actimab™-B and other actinium-linked products should they be approved.
- **cGMP Actimab™-A manufacturing developed:** The Company has developed at a contractor's site full cGMP (current good manufacturing practices) manufacturing processes for its drug candidate Actimab™-A.
- **Substantial IP portfolio:** The Company has an intellectual property portfolio in excess of 60 patents and patent applications, both in the U.S. and other countries, which cover clinical applications of the APIT technology and methods of manufacturing actinium 225 thus giving the Company control over both the applications of its technology and a supply chain of its key ingredients, actinium 225 and bismuth 213 alpha emitting isotopes.

**Competition Overview**

To the Company's knowledge, there are no other commercial entities that have significant programs in place for developing Ac-225- or Bi-213-based drugs. In the wider field of medical oncology, the Company faces competition from: developers of other alpha emitter based drug candidates, other radioimmunotherapy based technologies, technologies for labeling antibodies with toxic drugs (antibody-drug conjugates), and for each disease indication from all drugs available and/or in development.

For Company's lead indication, acute myeloid leukemia, there are a number of companies developing drugs for AML induction in the elderly. These drugs are most often small molecules. Until recently, our leukemia targeting monoclonal antibody HuM195 was under development as a native i.e. unconjugated mAb by Seattle Genetics, Inc., but its development has been discontinued due to lack of efficacy of the native mAb in that company's pivotal trial in AML. To our knowledge, there are no clinical trials that have shown significant efficacy in this indication.

In the field of hematopoietic stem cell transplantation, pharmaceuticals currently used for bone marrow ablation/conditioning are generic drugs and to our knowledge there are no significant industry efforts to enter this area, especially not in older patients.

**Government Regulation**

Governmental authorities in the United States and other countries extensively regulate, among other things, the research, development, testing, manufacture, labeling, promotion, advertising, distribution and marketing of radioimmunotherapy pharmaceutical products such as those being developed by the Company. In the United States, the U.S. Food and Drug Administration (FDA) regulates such products under the Federal Food, Drug and Cosmetic Act (FDCA) and implements regulations. Failure to comply with applicable FDA requirements, both before and after approval, may subject us to administrative and judicial sanctions, such as a delay in approving or refusal by the FDA to approve pending applications, warning letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions and/or criminal prosecution.

***United States FDA Regulation***

Our research, development and clinical programs, as well as our manufacturing and marketing operations, are subject to extensive regulation in the United States and other countries. Most notably, all of our products sold in the United States are subject to the FDA as implemented and enforced by the FDA. Certain of our product candidates in the United States require FDA pre-marketing approval of a Biologics License Application (BLA) pursuant to 21 C.F.R. § 314. Foreign countries may require similar or more onerous approvals to manufacture or market these products.

Failure by us or by our suppliers to comply with applicable regulatory requirements can result in enforcement action by the FDA, the Nuclear Regulatory Commission or other regulatory authorities, which may result in sanctions, including but not limited to, untitled letters, warning letters, fines, injunctions, consent decrees and civil penalties; customer notifications or repair, replacement, refunds, recall, detention or seizure of our products; operating restrictions or partial suspension or total shutdown of production; refusing or delaying our requests for BLA premarket approval of new products or modified products; withdrawing BLA approvals that have already been granted; and refusal to grant export.

**Properties**

The Company does not own any property. The Company has office space at 501 Fifth Avenue, 3 rd Floor, New York, NY 10017. The space is month to month and pays approximately $7,500 per month.

**Employees**

As of January 22, 2013, we have 6 full-time employees. None of these employees are covered by a collective bargaining agreement, and we believe our relationship with our employees is good. We also engage consultants on an as-needed basis to supplement existing staff.

**Legal Proceedings**

From time to time, we may become involved in various lawsuits and legal proceedings, which arise in the ordinary course of business. Litigation is subject to inherent uncertainties, and an adverse result in these or other matters may arise from time to time that may harm business. We are currently not aware of any such legal proceedings or claims that will have, individually or in the aggregate, a material adverse effect on our business, financial condition or operating results.

## MARKET PRICE OF AND DIVIDENDS ON OUR COMMON STOCK AND RELATED STOCKHOLDER MATTERS

### Market Information

Our Common Stock is listed on OTCQB, under the symbol "ATNM". Our Common Stock ceased trading on the OTCBB on May 29, 2013. The last quoted price for our Common Stock was $5.70 for a trade on January 30, 2014, as reported on www.otcbb.com. However, as there is currently little to no market for our Common Stock, we believe that this last reported price does not accurately reflect the value of the Common Stock or the Company, and it may not be possible to sell Common Stock at this price.

The following table shows, for the periods indicated, the high and low bid prices per share of our common stock as reported by the OTCQB quotation service. These bid prices represent prices quoted by broker-dealers on the OTCQB quotation service. The quotations reflect inter-dealer prices, without retail mark-up, mark-down or commissions, and may not represent actual transactions.

| | Fiscal 2014 | | Fiscal 2013 | | Fiscal 2012 | |
|---|---|---|---|---|---|---|
| | High | Low | High | Low | High | Low |
| First Quarter (through January 30, 2014)) | $ 6.95 | $ 5.45 | $ 7.50 | $ 1.50 | $ - | $ - |
| Second Quarter (April 1 - June 30) | $ - | $ - | $ 6.00 | $ 3.10 | $ - | $ - |
| Third Quarter (July 1 - September 30) | $ - | $ - | $ 6.40 | $ 3.37 | $ - | $ - |
| Fourth Quarter (October 1 - December 31) | $ - | $ - | $ 7.45 | $ 4.70 | $ - | $ - |

### Holders

As of January 22, 2014 there were 24,903,150 shares of common stock issued and outstanding, which were held by 349 holders of record. There are no shares of preferred stock outstanding.

Of the 24,903,150 shares of common stock issued and outstanding, 6,245,627 of such shares are restricted shares under the Securities Act. None of these restricted shares are eligible for resale absent registration or an exemption from registration under the Securities Act. As of the date hereof, until the provisions of Rule 144 are complied with, the exemption from registration provided by Rule 144 under the Securities Act is not available for these shares pursuant to Rule 144(i).

### Registration Rights

Certain shareholders are entitled to certain registration rights, including piggy-back registration rights, with respect to the shares of common stock purchased in the offerings conducted by the Company in 2013 and 2014.

The following shares are subject to registration rights:

- 1,106,120 shares of common stock, par value $0.001 per share, held by the selling stockholders issued pursuant to the private placement that closed on December 27, 2013 and January 10, 2014;
- 276,529 shares of our common stock issuable upon exercise of common stock warrants held by the selling stockholders at an exercise price of $9.00 per share issued pursuant to private placements that closed on December 27, 2013 and January 10, 2014; and
- 138,265 shares of our common stock issuable upon exercise of placement agent warrants held by the selling stockholders at an exercise price of $9.00 per share issued pursuant to private placements that closed on December 27, 2013 and January 10, 2014.

In addition:

- Certain Investors have registration rights pursuant to the following agreement:

  Second Amended and Restated Investor Rights Agreement, dated as of October 5, 2011 (the "Agreement"), by and among Actinium Pharmaceuticals, Inc., a Delaware corporation, Actinium Holdings Limited (formerly named General Atlantic Investments Limited"), a Bermuda corporation, and the persons identified on Exhibit A thereto (collectively, the "Holders").

  Pursuant to the terms of the Agreement the Holders have the following registration rights:

  (1) Piggyback Rights. - If at any time or from time to time, the Company shall determine to register any of its equity securities for its own account in a direct public offering or an underwritten public offering, the Company will: (i) prior to the filing of such registration give to the Holders written notice thereof; and (ii)include in such registration (and any related qualification under blue sky laws or other compliance), and underwriting, all the Registrable Securities (as defined in the Agreement) specified in a written request or requests made within thirty (30) days after receipt of such written notice from the Company by any Holder.

  (2) Demand Registration - If at any time after the earlier of (i) the third anniversary of the October 5, 2011, or (ii) three (3) months after the Company's Common Stock becomes publicly traded (whether through a Qualified Initial Public Offering, a Pubco Transaction (each as defined in the Agreement) or otherwise, (the "Start Date")) , whichever is earlier, Holders of at least thirty-five percent (35%) of the Registrable Securities (as defined in the Agreement) then outstanding request in writing that the Company file a registration statement under the Securities Act covering the registration of at least 20% of the then outstanding Registrable Securities (as defined in the Agreement), or a lesser percentage if the anticipated aggregate offering price, net of underwriting discounts and commissions, would exceed $10,000,000.

**Dividends**

We have never declared or paid a cash dividend. Any future decisions regarding dividends are made by our Board of Directors. We currently intend to retain and use any future earnings for the development and expansion of our business and do not anticipate paying any cash dividends in the foreseeable future. Our Board of Directors has complete discretion on whether to pay dividends. Even if our Board of Directors decides to pay dividends, the form, frequency and amount will depend upon our future operations and earnings, capital requirements and surplus, general financial condition, contractual restrictions and other factors that the Board of Directors may deem relevant.

**Securities Authorized for Issuance Under Equity Compensation Plans**

In December 2013 the Company's shareholders approved the Company's 2013 Stock Plan. The expiration date of the plan is September 9, 2023 and the total number of underlying shares of the Company's common stock available for grant to employees, directors and consultants of the Company under the plan is 5,750,000 shares.

In December 2013 the Company's shareholders approved the Company's 2013 Equity Incentive Plan. The expiration date of the plan is September 9, 2023 and the total number of shares of the Company's common stock available for grant to employees, directors and consultants of the Company under the plan is 1,000,000 shares.

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

*The information and financial data discussed below is derived from the unaudited consolidated financial statements of the Company for its quarterly period ended September 30, 2013 and of Actinium Corporation for the quarterly period ended September 30, 2012, and audited consolidated financial statements of Actinium Corporation for its fiscal years ended December 31, 2012 and 2011. The consolidated financial statements of the Company and Actinium Corporation were prepared and presented in accordance with generally accepted accounting principles in the United States. The information and financial data discussed below is only a summary and should be read in conjunction with the historical financial statements and related notes contained elsewhere in the Registration Statement of which this prospectus is a part. The financial statements contained elsewhere in the Registration Statement of which this prospectus is a part fully represent the Company's' financial condition and results of operations; however, they are not indicative of the Company's future performance. See "Cautionary Note Regarding Forward Looking Statements" above for a discussion of forward-looking statements and the significance of such statements in the context of this Registration Statement.*

This discussion contains forward-looking statements reflecting our current expectations that involve risks and uncertainties. Actual results may differ materially from those discussed in these forward-looking statements due to a number of factors, including those set forth in the section entitled "Risk Factors" and elsewhere herein.

**Overview**

The Company was incorporated under the laws of the State of Nevada on October 6, 1997. The Company was a shell entity that is in the market for a merger with an appropriate operating company.

On December 28, 2012, the Company entered into a transaction (the "Share Exchange"), pursuant to which the Company acquired 100% of the issued and outstanding equity securities of Actinium Pharmaceuticals, Inc. ("API"), in exchange for the issuance of approximately 99% of the issued and outstanding common stock, par value $0.01 per share, of the Company. The Share Exchange closed on December 28, 2012. As a result of the Share Exchange, the former shareholders of API became the controlling shareholders of the Company. At the closing, each API shareholder received 0.333 shares (the "Exchange Ratio") of Actinium common stock for each API share exchanged. At the closing, all of the API shareholders' options and warrants to purchase API common stock was exchanged at the Exchange Ratio for new options or warrants, as applicable, to purchase Actinium common stock. The Share Exchange was accounted for as a reverse takeover/recapitalization effected by a share exchange, wherein API is considered the acquirer for accounting and financial reporting purposes. The capital, share price, and earnings per share amount in these consolidated financial statements for the period prior to the reverse merger were restated to reflect the recapitalization in accordance with the exchange ratio established in the merger except otherwise noted.

Actinium, incorporated on June 13, 2000, is a biotechnology company committed to developing breakthrough therapies for life threatening diseases using its alpha particle immunotherapy (APIT) platform and other related and similar technologies. Actinium, together with its wholly owned subsidiary, MedActinium, Inc. (MAI), (hereinafter referred to collectively as "Actinium") has initiated collaborative efforts with large institutions to establish the proof of concept of alpha particle immunotherapy and has supported one Phase I/Il clinical trial and one Phase I clinical trial at Memorial Sloan-Kettering Cancer Center (MSKCC) under an MSKCC Physician Investigational New Drug Application. In 2012, Actinium launched a multi-center corporate sponsored trial in acute myeloid leukemia (AML) patients. Actinium's objective, through research and development, is to produce reliable cancer fighting products which utilize monoclonal antibodies linked with alpha particle emitters or other appropriate payloads to provide very potent targeted therapies. The initial clinical trials of Actinium's compounds have been with patients having acute myeloid leukemia and it is believed that Actinium's APIT platform will have wider applicability for different types of cancer where suitable monoclonal antibodies can be found.

As a result of the Share Exchange, the Company is now a holding company operating through Actinium, a clinical-stage biopharmaceutical company developing certain cancer treatments.

We develop drugs for treatment of cancer with intent to cure or significantly improve survival of the affected patients. As of now none of our drugs have been approved for sale in the United States or elsewhere. We have no commercial operations in sales or marketing of our products. All our product candidates are under development. In order to market and sell our products we must conduct clinical trials on patients and obtain regulatory approvals from appropriate regulatory agencies like the Food and Drug Administration (FDA) in the United States and similar agencies elsewhere in the world.

Our products under development are monoclonal antibodies labeled with radioisotopes. We have one program with an antibody labeled with a beta emitter and several programs based on a proprietary patent protected platform technology called alpha particle immunotherapy or APIT. Our APIT technology is based on attaching actinium 225 (Ac-225) or bismuth 213 (Bi-213) alpha emitting radioisotopes to monoclonal antibodies. Alpha emitting radioisotopes are unstable chemical elements that decay by releasing alpha particles. Alpha particles can kill any cell in whose immediate proximity they are released. Monoclonal antibodies are genetically engineered proteins that target specifically certain cells, and can target cancer cells. It is crucial for the success of our drug candidates to contain monoclonal antibodies that can successfully seek cancer cells and can kill them with the attached isotope while not harming nearby normal cells. We do not have technology and operational capabilities to develop and manufacture such monoclonal antibodies and we therefore rely on collaboration with third parties to gain access to such monoclonal antibodies. We have secured rights to two monoclonal antibodies, HuM195 (Lintuzumab), in 2003 through a collaborative licensing agreement with Abbott Laboratories and BC8 in 2012 with the Fred Hutchinson Cancer Research Center. We expect to negotiate collaborative agreements with other potential partners that would provide us with access to additional monoclonal antibodies. Establishing and maintaining such collaborative agreements is a key to our success as a company.

Under our own sponsorship as well as activity at FHCRC, we have four product candidates in active clinical trials: Actimab™-A (HuM195-Ac-225), Iomab™-B (BC8-I-131), BC8-Y-90 and BC8-SA. At this time, the Company is actively pursuing development of Actimab™-A and Iomab™-B while BC8-Y-90 and BC8-SA are in physician sponsored clinical phase I trials at the Fred Hutchinson Cancer Research Center. Actimab™-A is a combination of the monoclonal antibody we have in-licensed, Lintuzumab (HuM195), and the alpha emitting isotope actinium 225. Actimab™-A has shown promising results throughout preclinical development and an ongoing clinical trial started in 2006 in treating acute myeloid leukemia (AML) in the elderly. We have expanded the number of patients and number of clinical centers by commencing a new AML clinical trial which we have launched in 2012. This trial targets newly diagnosed AML patients over the age of 60. In order to conduct the trial we are engaged in funding, monitoring and quality assurance and control of the Lintuzumab antibody; procurement of actinium 225 isotope; funding, monitoring and quality assurance and control of the drug candidate Actimab™-A manufacturing and organizing and monitoring clinical trials. We estimate that the direct costs to completion of both parts of the ongoing Phase 1/2 trial will be approximately US $7.5 million. Assuming a successful trial we intend to explore out-licensing the Actimab™-A product and potentially receiving payments for co-developing the product with a partner. Iomab™-B is a combination of the in-licensed monoclonal antibody BC8 and the beta emitting radioisotope iodine 131. This construct has been extensively tested in Phase I and Phase II clinical trials in approximately 250 patients with different blood cancer indications who were in need of a hematopoietic stem cell transplantation (HSCT). Iomab™-B is used to condition the bone marrow of these patients by destroying blood cancer cells in their bone marrow and elsewhere thus allowing for a subsequent transplant containing healthy donor bone marrow stem cells. We have decided to develop this drug candidate by initially focusing on the patients over 55 with active acute myeloid leukemia in relapse and/or refractory to existing treatments. Our intention is to request the FDA to allow us to enter into a pivotal trial with Iomab™-B. We estimate the direct costs of such a trial to completion anticipated in 2016 will be approximately US $15 million, and up to approximately $25 million for both trials.

We have primarily management position employees and consultants who direct, organize and monitor the activities described above through contractors. Much of the *in vivo* laboratory and clinical work contracted for by the Company has been conducted at Memorial Sloan-Kettering Cancer Center in New York. The Company has also made clinical trial arrangements with other well known cancer centers.

Our Actimab™-A drug candidate and its components are contract manufactured and maintained under our supervision by specialized contract manufacturers and suppliers in the U.S., including IsoTex Diagnostics, Oak Ridge National Laboratory, Pacific GMP, Fischer Bioservices, BioReliance and others.

We are a development stage company and have never generated revenue. Currently we do not have a stable recurring source of revenues sufficient to cover our operating costs. As of December 31, 2012, we had an accumulated deficit of $55.7 million. We incurred net losses of $8.3 million and $3.4 million in the years ending December 31, 2012 and 2011, respectively.

**Opportunities, Challenges and Risks**

The market for drugs for cancer treatment is a large market in need of novel products, in which successful products can command multibillion dollars in annual sales. A number of large pharmaceutical and biotechnology company regularly acquire products in development, with preference given to products in Phase II or later clinical trials. These deals are typically structured to include an upfront payment that ranges from several million dollars to tens of million dollars or more and additional milestone payments tied to regulatory submissions and approvals and sales milestones. Our goal is to develop our product candidates through Phase II clinical trials and enter into partnership agreements with one or more large pharmaceutical and/or biotechnology companies.

We believe our future success will be heavily dependent upon our ability to successfully conduct clinical trials and preclinical development of our drug candidates. This will in turn depend on our ability to continue our collaboration with Memorial Sloan-Kettering Cancer Center and our Clinical Advisory Board members plan to continue and expand other research and clinical trial collaborations. In addition, we will have to maintain sufficient supply of actinium 225 and successfully maintain and if and when needed replenish or obtain our reserves of monoclonal antibodies. We will have to maintain and improve manufacturing procedures we have developed for production of our drug candidates from the components that include the iodine 131 and actinium 225 isotopes, monoclonal antibodies and other materials. It is possible that despite our best efforts our clinical trials results may not meet regulatory requirements for approval. If our efforts are successful, we will be able to partner our development stage products on commercially favorable terms only if they enjoy appropriate patent coverage and/or considerable know-how and other protection that ensures market exclusivity. For that reason we intend to continue our efforts to maintain existing and generate new intellectual property. Intellectual property is a key factor in the success of our business as well as market exclusivity.

To achieve the goals discussed above we intend to continue to invest in research and development at high and constantly increasing rates thus incurring further losses until one or more of our products are sufficiently developed to partner them to large pharmaceutical and biotechnology companies.

Since our inception on June 13, 2000, we have not generated any revenues, and that as of December 31, 2012, we have incurred net losses of $55.7 million. As of December 31, 2012 and September 30, 2013 our cash balance was $5.6 million and $4.0 million, respectively. In December 2013 and January 2014, the Company closed on total gross proceeds of approximately $6.6 million from the private placement of common stock and warrants to new and existing accredited investors. We need approximately $25 million in cash to finance research and development and to cover our ongoing working capital needs through 2016. If we do not raise any additional funding, we will be able to continue our operations through the first quarter of 2015. As we have raised 25% of the needed funds, we will be able to conduct our planned operations into the first quarter of 2015. If we raise 50% of the needed funds, we will be able to conduct our planned development programs through the second half of 2015. If we raise 75% or more of the needed funds, we will be able to accelerate our planned development programs through 2015 and into the second quarter of 2016. Our first product is not expected to be commercialized until at least 2017. In the second quarter of 2013 we issued shares of common stock pursuant to the exercise of Series A Warrants originally issued in connection with a private placement that closed in January 2013. The warrants were exercised at $1.65 per share, resulting in gross proceeds of $3,457,087 for the Company. We believe that we have enough cash on hand to fund our business through the first quarter of 2015. In order to fund our

business beyond the first quarter of 2015 we will likely need to raise money through private offerings of debt and/or equity.

**Results of Operations**

**Nine Months Ended September 30, 2013 Compared to the Nine Months Ended September 30, 2012**

The following table sets forth, for the periods indicated, data derived from our statements of operations:

| | For the nine months ended September 30, | |
|---|---|---|
| | **2013** | **2012** |
| Revenues | $ - | $ - |
| Operating expenses: | | |
| Research and development, net of reimbursements | 2,373,200 | 2,723,459 |
| General and administrative | 2,730,233 | 1,520,221 |
| Other expenses | 4,122 | 429 |
| Total operating expenses | 5,107,555 | 4,244,109 |
| Other (income) expense: | | |
| Interest expense | 2,508 | 952,241 |
| (Gain) loss on change in fair value of derivative liabilities | (216,112) | 287,604 |
| Total other (income) expense | (213,604) | 1,239,845 |
| Net loss | $ (4,893,951) | $ (5,483,954) |

**Revenues**

We recorded no commercial revenues for the nine months ended September 30, 2013 and 2012.

**Research and Development Expense**

Research and development expenses decreased by $350,259 to $2,373,200 for the nine months ended September 30, 2013 compared to $2,723,459 for the nine months ended September 30, 2012. The decrease is primarily attributable to the Company conserving capital during the three months ended September 30, 2013.

**General and Administrative Expenses**

Overall, total general and administrative expenses increased by $1,210,012 to $2,730,233 for the nine months ended September 30, 2013 compared to $1,520,221 for the nine months ended September, 2012. The increase was largely attributable to increases in professional fees and financing related fees incurred by the Company as discussed below.

**Other Expense**

Other expense decreased by $1,453,449 for the nine months ended September 30, 2013 compared to the nine months ended September 30, 2012. The decrease is primarily attributable a decrease in interest expense related to the amortization of the convertible debt discount and deferred financing costs related to the convertible debt and an increase in the gain on the change in fair value of the derivative liability.

**Net Loss**

Net loss decreased by $590,003 to $4,893,951 for the nine months ended September 30, 2013 compared $5,483,954 for the nine months ended September 30, 2012. The decrease was primarily due to a decrease in interest expense associated with the amortization of debt discount to interest expense, a decrease in research and development and a gain from change in fair value of the derivative liability efforts and offset by an increase in professional fees and payroll related expense.

**Liquidity and Capital Resources**

We have financed our operations primarily through sales of the Company’s stock and the issuance of convertible promissory notes.

The following tables sets forth selected cash flow information for the periods indicated:

| | For the nine months ended September 30, | |
|---|---|---|
| | 2013 | 2012 |
| Cash used in operating activities | $ (4,947,969) | $ (3,795,480) |
| Cash used in investing activities | (8,030) | (1,812) |
| Cash provided by financing activities | 3,327,393 | 660,163 |
| Net change in cash | $ (1,628,606) | $ (3,137,129) |

Net cash used in operating activities was $4,947,969 for the nine months ended September 30, 2013 compared to $3,795,480 used in operations for the same period in 2012. Cash used in operations increased due to the increase in spending related to preparations and eventual launch and conduct of a multicenter trial and an increase in spending related to professional fees combined with an increase in payroll-related expenses.

Net cash provided by financing activities was $3,327,393 for the nine months ended September 30, 2013 compared to net cash provided by financing activities of $660,163 for the same period in 2012. During the nine months ended September 30, 2013, the Company received proceeds from the exercise of warrants as more discussed below. During the nine months ended September 30, 2012, the Company received net proceeds of $660,163 from sale of its stock.

We have experienced cumulative losses of $60,637,414 from inception (June 13, 2000) through September 30, 2013, and have stockholders' equity of $604,328 at September 30, 2013. In addition, the Company has not completed its efforts to establish a stable recurring source of revenues sufficient to cover its operating costs for the next twelve months. These factors raise substantial doubt regarding the Company's ability to continue as a going concern.

**Year Ended December 31, 2012 Compared to Year Ended December 31, 2011**

The following table sets forth, for the periods indicated, data derived from our statements of operations:

| | For the Years ended December 31, | | Increase |
|---|---|---|---|
| | 2012 | 2011 | (Decrease) |
| Revenues | $ - | $ - | $ - |
| Operating expenses: | | | |
| Research and development, net of reimbursements | 3,440,485 | 323,788 | 3,116,697 |
| General and administrative | 4,506,232 | 2,959,246 | 1,546,986 |
| Depreciation expense | 581 | 633 | (52) |
| Total operating expenses | 7,947,298 | 3,283,667 | 4,633,631 |
| Other (income) expense: | | | |
| Interest expense | 1,099,327 | 175,094 | 924,233 |
| Gain on change in fair value of derivative liabilities | (685,420) | (13,966) | (671,454) |
| Total other (income) expense | 413,907 | 161,128 | 252,779 |
| Net loss | $ (8,361,205) | $ (3,444,795) | $ (4,916,410) |

*Revenues*

We recorded no commercial revenues for the year ended December 31, 2012 and 2011.

*Research and Development Expense*

Research and development expenses increased by $3,116,697 to $3,440,485 for the year ended December 31, 2012 compared to $323,788 for the year ended December 31, 2011. The increase is attributable to the costs incurred on initiation of the multi-center clinical trial for Actimab™-A. The Company also made its first milestone payment of $750,000 to Abbott Biotherapeutics Corp. upon reaching the milestone. The increase also reflected an agreement the Company made with MSKCC as of April 2010, in which MSKCC agreed to pay or reimburse the Company for certain costs and expenses related to the Company's drug development and clinical study program. This agreement expired on October 5, 2011. No reimbursement was due for the year ended December 31, 2012 and $237,834 was due for the year ended December 31, 2011.

*General and Administrative Expenses*

Overall, total general and administrative expenses increased by $1,546,986 to $4,506,232 for the year ended December 31, 2012 compared to $2,959,246 for the year ended December 31, 2011. The increase was largely attributable to increases in professional fees and the stock-based compensation incurred by the Company as discussed below.

In connection with the Company's stock offering, in January 2012, we issued warrants to purchase 400,013 shares of common stock to the transaction manager for consulting services related to assisting the Company in preparing to become a publicly traded company. The fair value of $144,463, or $0.36 per share, was a noncash charge to general and administrative expenses for the year ended December 31, 2012. In February 2012, the Company granted options to purchase 2,125,000 shares of common stock to its employees and consultants with a fair value of $531,913. In July 2012, the Company granted options to purchase 90,000 shares of common stock to its consultants with a fair value of $23,770. In August 2012, the Company granted options to purchase 2,875,000 shares of common stock to its employees and consultants with a fair value of $724,784. During the fourth quarter, the Company granted options to purchase 1,085,000 shares of common stock to its employees and consultants with a fair value of $239,310. For the year ended December 31, 2012, the Company recorded amortization of stock-based compensation of $266,172 as a noncash charge to general and administrative expenses.

The increase can also be attributed to additional professional fees of $549,383 related to the year-end audit, the quarterly review, legal fees, and management fees associated with the Company going public. In addition to the professional fees incurred, we increased our personnel. As such, payroll-related expenses for the year ended December 31, 2012 increased compared to the same period in 2011.

*Interest Expense*

Interest expense increased by $924,233 for the year ended December 31, 2012 compared to the year ended December 31, 2011. The increase in interest expense is directly attributable to interest accrued on the convertible debt, amortization of the convertible debt discount and deferred financing costs related to the convertible debt.

*Net Loss*

Net loss increased by $4,916,410 to $8,361,205 for the year ended December 31, 2012 compared to $3,444,795 for to the year ended December 31, 2011. The increase was primarily due to additional costs incurred by the Company in research and development expenses, non-cash stock-based compensation costs and professional fees as discussed above.

**Liquidity and Capital Resources**

We have financed our operations primarily through sales of the Company's stock and the issuance of Convertible Promissory Notes.

We did not have any cash or cash equivalents held in financial institutions located outside of the United States as of December 31, 2012 and 2011. We do not anticipate this practice will change in the future.

The following tables sets forth selected cash flow information for the periods indicated:

| | For the years ended December 31, | |
|---|---|---|
| | 2012 | 2011 |
| Cash provided by (used in) operating activities | $ (5,212,710) | $ (517,592) |
| Cash provided by (used in) investing activities | (2,359) | - |
| Cash provided by (used in) financing activities | 5,129,940 | 6,025,255 |
| Net increase (decrease) in cash | $ (85,129) | $ 5,507,663 |

Net cash used in operating activities was $5,212,710 for the year ended December 31, 2012 compared to $517,592 used in operations for the same period in 2011. Cash used in operations increased due to the increase in spending related to preparations and eventual launch and conduct of a multicenter trial and an increase in spending related to professional fees combined with an increase in payroll-related expenses.

Net cash provided by financing activities was $5,129,940 for the year ended December 31, 2012 compared to $6,025,255 for the same period in 2011. In January 2012, we sold 968,759 shares of our stock at $0.78 per share. In 2012, we also sold 3,118,988 shares of our common stock at $1.65 per share. We raised funds through sale of the Company's stock to finance the expansion of our research and development efforts.

We have experienced cumulative losses of approximately $55,743,463 from inception (June 13, 2000) through December 31, 2012, and have stockholders' equity of $1,145,635 at December 31, 2012. In addition, the Company has not completed its efforts to establish a stable recurring source of revenues sufficient to cover its operating costs for the next twelve months. These factors raise substantial doubt regarding the Company's ability to continue as a going concern.

**Recent Debt and Equity Offerings**

During 2011, the Company raised $6,184,967 by selling 7,891,141 shares of the Company's stock and warrants to purchase 19,972,785 shares of the Company's stock through an offering ("Stock Offering"). A net amount of $5,379,367 was received by the Company in 2011. The Company paid Laidlaw & Company (UK) Ltd. ("Laidlaw & Co."), the placement agent, total cash fees of $742,196, which consisted of placement agent commission of $618,497 and expense reimbursement of $123,699. In addition, the Company paid Laidlaw & Co.'s outside counsel, McCormick & O'Brien LLP, $60,904 for its services as the placement agent's legal counsel and Signature Bank $2,500 for the bank escrow fee.

On December 27, 2011, the Company completed a private offering of 8% Senior Subordinated Unsecured Convertible Promissory Notes ("Convertible Notes") in the amount of $900,000 and received net proceeds of $750,000. The convertible notes were issued at 83.33% of the principal amount resulting in an original issue discount of $150,000. The Convertible Notes mature one year from the date of issuance. Interest accrues at the rate of 8% per year on the outstanding principal amount, accrued semi-annually and to be paid at maturity. On December 19, 2012, in connection with the Share Exchange, the Convertible Notes were converted into 1,252,550 share of common stock.

During 2012, the Company raised $759,300 by selling 968,759 shares and warrants to purchase 242,190 shares of the Company's common stock under the Company's Stock Offering. A net amount of $660,164 was received by the Company in 2012. The Company paid Laidlaw & Co. total cash fees of $91,116, which consisted of placement agent commission of $75,930 and expense reimbursement of $15,186. In addition, the Company paid Laidlaw & Co.'s outside counsel, McCormick & O'Brien PLLC, $8,020 for its services as the placement agent's legal counsel.

In 2012, the Company raised $5,151,450 through an offering of 3,118,988 shares of its common stock and "A Warrants" to purchase 3,118,988 shares of the Company's common stock, exercisable at a price of $1.65 per share for a period of 120 days from the day of the final closing of the offering, and "B Warrants" to purchase 1,559,505 shares of the Company's common stock, exercisable at a price of $2.48 per share for a period of 5 years from the date of the final closing of the offering. ("2012 Common Stock Offering") A net amount of $4,469,776 was received by the Company. Pursuant to the 2012 Common Stock Offering agreement, the Company paid Laidlaw & Co. total cash fees of $618,174, which consisted of placement agent commission of $515,145 and expense reimbursement of $103,029. The Company also issued the placement agent warrants to purchase an aggregate of 467,845 shares of the Company's common stock, with an exercise price of $0.78 per share and a term of 5 years. These placement agent warrants were valued at $499,707 and recorded as derivative liabilities. In addition, the Company paid the Laidlaw & Co.'s outside counsel, Richardson & Patel, LLP, $60,000 for its services as the Laidlaw & Co.'s legal counsel and Signature Bank $3,500 for the bank escrow fee.

Actinium intends to increase funds available to continue our research and development efforts, which include material supply, manufacturing, clinical development and pre-clinical trials and working capital. In 2014 we expect cash needs of up to $7,000,000 to finance research and development, which include material supply, manufacturing, clinical trials and pre-clinical trials and to cover our ongoing working capital needs.

In the second quarter of 2013 we issued shares of common stock pursuant to the exercise of A-Warrants originally issued in connection with a private placement that closed in January 2013. The warrants were exercised at $1.65 per share, resulting in gross proceeds of $3,457,087 for the Company. In December 2013 and January 2014, the Company closed on total gross proceeds of approximately $6.6 million from the private placement of common stock and warrants to new and existing accredited investors. The proceeds from these exercised warrants and the offering will be used for the Company's clinical and preclinical programs and for general working capital. This capital will allow us to continue to develop our drug candidates for treatment of the most difficult forms of cancer, including Acute Myeloid Leukemia, where the Company has made significant advances and already helped a number of patients. The Company intends to advance its programs and add new programs by the end of 2013. Shareholders exercised 2,095,204 (67.2%) of the 3,118,988 originally issued A-warrants. The A-warrants expired on May 28, 2013. With exercise of the A-warrants we believe that we have the needed capital for 2013. We do not expect proceeds from the exercise of the outstanding B- warrants, Stock Offering warrants, consulting firm warrants, and placement agent warrants since these warrants contain cash-less exercise provisions. To meet our capital needs beyond 2013 we intend to conduct offerings of either stock and/or debt and also engage in licensing activities. We are currently sponsoring conduct of two clinical trials with Actimab-A (Phase I Physician trial at MSKCC and Phase 1/2 multicenter trial) and preparing for a Phase III trial with Iomab-B. If we do not raise any additional funding, we will be able to continue our operations through the first quarter of 2015. If we do not raise any additional funding, we will be able to continue our operations through 2014 and into the first quarter of 2015**.** As we have raised 25% of the needed funds, we will be able to conduct our planned operations through 2014 and into the first quarter of 2015. If we raise 50% of the needed funds, we will be able to conduct our planned development programs through the second half of 2015. If we raise 75% or more of the needed funds, we will be able to accelerate our planned development programs through 2015 and into the second quarter of 2016. There can be no assurance that we will be successful in obtaining additional capital through offerings of our securities in the future. Our first product is not expected to be commercialized until at least 2017

In the event we do not meet our cash needs of $25.0 million through 2016, it may be necessary for us to delay the timing of various product development efforts.

**Off-Balance Sheet Arrangements**

We do not have any off-balance sheet arrangements that have or are reasonably likely to have a current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that is material to investors.

**Seasonality**

We do not have a seasonal business cycle. Our revenues and operating results are generally derived evenly throughout the calendar year.

**Critical Accounting Policies**

Our financial statements have been prepared in accordance with accounting principles generally accepted in the United States. To prepare these financial statements, we must make estimates and assumptions that affect the reported amounts of assets and liabilities. These estimates also affect our expenses. Judgments must also be made about the disclosure of contingent liabilities. Actual results could be significantly different from these estimates. We believe that the following discussion addresses the accounting policies that are necessary to understand and evaluate our reported financial results.

**Derivatives**

All derivatives are recorded at fair value and recorded on the balance sheet. Fair values for securities traded in the open market and derivatives are based on quoted market prices. Where market prices are not readily available, fair values are determined using market based pricing models incorporating readily observable market data and requiring judgment and estimates.

**Fair Value of Financial Instruments**

Fair value is defined as the price that would be received to sell an asset, or paid to transfer a liability, in an orderly transaction between market participants. A fair value hierarchy has been established for valuation inputs that gives the highest priority to quoted prices in active markets for identical assets or liabilities and the lowest priority to unobservable inputs. The fair value hierarchy is as follows:

- Level 1 Inputs – Unadjusted quoted prices in active markets for identical assets or liabilities that the reporting entity has the ability to access at the measurement date.

- Level 2 Inputs – Inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly. These might include quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable for the asset or liability (such as interest rates, volatilities, prepayment speeds, credit risks, etc.) or inputs that are derived principally from or corroborated by market data by correlation or other means.

- Level 3 Inputs – Unobservable inputs for determining the fair values of assets or liabilities that reflect an entity's own assumptions about the assumptions that market participants would use in pricing the assets or liabilities.

**Income Taxes**

The Company uses the asset and liability method in accounting for income taxes. Under this method, deferred tax assets and liabilities are determined based on differences between financial reporting and income tax carrying amounts of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The Company reviews deferred tax assets for a valuation allowance based upon whether it is more likely than not that the deferred tax asset will be fully realized. A valuation allowance, if necessary, is provided against deferred tax assets, based upon management's assessment as to their realization.

**Research and Development Costs**

Research and development costs are expensed as incurred. Research and development reimbursements and grants are recorded by the Company as a reduction of research and development costs.

**Share-Based Payments**

The Company estimates the fair value of each stock option award at the grant date by using the Black-Scholes option pricing model and common shares based on the last common stock valuation done by third party valuation expert of the Company's common stock on the date of the share grant. The fair value determined represents the cost for the award and is recognized over the vesting period during which an employee is required to provide service in exchange for the award. As share-based compensation expense is recognized based on awards ultimately expected to vest, the Company reduces the expense for estimated forfeitures based on historical forfeiture rates. Previously recognized compensation costs may be adjusted to reflect the actual forfeiture rate for the entire award at the end of the vesting period. Excess tax benefits, if any, are recognized as an addition to paid-in capital.

**Recent Accounting Pronouncements**

There were various accounting standards and interpretations issued during 2012 and 2011, none of which are expected to have a material impact on the Company's financial position, operations or cash flows.

**Subsequent Event**

In December 2013 and January 2014, the Company also raised approximately $6,636,720 through an offering of 1,106,120 shares of its common stock and five year common stock warrants to purchase 276,529 shares of the Company's common stock, exercisable at a price of $9.00 per share. A net amount of $5,756,813 was received by the Company. Pursuant to the 2012 Common Stock Offering agreement, the Company paid Laidlaw & Co. total cash fees of $796,406, which consisted of placement agent commission of $663,672 and expense reimbursement of $132,734. The Company also issued the placement agent warrants to purchase an aggregate of 138,265 shares of the Company's common stock, with an exercise price of $9.00 per share and a term of 5 years. In addition, the Company paid the Laidlaw & Co.'s outside counsel, Sichenzia Ross Friedman Ference LLP, $50,000 for its services as the Laidlaw & Co.'s legal counsel and Signature Bank $3,500 for the bank escrow fee.

## CHANGES IN REGISTRANT'S CERTIFYING ACCOUNTANT

(a)

On December 28, 2012, we dismissed R.R. Hawkins and Associates International, A PC, ("Hawkins"), as our independent registered public accounting firm. The dismissal was approved by the audit committee ("Audit Committee") of our board of directors.

During the fiscal years ended December 31, 2011 and 2010, Hawkins' reports on our financial statements did not contain an adverse opinion or disclaimer of opinion, and were not qualified or modified as to uncertainty, audit scope or accounting principles.

During the fiscal years ended December 31, 2011 and 2010 and the subsequent periods through December 28, 2012, (i) there were no disagreements between us and Hawkins on any matter of accounting principles or practices, financial statement disclosure, or auditing scope or procedure, which disagreements, if not resolved to the satisfaction of Hawkins, would have caused Hawkins to make reference to the subject matter of the disagreements in connection with its reports on the Registrant's financial statements, and (ii) there were no reportable events as that term is described in Item 304(a)(1)(v) of Regulation S-K.

On December 28, 2012, we provided Hawkins with a copy of the disclosures it is making in response to Item 4.01 on Form 8-K, and requested that Hawkins furnish it with a letter addressed to the Securities and Exchange Commission stating whether it agrees with the above statements. A copy of the letter, dated December 28, 2012, was filed as Exhibit 16 to the Current Report on Form 8-K filed on January 2, 2013. A revised letter is attached to this Form S-1as Exhibit 16.1 that corrects the name of the registrant.

(b)

On December 28, 2012, we engaged GBH CPAs, PC as our new independent registered public accounting firm beginning with our fiscal year ended December 31, 2012. The change in our independent registered public accounting firm was approved by the Audit Committee. During the two most recent fiscal years and through December 28, 2012, neither the Company nor anyone on its behalf consulted with GBH CPAs, PC regarding any of the following:

(i) The application of accounting principles to a specific transaction, either completed or proposed;

(ii) The type of audit opinion that might be rendered on the Company's financial statements, and none of the following was provided to the Company:

(a) a written report; or (b) oral advice that GBH CPAs, PC concluded was an important factor considered by the Company in reaching a decision as to an accounting, auditing or financial reporting issue; or

(iii) Any matter that was subject of a disagreement, as that term is defined in Item 304(a)(1)(iv) of Regulation S-K, or a reportable event, as described in Item 304(a)(1)(v) of Regulation S-K.

## DIRECTORS AND EXECUTIVE OFFICERS

**Directors And Executive Officers**
The names, positions and ages of our directors and executive officers as of the date of this Memorandum, are as follows:

| Name | Age | Position |
|---|---|---|
| Sandesh Seth, MS, MBA | 49 | Chairman of the Board |
| Kaushik J. Dave, PhD, MBA | 52 | President, Chief Executive Officer and Director |
| Sergio Traversa, MBA | 52 | Interim Chief Financial Officer and Director |
| Dragan Cicic, MD | 49 | Chief Operating Officer and Chief Medical Officer |
| David Nicholson, PhD | 58 | Director |
| Richard I. Steinhart | 56 | Director |

All directors hold office until the next annual meeting of stockholders and the election and qualification of their successors. Officers are elected annually by the board of directors and serve at the discretion of the board.

Pursuant to the Company's charter, Mr. Traversa and Mr. Seth were appointed as directors of the Company by the former Series E preferred stock holders of Actinium Corporation. During 2011, Actinium Corporation raised $6.2 million through an offering of 23,697,119 shares (pre-Actinium Share Exchange) of the 2011 Series E preferred shares and 5,924,285 warrants (pre-Actinium share exchange). In January 2012, the Actinium Corporation raised $0.8 million through its final offering of the 2011 Series E preferred shares.

There are no other arrangements or understanding between any of our directors and any other persons pursuant to which they were selected as a director.

**Background of Executive Officers and Directors**

The principal occupations for the past five years (and, in some instances, for prior years) of each of our directors and executive officers are as follows:

**Sandesh Seth, MS, MBA, Director**

Mr. Sandesh Seth has been our Director since March 2012 and our Chairman of the Board since October 2013. Mr. Seth is the Head of Healthcare Investment Banking at Laidlaw & Company (UK) Ltd. and has over 20 years of experience which includes prior investment banking at Cowen & Co., equity research at Bear Stearns and Commonwealth Associates and in the pharmaceutical industry at Pfizer, Warner-Lambert, and SmithKline Beecham in strategic planning, business development and R&D project management respectively. Mr. Seth's financial services experience includes 100+ completed transactions in which $5 billion+ in capital was raised. Transactions included venture investments, private placements, IPOs, FOs, PIPEs, Convertible and High-Yield Debt. Mr. Seth was also involved with various strategic initiatives such as mergers and acquisitions, leveraged and management buy-outs, and licensing and joint ventures, including the $100 billion merger of Pfizer and Warner-Lambert and the $20 billion merger of Pharmacia & Upjohn with Monsanto. Mr. Seth has an MBA in Finance from New York University; an M.S. in the Pharmaceutical Sciences from the University of Oklahoma Health Center and a B.Sc. in Chemistry from Bombay University. He has published several scientific articles and was awarded the University Regents Award for Research Excellence at the University of Oklahoma. Mr. Seth was designated as Regulatory Affairs Certified (R.A.C.) by the Regulatory Affairs Professionals Society which signifies proficiency with United States FDA regulations. He also holds the following Securities Industry Licenses: Series 7, 79 and 63.

That Mr. Seth has served in various business executive-level positions over the course of his career, has significant investment banking experience, has developed significant management and leadership skills and is well accustomed to interfacing with investors, analysts, auditors, C-level executives, and outside advisors, led us to conclude that Mr. Seth should serve as a director.

**Kaushik J. Dave, PhD, MBA, President, Chief Executive Officer and Director**

Dr. Kaushik J. Dave has been our President, Chief Executive Officer and Director since September 2013. From March 2008 to September 2013, Dr. Dave was the Executive Vice President of Product Development for Antares Pharmaceuticals Inc. (Antares). As part of the core management team at Antares, he was instrumental in setting strategy, vision, product portfolio development and business development. Dr. Dave led the clinical and regulatory approval of Anturol™ and was also a key contributor to the change in company vision to combination products using Antares' medical device technology which resulted in a robust pipeline that included development and New Drug Application submission for Otrexup, which was approved on October 14, 2013. From January 2001 to June 2006, Dr. Dave was Vice President Product Development at Palatin Technologies Inc. where he obtained approval of NeutroSpecTM (a radiopharmaceutical monoclonal antibody product). From January 1997 to December 2000, Dr. Dave was employed at Schering-Plough Inc. and Merck & Co. Inc., responsible for steering the development of several pharmaceutical product development programs. Dr. Dave received his pharmacy degree from the University of Bath, UK and a Ph.D. in Pharmaceutical Chemistry from the University of Kansas. Dr. Dave also received an MBA from the Wharton School of the University of Pennsylvania.

As President and Chief Executive Officer of the Company, Dr. Dave is the most senior executive of the Company and as such provides our Board of Directors with the greatest insight into the Company's business and the challenges and material risks it faces. Dr. Dave has more than 23 years of healthcare industry experience and is especially qualified to understand the risks and leadership challenges facing a growing pharmaceutical company from a senior management and financial expertise perspective led us to conclude that Dr. Dave should serve as President, Chief Executive Officer and Director of the Company.

**Sergio Traversa, Interim Chief Financial Officer and Director**

Dr. Traversa has been a Director of the Company since August, 2012. Dr. Traversa is also the Chief Executive Officer of Relmada Therapeutics Inc. Previously, he was the co-founder and CEO of Medeor Inc. a spinoff pharmaceutical company from Cornell University. Dr. Traversa has over 25 years of experience in the healthcare sector in the United States and Europe, ranging from management positions in the pharmaceutical industry to investing and strategic advisory roles. He has held financial analyst, portfolio management and strategic advisory positions at large UNITED STATES investment firms specializing in healthcare, including Mehta and Isaly and Mehta partners, ING Barings, Merlin BioMed and Rx Capital. Dr. Traversa was a founding partner of Ardana Capital, a pharmaceutical and biotechnology investment advisory firm. In Europe, he held the position of Area Manager for Southern Europe (Italy, Spain, Greece and Portugal) of Therakos Inc., a cancer and immunology division of Johnson & Johnson. Prior to Therakos, Dr. Traversa was at Eli Lilly, where he served as Marketing Manager of the Hospital Business Unit. He was also a member of the CNS team at Eli Lilly, where he participated in the launch of Prozac and the early development of Zyprexa and Cymbalta. Dr. Traversa started his career as a sales representative at Farmitalia Carlo Erba, the largest pharmaceutical company in Italy later sold to Pharmacia and now part of Pfizer. Dr. Traversa holds a Laurea degree in Pharmacy from the University of Turin (Italy) and an MBA in Finance and International Business from the New York University Leonard Stern School of Business.

As Interim Chief Financial Officer of the Company, Mr. Traversa is a senior executive of the Company and as such provides our Board of Directors with great insight into the Company's business and the challenges and material risks it faces. That Dr. Traversa serves in such executive officer positions with the Company and has more than 25 years of healthcare and financial industry experience in the United States and Europe and is especially qualified to understand the risks and leadership challenges facing a growing pharmaceutical company from a senior management and financial expertise perspective led us to conclude that Mr. Traversa should serve as a director.

Dr. Traversa devotes a minimum of 40 hours per week to the Company. Relmada Therapeutics, Inc., of which Dr. Traversa also serves as Chief Executive Officer, is not related to the Company and specializes in pain management, which is not related to our business. We do not believe that Dr. Traversa's employment by Relmada Therapeutics, Inc. creates a material risk of conflicts of interest.

**Dragan Cicic, MD, MBA, Chief Operating Officer and Chief Medical Officer**

Dragan Cicic is the Chief Operating Officer and Chief Medical Officer of the Company. He joined the Company in 2005 and previously held the position of the CEO and prior to that of the Medical Director at Actinium. Dr. Cicic joined Actinium from the position of Project Director of QED Technologies Inc., a life sciences strategic consulting and transactional group focused on emerging biotech, pharmaceuticals and medical devices companies. Dr. Cicic prepared business and strategic plans on behalf of those clients and assisted them in raising funding. He also represented corporate and private investors in identifying acquisition and/or investment targets and negotiating, structuring and consummating deals. Prior to joining QED Technologies, Dr. Cicic was an investment banker with SG Cowen Securities.

Dr. Cicic graduated as a Medical Doctor from the School of Medicine at The Belgrade University, and received his MBA from Wharton School at The University of Pennsylvania. He was also a Nieman Fellow at Harvard University.

**C. David Nicholson, BS, PhD, Director**

C. David Nicholson is a Director of the Company and joined the Executive Committee of Bayer CropScience on March 5, 2012 as Head of Research & Development responsible for the integration of the company's R&D activities into one global organization. Dr. Nicholson graduated in pharmacology, earning his B.Sc. from the University of Manchester (1975) and his Ph.D. from the University of Wales (1980). Between 1978 and 1988, Dr. Nicholson worked in the pharmaceutical industry for the British company Beecham-Wülfing in Gronau, Germany. The main emphasis of his activities as group leader in a multidisciplinary project group was the development of cardiovascular drugs.

From 1988-2007, Dr, Nicholson held various positions of increasing seniority in the UK, the Netherlands and the USA with Organon a Business Unit of Akzo Nobel. Ultimately he became Executive Vice President, Research & Development, and member of the Organon Executive Management Committee. He implemented change programs, leading to maximizing effectiveness in research & development, ensuring customer focus and the establishment of a competitive pipeline of innovative drugs. In 2007, Dr. Nicholson transferred to Schering-Plough, Kenilworth, New Jersey as Senior Vice President, responsible for Global Project Management and Drug Safety. From 2009 to December 2011, he was Vice President Licensing and Knowledge Management at Merck in Rahway, New Jersey, reporting to the President of Merck R&D. As an integration team member, David Nicholson played a role in the strategic mergers of Organon BioSciences, the human and animal health business of Dutch chemical giant Akzo-Nobel, and Schering-Plough in 2007 as well as of Schering-Plough and Merck in 2009. Dr. Nicholson is presently on the Board of Directors of multiple biotechnology companies, including Actinium Pharmaceuticals, Inc.

That Dr. Nicholson brings over 25 years of pharmaceutical experience to our Board, Having served in various pharmaceutical research and development executive-level positions over the course of his career, and that Dr. Nicholson has developed significant management and leadership skills relating to the pharmaceutical industry. and is well accustomed to interfacing with investors, analysts, auditors, outside advisors and governmental officials, led us to conclude that Dr. Nicholson should serve as a director.

**Richard I. Steinhart, Director**

Richard I. Steinhart has served as our Director and Chairman of the Audit Committee since November 2013. Mr. Steinhart is also a member of our Compensation Committee. Through December 2013, Mr. Steinhart was employed by MELA Sciences, Inc, as their Vice President, Finance and Chief Financial Officer, Treasurer and Secretary since April 2006 and in April 2012, Mr. Steinhart received a promotion to Sr. Vice President, Finance. From May 1992 until joining the Company Mr. Steinhart was a Managing Director of Forest Street Capital/SAE Ventures, a boutique investment banking, venture capital, and management consulting firm focused on healthcare and technology companies. Prior to Forest Street Capital/SAE Ventures, he was Vice President and Chief Financial Officer of Emisphere Technologies, Inc. Mr. Steinhart's other experience includes seven years at CW Group, Inc., a venture capital firm focused on medical technology and biopharmaceutical companies, where he was a General Partner and Chief Financial Officer. Until December 2011, Mr. Steinhart served on the Board of Manhattan Pharmaceuticals, Inc., a biopharmaceutical company and was Chairman of its Audit Committee. Mr. Steinhart began his career at Price Waterhouse, now known as PricewaterhouseCoopers. He holds B.B.A. and M.B.A degrees from Pace University and is a Certified Public Accountant (inactive).

That Mr. Steinhart brings over 20 years of financial experience to our Board, having served in various financial executive-level positions over the course of his career, and that Mr. Steinhart is a certified public accountant led us to conclude that Mr. Steinhart should serve as a director and chair the audit committee.

**Corporate Governance**

The business and affairs of the Company are managed under the direction of the Board of Directors.

***Term of Office***

Our directors are divided into three classes, designated Class I, Class II and Class III. Class I shall consists of two independent directors, Class II shall consist of two directors, and Class III shall consist of the chief executive officer.
The term of each director is set forth below or until their successors are duly elected:

| Director | Class | Term (from 2013 Annual Meeting) |
|---|---|---|
| Kaushik Dave | Class III | 36 months |
| David Nicholson | Class I | 12 months |
| Sandesh Seth | Class II | 30 months |
| Sergio Traversa | Class II | 30 months |
| Richard Steinhart | Class I | 12 months |

Notwithstanding the foregoing, each director shall serve until his successor is duly elected and qualified, or until his or her retirement, death, resignation or removal. In order to implement a staggered board of directors, Class I shall serve a 12 month term from the date of the 2013 Annual Shareholders Meeting (December 2013); Class II shall serve a 30 month term from the date of the 2013 Annual Shareholders Meeting; and Class III shall serve a 36 month term from the date the date of the 2013 Annual Shareholders Meeting.

***Director Independence***

We use the definition of "independence" of The NASDAQ Stock Market to make this determination. We are not listed on NASDAQ, so although we use its definition of "independence", its "independence" rules are inapplicable to us. NASDAQ Listing Rule 5605(a)(2) provides that an "independent director" is a person other than an officer or employee of the company or any other individual having a relationship which, in the opinion of the Company's Board, would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. The NASDAQ listing rules provide that a director cannot be considered independent if:

- the director is, or at any time during the past three years was, an employee of the company;
- the director or a family member of the director accepted any compensation from the company in excess of $120,000 during any period of 12 consecutive months within the three years preceding the independence determination (subject to certain exclusions, including, among other things, compensation for board or board committee service);
- a family member of the director is, or at any time during the past three years was, an executive officer of the company;
- the director or a family member of the director is a partner in, controlling stockholder of, or an executive officer of an entity to which the company made, or from which the company received, payments in the current or any of the past three fiscal years that exceed 5% of the recipient's consolidated gross revenue for that year or $200,000, whichever is greater (subject to certain exclusions);

- the director or a family member of the director is employed as an executive officer of an entity where, at any time during the past three years, any of the executive officers of the company served on the compensation committee of such other entity; or
- the director or a family member of the director is a current partner of the company's outside auditor, or at any time during the past three years was a partner or employee of the company's outside auditor, and who worked on the company's audit.

Our Common Stock is not currently quoted or listed on any national exchange or interdealer quotation system with a requirement that a majority of our board of directors be independent and, therefore, the Company is not subject to any director independence requirements. Under the following three NASDAQ director independence rules a director is not considered independent: (a) NASDAQ Rule 5605(a)(2)(A), a director is not considered to be independent if he or she also is an executive officer or employee of the corporation, (b) NASDAQ Rule 5605(a)(2)(B), a director is not consider independent if he or she accepted any compensation from the company in excess of $120,000 during any period of twelve consecutive months within the three years preceding the determination of independence, and (c) NASDAQ Rule 5605(a)(2)(D), a director is not considered to be independent if he or she is a partner in, or a controlling shareholder or an executive officer of, any organization to which the company made, or from which the company received, payments for property or services in the current or any of the past three fiscal years that exceed 5% of the recipient's consolidated gross revenues for that year, or $200,000. Under such definitions, David Nicholson and Sergio Traversa are the only independent directors.

**Committees of the Board of Directors**

On December 28, 2012, our board of directors formed two standing committees: audit and compensation. Actions taken by our committees are reported to the full board. Each of our committees has a charter and each charter is posted on our website.

| Audit Committee | Compensation Committee |
|---|---|
| Richard I. Steinhart* | Dr. David Nicholson* |
| Dr. Sergio Traversa | Sandesh Seth |
| Dr. David Nicholson | Richard I. Steinhart |

***** Indicates committee chair

***Audit Committee***

Our audit committee, which currently consists of three directors, provides assistance to our board in fulfilling its legal and fiduciary obligations with respect to matters involving the accounting, financial reporting, internal control and compliance functions of the company. Our audit committee employs an independent registered public accounting firm to audit the financial statements of the company and perform other assigned duties. Further, our audit committee provides general oversight with respect to the accounting principles employed in financial reporting and the adequacy of our internal controls. In discharging its responsibilities, our audit committee may rely on the reports, findings and representations of the company's auditors, legal counsel, and responsible officers. Our board has determined that all members of the audit committee are financially literate within the meaning of SEC rules and under the current listing standards of the Nasdaq Capital Market. Richard I. Steinhart was determined as a chairman of the audit committee.

***Compensation Committee***

Our compensation committee, which currently consists of three directors, establishes executive compensation policies consistent with the company's objectives and stockholder interests. Our compensation committee also reviews the performance of our executive officers and establishes, adjusts and awards compensation, including incentive-based compensation, as more fully discussed below. In addition, our compensation committee generally is responsible for:

- establishing and periodically reviewing our compensation philosophy and the adequacy of compensation plans and programs for our directors, executive officers and other employees;
- overseeing our compensation plans, including the establishment of performance goals under the company's incentive compensation arrangements and the review of performance against those goals in determining incentive award payouts;
- overseeing our executive employment contracts, special retirement benefits, severance, change in control arrangements and/or similar plans;
- acting as administrator of any company stock option plans; and
- overseeing the outside consultant, if any, engaged by the compensation committee.

Our compensation committee periodically reviews the compensation paid to our non-employee directors and the principles upon which their compensation is determined. The compensation committee also periodically reports to the board on how our non-employee director compensation practices compare with those of other similarly situated public corporations and, if the compensation committee deems it appropriate, recommends changes to our director compensation practices to our board for approval.

Outside consulting firms retained by our compensation committee and management also will, if requested, provide assistance to the compensation committee in making its compensation-related decisions.

**Family Relationships**

There are no family relationships among any of our officers or directors.

**Involvement in Certain Legal Proceedings**

To our knowledge, none of our current directors or executive officers has, during the past ten years:

- been convicted in a criminal proceeding or been subject to a pending criminal proceeding (excluding traffic violations and other minor offenses);
- had any bankruptcy petition filed by or against the business or property of the person, or of any partnership, corporation or business association of which he was a general partner or executive officer, either at the time of the bankruptcy filing or within two years prior to that time;
- been subject to any order, judgment, or decree, not subsequently reversed, suspended or vacated, of any court of competent jurisdiction or federal or state authority, permanently or temporarily enjoining, barring, suspending or otherwise limiting, his involvement in any type of business, securities, futures, commodities, investment, banking, savings and loan, or insurance activities, or to be associated with persons engaged in any such activity;
- been found by a court of competent jurisdiction in a civil action or by the SEC or the Commodity Futures Trading Commission to have violated a federal or state securities or commodities law, and the judgment has not been reversed, suspended, or vacated;
- been the subject of, or a party to, any federal or state judicial or administrative order, judgment, decree, or finding, not subsequently reversed, suspended or vacated (not including any settlement of a civil proceeding among private litigants), relating to an alleged violation of any federal or state securities or commodities law or regulation, any law or regulation respecting financial institutions or insurance companies including, but not limited to, a temporary or permanent injunction, order of disgorgement or restitution, civil money penalty or temporary or permanent cease-and-desist order, or removal or prohibition order, or any law or regulation prohibiting mail or wire fraud or fraud in connection with any business entity; or
- been the subject of, or a party to, any sanction or order, not subsequently reversed, suspended or vacated, of any self-regulatory organization (as defined in Section 3(a)(26) of the Exchange Act), any registered entity (as defined in Section 1(a)(29) of the Commodity Exchange Act), or any equivalent exchange, association, entity or organization that has disciplinary authority over its members or persons associated with a member.

Except as set forth in our discussion below in “Certain Relationships and Related Transactions,” none of our directors or executive officers has been involved in any transactions with us or any of our directors, executive officers, affiliates or associates which are required to be disclosed pursuant to the rules and regulations of the SEC.

**Code of Ethics**

The Company has adopted a code of ethics, a copy of which is attached as Exhibit 14.1 to the Form 8-K filed on January 2, 2013.

## EXECUTIVE COMPENSATION

### Summary Compensation Table

The following table provides information regarding the compensation earned during the fiscal years ended December 31, 2013, December 31, 2012 and December 31, 2011 by our Chief Executive Officer and the two next most highly compensated executive officers.

| Name/Position | Year | Salary | Bonus | Option Awards | All Other Compensation | Total |
|---|---|---|---|---|---|---|
| Kaushik J. Dave, President and CEO (3) | 2013 | $ 112,134 | $ - | $ 58,412 | $ - | $ 112,134 |
| | 2012 | - | - | - | - | - |
| | 2011 | - | - | - | - | - |
| Jack Talley, former CEO, resigned on February 28, 2013 | 2013 | $ 367,692 | $ | $ -- | $ - | $ 367,692 |
| | 2012 | 250,000 | -- | 58,412 | - | 308,412 |
| | 2011 | - | - | - | - | - |
| Dragan Cicic, COO | 2013 | $ 220,450 | $ 75,000 | $ | $ - | $ 295,450 |
| | 2012 | 190,658 | - | -58,426 | - | 249,084 |
| | 2011 | 190,658 | 50,000 | 9,717(2) | - | 250,375 |
| Enza Guagenti, former CFO, resigned on March 9, 2013 | 2013 | $ 41,486 | $ - | $ 3,394 | $ - | $ 41,486 |
| | 2012 | 90,000 | - | 3,394 | - | 93,394 |
| | 2011 | - | - | - | - | - |
| Diane Button, CEO, CFO (1) | 2013 | $ - | $ - | $ - | $ - | $ - |
| | 2012 | $ - | $ - | $ - | $ - | $ - |
| | 2011 | $ - | $ - | $ - | $ - | $ - |

(1) Ms. Diane Button resigned as the Company's CEO and CFO on December 28, 2012.

(2) Dr. Cicic's options awards were determined by taking into consideration the following factors: (i) Dr Cicic's responsibilities at the Company; (ii) his performance historically and as an incentive for future efforts; (iii) compensation data taken from peer group companies (newly public biotech firms); and (iv) the level of his past awards.

(3) Dr. Kaushik J. Dave became the Company's President and CEO on September 16, 2013.

As an "emerging growth company" we will not be required to provide information relating to the ratio of total compensation of our Chief Executive Officer to the median of the annual total compensation of all of our employees, as required by the Investor Protection and Securities Reform Act of 2010, which is part of the Dodd-Frank Wall Street Reform and Consumer Protection Act.

### Director Compensation

Historical non-management Directors of the Company do not receive any cash compensation. Commencing October 1, 2012, non-management Directors of Actinium Corporation (and now the Company) began to receive a quarterly cash retainer of $7,500 per calendar quarter for their service on the Board of Directors. They also receive reimbursement for out-of-pocket expenses and certain directors have received stock option grants for shares of Company Common Stock as described below.

The following table sets forth the compensation of our directors for the 2013 fiscal year:

| Name(1) | Fees Earned or Paid in Cash | Stock Awards | Option Awards | All Other Compensation | Total |
|---|---|---|---|---|---|
| David Nicholson | $ 30,000 | $ 10,000 | -00 | - | $ 30,000 |
| Sandesh Seth | $ 30,000 | $ 10,000 | - | - | $ 30,000 |
| Richard Steinhart | $ 0 | $ 0 | 49,950 | - | $ 0 |
| Sergio Traversa | $ 30,000 | $ 10,000 | 20,000 | - | $ 30,000 |

**Employment Agreements**

Effective September 16, 2013, the Company and Dr. Kaushik J. Dave entered into an agreement (the "Employment Agreement"), to employ Dr. Dave as the Company's Chief Executive Officer. Dr. Dave shall have such responsibilities, duties and authority as are assigned to him by the Board, or its designee. These responsibilities shall include implementation of the overall direction of the Company as set by the Board, including, planning, corporate policies, research and development, staffing, finance and operations. Dr. Dave shall perform such other duties and shall have authority consistent with his position as may be from time to time specified by the Board and subject to the discretion of the Board. Dr. Dave reports directly to the Board. Dr. Dave also agreed to devote his best efforts and substantially all of his business time to advance the interests of the Company and to discharge adequately his duties under the Employment Agreement. Dr. Dave may hold up to two board seats on for-profit and not-for-profit boards that do not represent a conflict with the Company and subject to Board approval after review of the time commitment involved.

Pursuant to the Employment Agreement, Dr. Dave is entitled to the following compensation and benefits:

- A base salary at an annual rate of $350,000.

  Upon the six month anniversary of the start date, the Board will review Dr. Dave's base salary with the help of an independent compensation consultant to adjust the base salary to be competitively aligned to a range between the 25th (twenty-fifth) and 75th (seventy-fifth) percentile of the relevant market data of CEO positions of similarly situated publicly traded Biotech companies. The Board shall review the amount of the base salary and performance bonus, and shall determine the appropriate adjustments to each component of Dr. Dave's compensation within 60 days of the start of each calendar year.

  In addition, for the duration that the Company maintains its primary office in New York City, the Company will reimburse Dr. Dave for up to $500 per month in travel expenses plus the dollar amount of the difference between Dr. Dave's New York State and New Jersey State taxes based on income from the Company.

- Dr. Dave shall be entitled to participate in an executive bonus program, which shall be established by the Board pursuant to which the Board shall award bonuses to Dr. Dave, based upon the achievement of written individual and corporate objectives such as the Board shall determine. Upon the attainment of such performance objectives, Dr. Dave shall be entitled to a cash bonus in an amount to be determined by the Board with a target of forty percent (40%) of the base salary. Within thirty (30) days after the start date, the Board shall establish written individual and corporate performance objectives for the balance of 2013 and the amount of the performance pro-rata bonus payable upon the attainment of each objective. At least thirty (30) days before each subsequent calendar year, the Board shall establish written individual and corporate performance objectives for such calendar year and the amount of the performance bonus payable upon the attainment of such objectives. Within sixty (60) days after the end of each calendar year, the Board shall determine the amount of any performance bonus payable thereunder. Any such performance bonus shall be due and payable within ninety (90) days after the end of the calendar year to which it relates.

- The Board has agreed to grant to Dr. Dave an option to purchase common shares of the Company and restricted stock (the "Grant"). The Grant will consist of (A) an option grant to purchase 675,000 common shares of the Company; (B) 125,000 shares of restricted and (C) 100,000 shares of restricted stock as a sign-on bonus of which fifty percent will vest at the one year anniversary of the start date upon starting work. An additional twenty-five percent each will vest at eighteen months and twenty-four months after the start date.

  Stock Options. Such options will have an exercise price equal to the prior day closing price of the Company's common stock which is equal to fair market value as determined by the Board on the date of the grant (the "Grant date"). The Grant Date shall occur no later than 90 days from the start date.

  Restricted Stock Grant (excluding the sign-on bonus). One third (33.33%) of the restricted stock shall be granted upon the next closing of a financing of the Company of at least $5 million, and shall vest per the vesting schedule below. The remaining two thirds (66.66%) of the restricted stock shall be granted upon the treatment of the first patient in 2014 for the Iomab™-B trial and subject to the vesting schedule below.

  Vesting Schedule. Twenty-eight percent (28%) of the initial options or restricted stock granted shall vest twelve months after the date of grant and two percent (2%) of the remainder shall vest each month thereafter until fully vested. Such additional options or restricted stock will have an exercise price per share which is equal to fair market value as determined by the Board on the date of the grant. Two percent (2%) of such additional options or stock shall vest each month thereafter until fully vested. The term of all options granted under this Agreement will be for 10 years from the date of grant, subject to Dr. Dave's continuing service with the Company.

- Dr. Dave is also eligible to participate in the Company's benefit plans that are generally provided for executive employees.

- The employment agreement also contains a non-solicitation provision that provides that during the term of employment and for a period of 24 months following the cessation of employment with the company you Dr. Dave shall not directly or indirectly solicit, induce, recruit or encourage any of the Company's employees or consultants to terminate their relationship with the Company, or attempt any of the foregoing, either for himself or any other person or entity

On July 23, 2012, Actinium Corporation entered into an employment agreement with Jack Talley, as our, Chief Executive Officer. The initial term of employment was for a period of three (3) years, provided that Mr. Talley's employment with the company will be on an "at will" basis. Actinium Corporation agreed to pay a base salary of $250,000 per annum. The board will review Mr. Talley's base salary with help of an independent compensation consultant to adjust his base salary to be competitively aligned to a range between the 25th and 75th percentile of the relevant market data of CEO positions of similarly situated publicly traded biotech companies. Mr. Talley was also entitled to participate in an executive bonus program, which shall be established by the board pursuant to which the board shall award bonuses to Mr. Tally, based on achievement of written individual and corporate objectives such as the board shall determine. Upon the attainment of such performance objectives, in addition to base salary, Mr. Talley was entitled to a cash bonus in an amount to be determined by the Board up to fifty percent (50%) of his base salary. Actinium Corporation also agreed to grant to Mr. Talley an option grant to purchase common shares of the Company equal to three percent (3.0%) of the Company's issued and outstanding equity (common and preferred shares) on a fully diluted basis. Such options had an exercise price of $0.261 cents per share which is equal to fair market value as determined by the board on the date of the grant. Twenty-eight percent (28%) of the initial options granted shall vest twelve months after the date of grant and two percent (2%) of the remainder shall vest each month thereafter until fully vested. Additional options were to be granted upon the final closing of the Company's next financing so that total options granted would equal three percent (3%) of fully diluted shares on that date. Such additional options will have an exercise price per share which is equal to fair market value as determined by the Board on the date of the grant. Two percent (2%) of such additional options shall vest each month thereafter until fully vested. The term of all options granted under this Agreement will be for 10 years from the date of grant, subject to your continuing service with the Company. On February 28, 2013, Mr. Talley resigned as Chief Executive Officer and Director of the Company and Actinium Corporation as per the terms of the Severance Agreement (as described below).

On January 2, 2006, Actinium Corporation entered into an employment agreement with Dragan Cicic, as our, Chief Operating Officer and Chief Medical Officer. The term of the employment agreement is one year; provided that the term shall be automatically extended for successive one year periods thereafter, unless, no later than 60 days prior to the expiration of any successive one-year renewal term, either party thereto provides the other party written notice of its desire not to extend the term. Actinium agreed to pay a base salary of $144,758 per annum during the term with an annual percentage increase of not less than an amount equal to the aggregate preceding 12 months annual percentage increase of the U.S. Department of Labor Consumer Price Index for All Urban Consumers (CPI-U) for the New York area. Mr. Cicic is also entitled to participate in any incentive compensation or bonus program which is instituted or maintained for company executives generally during the term of the agreement.

On July 21, 2012, Actinium entered into an employment agreement with Enza Guagenti, as our Chief Financial Officer. Ms. Guagenti's employment with the Company is on an "at will" basis, meaning that either Ms. Guagenti or the Company may terminate your employment at any time for any reason or no reason, without further obligation or liability, except that upon termination of Ms. Guagenti's employment by the Company other than for cause Ms. Guagenti will be entitled to severance equal to 3 months base salary. In the event that a) the Company hires a CFO other than yourself, and 2) within two years thereafter Ms. Guagenti's base salary is reduced below $115,000 per year, Ms. Guagenti may then within thirty days after the base salary reduction resign her position with the Company and collect the severance. Actinium Corporation agreed to pay an initial base salary of $90,000. Ms. Guagenti's annual base salary will be increased to one hundred fifteen thousand dollars ($115,000) on the six month anniversary of the start date. Thereafter, before the beginning of each calendar year during the term of her employment, beginning in January 2014, the board shall review the amount of Ms. Guagenti's base salary and performance bonus, and shall determine the appropriate adjustments to each component of her compensation for the following calendar year. The Company also agreed to grant to Ms. Guagenti an option grant to purchase 75,000 common shares of the Company. Such options will have an exercise price of $0.261 cents per share which is equal to fair market value as determined by the board on the date of the grant. Two percent (2%) of the options granted shall vest each month after the date of grant until fully vested. The term of all options granted under this Agreement will be for 10 years from the date of initial grant, subject to Ms. Guagenti's continuing service with the Company. On March 9, 2013, Ms. Guagenti resigned as Chief Financial Officer of the Company and Actinium Corporation. Purusant to the terms of the employment agreement, Ms. Guagenti did not receive any severance payments upon resignation.

**Severance Agreement**

On February 28, 2013, the Company entered into a Separation and Settlement Agreement with Mr. Talley (the "Separation Agreement"). The Separation Agreement, among other things, provides for a cash payment in two (2) equal installments the aggregate amount of two hundred fifty thousand dollars ($250,000), with the first payment of $125,000 occurring on March 8, 2013 and the second payment of $125,000 occurring on September 1, 2013. The Company will also pay Mr. Talley (i) a discretionary performance bonus of $60,000 for the period of August 15, 2012 to December 31, 2012 and (ii) COBRA continuation coverage under the Company's group health plan for six months. As part of the settlement Mr. Talley agreed to resign as a director from the Company and Actinium Corporation. The Separation Agreement also includes, subject to limited exceptions, mutual releases.

**Agreement with Dr. Mazanet**

On May 31, 2013, Dr. Rosemary Mazanet resigned as a director of the Company and Actinium Corporation, a subsidiary of the Company, to pursue other opportunities. Dr. Mazanet's decision to resign from the board of directors of the Company was not based upon any disagreement with the Company on any matter relating to the Company's operations, policies or practices as contemplated by Item 5.02(a) of Form 8-K.

On May 31, 2013, the Company and Actinium Corporation also entered into an agreement with Dr. Mazanet (the "Agreement") which, among other things, provides for a cash payment to Dr. Mazanet of $25,000 in full satisfaction for all amounts owed under the Consulting Agreement. The parties also agreed that Dr. Mazanet is entitled to a total of 83,250 vested Company options (the Options") which will be exercisable until the ten year anniversary of the grants, respectively. Dr. Mazanet agreed not to sell or otherwise transfer any shares of Company common stock underlying the Options or other securities of the Company owned by Dr. Mazanet until (i) the date that is the earlier of twelve (12) months from December 28, 2012; or (ii) six (6) months following the effective date of the Registration Statement filed by the Company with the Securities and Exchange Commission on March 15, 2013. Dr. Mazanet also resigned as a director from the Company and Actinium Corporation. The Agreement also includes, subject to limited exceptions, mutual releases, mutual non-

disparagement clauses, and a non-solicitation provision.

## SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table shows the beneficial ownership of our Common Stock as of January 22, 2014 held by (i) each person known to us to be the beneficial owner of more than five percent (5%) of any class of our shares; (ii) each director; (iii) each executive officer; and (iv) all directors and executive officers as a group.

Beneficial ownership is determined in accordance with the rules of the SEC, and generally includes voting power and/or investment power with respect to the securities held. Shares of Common Stock subject to options and warrants currently exercisable or which may become exercisable within 60 days of January 22, 2014, are deemed outstanding and beneficially owned by the person holding such options or warrants for purposes of computing the number of shares and percentage beneficially owned by such person, but are not deemed outstanding for purposes of computing the percentage beneficially owned by any other person. Except as indicated in the footnotes to this table, the persons or entities named have sole voting and investment power with respect to all shares of our Common Stock shown as beneficially owned by them.

The percentages below are based on fully diluted shares of our Common Stock equivalents as of January 22, 2014. Unless otherwise indicated, the principal address of each of the persons below is c/o Actinium Pharmaceuticals, Inc., 501 Fifth Avenue, New York, NY 10017.

| **Executive Officers and Directors** | **Number of Shares of Common Stock and Preferred Stock Beneficially Owned** | **Percentage of Ownership(a)** |
|---|---|---|
| Kaushik Dave, PhD | 0 | 0% |
| Dragan Cicic, MD | 258,413(1) | 1.04% |
| Dr. David Nicholson | 57,942(2) | 0.23% |
| Sandesh Seth | 183,345(3) | 0.74% |
| Richard I. Steinhart | 0 | 0% |
| Dr. Sergio Traversa | 21,781(4) | 0.09% |
| | | |
| **All Directors and Officers as a Group (4 persons)** | **521,481** | **2.1%** |
| **All other 5% holders** | | |
| Actinium Holdings Ltd. (5)<br>c/o Sterling Management Limited<br>P.O. Box HM 1029<br>Hamilton HM CX | 5,702,387 | 22.9% |

(a) Based on 24,903,150 shares of Common Stock outstanding as of January 22, 2014, and includes 400,000 shares of common stock of the Company that remained outstanding after the closing of the Share Exchange.

(1) Options granted to purchase an aggregate of 333,000 shares of Common Stock of the Company at an exercise price of $0.784 per share, options to purchase an aggregate of 99,900 shares of Common Stock of the Company at an exercise price of $1.50 per share, and options to purchase an aggregate of 81,784 shares of Common Stock of the Company at an exercise price of $1.35 per share. All shares are subject to vesting. 258,413 shares of Common Stock will have vested within 60 days of January 22, 2014.

(2) Options to purchase an aggregate of 49,950 shares of Common Stock of the Company at an exercise price of $0.784 per share and options to purchase an aggregate of 49,950 shares of Common Stock of the Company at an exercise price of $1.50 per share. All shares are subject to vesting. 57,942shares of Common Stock will have vested within 60 days of January 22, 2014.

(3) 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. Excludes warrants to purchase an aggregate of 375,556 shares of Common Stock of the Company at par value per share, exercisable on a cashless basis issued to Amrosan, LLC as the warrants are not exercisable upon less than 90 days notice. The holder may waive the 90 day exercise notice requirement by giving 65 days prior notice of such waiver. The shares available by exercise of this Warrant are also restricted and may not be sold or otherwise transferred until the earlier of twelve months from December 28, 2012, the closing date of the going Share Exchange; or for six months after the Registration Statement of which this prospectus is a part is declared effective. Excludes 353,023 warrants issued to Carnegie Hill Asset Partners and irrevocable trust linked to Mr. Seth's family and 721,068 warrants issued to Bioche Asset Management, LLC, a partnership in which the majority member interest is owned by the family of Mr. Seth whose terms are the same as those issued to Amrosan LLC. Also excludes warrants held by the Placement Agent or its affiliates in connection with the offering of common stock and Series A and Series B warrants that closed on December 19, 2012 (the "2012 Offering"), the Bridge Notes Financing, the Series E financing and by designees of Jamess Capital Group, LLC in connection with the Share Exchange. Also includes options to purchase an aggregate of 49,950 shares of Common Stock of the Company at an exercise price of $1.50 per share. All shares are subject to vesting. 18,981 shares of Common Stock will have vested within 60 days of January 22, 2014.

(4) Options to purchase an aggregate of 49,950 shares of Common Stock of the Company at an exercise price of $1.50 per share and options to purchase an aggregate of 20,000 shares of Common Stock of the Company at an exercise price of $3.60 per share. 21,781 shares of Common Stock will have vested within 60 days of January 22, 2014.

(5) Actinium Holdings Ltd., a Bermuda corporation ("AHL"), has entered the Share Exchange and a related Lock-up Agreement and is the record holder of the number of shares of Common Stock of the Company listed opposite its name. Michael Sheffrey has sole voting and investment power over the securities beneficially owned by Actinium Holdings Ltd. AHL is wholly owned by AHLB Holdings, LLC ("AHLB"), which in turn, is wholly owned by MSKCC. AHL, AHLB and MSKCC may be deemed to share investment and voting power and beneficial ownership of such shares. Investment power with respect to such shares is limited by AHL's agreement not to transfer its shares of Common Stock, subject to exceptions for certain related-party transfers, transfers to trusts and other private transfers, until, in general, the earlier of (i) December 28, 2013 (the first anniversary of the closing of the Share Exchange); or (ii) six (6) months following the effective date of the Registration Statement of which this prospectus is a part. AHL is entitled to certain demand and "piggyback" registration rights with respect to its shares of Common Stock. The shares to be registered by AHL will, however, in certain circumstances, be subject to "cutback" (or reduction of the number of shares includible in an underwritten registration) prior to the "cutback" of the shares being registered on behalf of investors in certain recent private placements of the Company.

## CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

**Transactions with Related Persons**

On January 18, 2001, Actinium Corporation entered into a Clinical Trial Agreement with MSKCC and Sloan-Kettering Institute of Cancer Research (SKI), an entity related to MSKCC. Through an indirect subsidiary, Actinium Holdings Ltd. (AHL), MSKCC has been a principal stockholder of the Company since April 2010. The agreement provided for the conduct by SKI/MSKCC of Phase 1/2 clinical trials of the use of 213Bi-Hu195and cytarabine for the treatment of acute myeloid leukemia and for Actinium Corporation's partial sponsorship of the study in exchange for access to data resulting from the study. Actinium Corporation was obligated to pay SKI (a) $10,000 for each completed case report on a completed subject, and (b) $2,500 for each case report on an incomplete subject. The trial enrolled 31 patients, was completed in 2007 and all the money due to MSKCC and SKI were paid in full.

On February 11, 2002, Actinium Corporation entered into a License, Development and Commercialization Agreement with SKI (the "License Agreement"). The agreement was amended in August 2006. Pursuant to the agreement, Actinium Corporation licenses certain intellectual property from SKI, including critical patents with respect to Actinium Corporation's core technology, and also supports ongoing research and clinical development of Actinium Corporation related drug candidates. Certain amounts due under this agreement were deferred and then forgiven under the forbearance-related arrangements described below. On June 19, 2011, Actinium Corporation nonetheless agreed to pay SKI (a) $50,000 in 2011, (b) $200,000 in 2012 and (c) $250,000 in 2013 under this agreement, in respect of the $50,000 annual maintenance fees and research payments. Since January 1, 2011, the Company has paid $100,000 for 2012 under this Agreement and as of December 31, 2012, the Company agreed to pay an additional $150,000 for research to be conducted in 2013 under this agreement.

On February 25, 2006, Actinium Corporation entered into a Clinical Trial Agreement with MSKCC and SKI. The agreement provides for the conduct by SKI/MSKCC of a Phase I clinical trials of the use of Actinium 225-HuM195 for the treatment of advanced myeloid malignancy and for Actinium Corporation's partial sponsorship of the study in exchange for access to data resulting from the study. Actinium Corporation is obligated to pay SKI (a) $10,000 for each completed case report on a completed subject, and (b) $2,500 for each case report on an incomplete subject. As of December 21, 2012, 18 subjects had been enrolled in this study, and the parties intend to attempt to enroll and additional 3 subjects. The maximum compensation for which Actinium Corporation is responsible for under the agreement is $328,000. Since the inception of the trial in 2006, Actinium Corporation has paid $180,000 and since January 1, 2011, Actinium Corporation has paid $70,000 under the agreement. As of December 31, 2012, no monies were due under this agreement. The trial is ongoing and further fees are likely to be accrued as patients are enrolled. In January and February 2012, two additional patients were treated in this trial. We anticipate enrollment of one more additional patient under this agreement in 2013 and closing the trial after that.

In April 2010, SKI agreed, on behalf of itself and its related or affiliated entities, including MSKCC, to forbear from collecting or otherwise enforcing Actinium Corporation's then outstanding obligations to those entities and similar obligations arising during a defined forbearance period. The initial outstanding obligations consisted of approximately $260,000 due under Actinium Corporation's license and clinical trials agreements with those entities. In June 2011, SKI agreed to forgive all current and future obligations subject to the forbearance in order to facilitate Actinium Corporation's financing efforts. The forbearance period terminated on October 30, 2011, when the Company satisfied a financing condition to the termination of the forbearance period by raising in excess of $3,000.000 in new equity financing. The total amount forgiven was approximately $360,000.

MSKCC agreed, subject to certain conditions, to utilize donated funds for certain clinical and preclinical programs and activities related to Actinium Corporation's drug development and clinical study programs, including the payment of certain costs and expenses that would otherwise have been borne by Actinium Corporation. The following is a summary of activities related to the MSKCC arrangements at December 31, 2011 and 2010:

| | 2012 | 2011 |
|---|---|---|
| Qualified R&D costs incurred by Actinium Corporation | $ - | $ 655,786 |
| Cash received from MSKCC | 237,834 | 966,341 |

As of December 31, 2011 and 2010, the Company had reimbursement receivables for costs incurred of $237,834 and $279,401 from MSKCC, respectively. These amounts have since been paid.

From July through October 2011, AHL agreed, in connection with Actinium Corporation's Stock offering, to waive its rights to anti-dilution adjustments in respect of its outstanding stock and its preemptive rights to purchase the Company's stock from the Stock Offering. AHL also agreed to the restructuring of its registration rights in favor of the private placement purchasers, the amendment of the stockholders agreement of Actinium Corporation (to permit, among other transactions, the share exchange) and the relinquishment of its rights to Board representation, although one director originally nominated by AHL continued to serve. Actinium agreed (i) not to reduce the indemnification, advancement of expenses and similar rights of present and former directors and officers of Actinium Corporation, (ii) until April 30, 2016 to maintain directors' and officers' liability insurance at least in the same manner and to the same extent as then in effect, and (iii) following any merger, asset transfer and certain other transactions to provide for the parity of such directors and officers in respect of indemnification, advancement of expenses and D&O liability insurance with such rights applicable to the non-continuing directors following such transactions.

On March 27, 2012, Actinium Corporation entered into an additional clinical trial agreement with Memorial Sloan-Kettering Cancer Center with respect to conducting a Phase 1/2 trial of combination therapy of low dose cytarabine and fractionated dose of Lintuzumab-Ac225. Actinium Corporation will pay $31,185 for each patient that has completed the clinical trial. Upon execution of the agreement, Actinium Corporation was required to pay a start-up fee of $79,623, which was paid on July 10, 2012. The total number of patients anticipated to be enrolled at MSKCC in this trial is 15.

On September 4, 2013, the Company entered into a letter agreement with Sloan-Kettering Institute for Cancer Research (SKI) to set forth the amount that the Company owes SKI for the period of 2011 to 2014. The total amount that the Company owes SKI for the period of 2011 to 2014 is $815,100 plus all relevant licensed intellectual property related pass through costs to be determined. The amount owed does not include amounts the Company may owe for patent expenses under the License Agreement (as defined above). During the period to 2011 to 2013, the Company paid SKI a total of $321,500, reducing the total amount owed for the period of 2011 to 2014 to $493,600.

AHL has agreed not to transfer its shares of Common Stock, subject to exceptions for certain related-party transfers, transfers to trusts and other private transfers, until, in general, the earlier of (i) December 28, 2013 (the first anniversary of the closing date of the Share Exchange); or (ii) six (6) months following the effective date of the Registration Statement of which this prospectus is a part. AHL will be entitled to certain demand and "piggyback" registration rights with respect to the shares of Common Stock that it may acquire. The shares to be registered by AHL will, however, in certain circumstances, be subject to "cutback" (or reduction of the number of shares includible in an underwritten registration) prior to the "cutback" of the shares being registered on behalf of investors in certain recent private placements.

On January 1, 2012, Actinium Corporation entered into a Consulting Services Agreement with Dr. Rosemary Mazanet, a former director of Cactus. Pursuant to the agreement, Dr. Mazanet provided, among other things, consulting services in the areas of implementation of the Actimab™-A trial including all aspects of study initiation until first patient in at each clinical site. Dr. Mazanet received compensation of $100,000 per year. Since January 1, 2011, Dr. Mazanet has received options to purchase 225,000 shares of common stock of Actinium. Dr. Mazanet resigned as a director of the Company on May 31, 2013.

On August 7, 2012, Actinium Corporation entered into an engagement agreement with Laidlaw & Company (UK) Ltd. (the "Placement Agent") for the 2012 Offering, of which Mr. Seth, a director of the Company, is Head of Healthcare Investment Banking. Pursuant to the agreement, the Placement Agent was engaged as the exclusive agent for the 2012 Offering. None of the Company's current officers or directors had a prior relationship or affiliation with the Company prior to the closing of the Share Exchange. In consideration for its services, the Placement Agent received (a) a cash fee equal to 10% of the gross proceeds raised in the 2012 Offering, (b) a non-accountable expense reimbursement equal to 2% of the gross proceeds raised in the 2012 Offering, and (c) reimbursement of $100,000 for legal expenses incurred by the Placement Agent. The Placement Agent or its designees have also received warrants to purchase shares of the Company's Common Stock in an amount equal to 10% of the shares of Common Stock issued as part of the Units sold in the 2012 Offering and the shares of Common Stock issuable upon exercise of the B Warrants included in such Units. The Placement Agent will also receive 5% solicitation fee for any Warrants exercised as a result of being called for redemption by the Company. Upon the final closing of the 2012 Offering the Placement Agent was engaged by the Company to provide certain financial advisory services to the Company for a period of at least 6 months for a monthly fee of $25,000. This financial advisory services terminated in March 2013. The agreement also provides that (i) if the Company consummates any merger, acquisition, business combination or other transaction (other than the Share Exchange) with any party introduced to it by the Placement Agent, the Placement Agent would receive a fee equal to 10% of the aggregate consideration in such transactions, and (ii) if, within a period of 12 months after termination of the advisory services described above, the Company requires a financing or similar advisory transaction the Placement Agent will have the right to act as the Company's financial advisor and investment banker in such financing or transaction pursuant to a set fee schedule set forth in the August 7, 2012 engagement agreement. For a period ending one year after the expiration of all lock-up agreements entered into in connection with the Share Exchange, any change in the size of the Company board of directors must be approved by the Placement Agent. The Placement Agent also was engaged by Actinium Corporation as placement agent for its Stock Offering and notes financing in 2011 and, as a part of the fee for that engagement, designees of the Placement Agent also hold warrants to purchase 1,245,226 shares of the Company's Common Stock.

On May 9, 2011, Actinium Corporation entered into a transaction management agreement with Jamess Capital Group, LLC. (formerly known as Amerasia Capital Group, LLC), a consulting firm affiliated with Mr. Sandesh Seth, a Director of the Company. Mr. Seth is a Managing Partner of the consulting firm some of whose member interests are held by entities owned by officers and employees of the Placement Agent. None of the Company's current officers or directors had a prior relationship or affiliation with the Company prior to the closing of the Share Exchange. Pursuant to the agreement, the management firm was engaged to provide consulting services to Actinium Corporation related to the consummation of a going public transaction for Actinium. The management firm received a monthly fee of $12,500 which is terminable by the Company three months after the effective date of the going public transaction and designees of Jamess, including entities affiliated with Mr. Seth, were issued warrants to purchase common stock equal to 10% of the fully-diluted capital stock of the Company as of the effective date of the going public transaction. The fully diluted shares for this calculation included all issued and outstanding shares as well as those reserved under the Employee Stock Option Plan. Jamess Capital Group does not retain beneficial ownership of the warrants as they were issued to designess of the members in amounts which do not qualify either Jamess or the warrant holders for inclusion in the beneficial ownership table. The warrants contain a provision wherein the holder may waive the 90 day exercise notice requirement by giving 65 days prior notice of such waiver. The shares available by exercise of this Warrant are also restricted and may not be sold or otherwise transferred until the earlier of twelve months from December 28, 2012, the closing date of the Share Exchange; or for six months after the Registration Statement of which this prospectus is a party declared effective. The consulting firm is also eligible to be reimbursed upon the submission of proper documentation for ordinary and necessary out-of-pocket expenses not to exceed $5,000 per month. The transaction management agreement was terminated on March 31, 2013.

In 2010, Actinium Corporation entered into an agreement with Guagenti & Associates LLC ("G&A"). G&A is affiliated with Enza Guagenti, the former Chief Financial Officer of the Company. Pursuant to the agreement, API leases storage space in Newark, NJ from G&A. The rent is $300 per month. The agreement is on a month-to-month basis and requires a 45-day notice by either party to cancel. Since January 1, 2011, the Company has paid $7,200 pursuant to this agreement. Ms. Guagenti resigned as our Chief Financial Officer on March 9, 2013.

On December 9, 2013, the Company entered into an engagement agreement with Laidlaw & Company (UK) Ltd. (the "Placement Agent") for the December 2013 Offering, of which Mr. Seth, a director of the Company, is Head of Healthcare Investment Banking. Pursuant to the agreement, the Placement Agent was engaged as the exclusive agent for the December 2013 Offering. In consideration for its services, the Placement Agent received (a) a cash fee equal to 10% of the gross proceeds raised in the December 2013 Offering, and (b) a non-accountable expense reimbursement equal to 2% of the gross proceeds raised in the December 2013 Offering,. The Placement Agent or its designees have also received warrants to purchase shares of the Company's Common Stock in an amount equal to 10% of the shares of Common Stock issued as part of the Units sold in the December 2013 Offering and the shares of Common Stock issuable upon exercise of the common stock warrants included in such Units. The Placement Agent will also receive the same fee and expense schedule for any cash exercise of Warrants within 6 months of the final closing of the December 2013 Offering and a 5% solicitation fee for any Warrants exercised as a result of being called for redemption by the Company. Upon the final closing of the December 2013 Offering the Placement Agent has been engaged by the Company to provide certain financial advisory services to the Company for a period of 6 months, unless extended by mutual consent between the Company and the Placement Agent for a monthly fee of $25,000. The agreement also provides

that (i) if the Company consummates any merger, acquisition, business combination or other transaction (other than the Share Exchange) with any party introduced to it by the Placement Agent, the Placement Agent would receive a fee equal to 10% of the aggregate consideration in such transactions, and (ii) if, within a period of 12 months after termination of the advisory services described above, the Company requires a financing or similar advisory transaction the Placement Agent will have the right to act as the Company's financial advisor and investment banker in such financing or transaction pursuant to a set fee schedule set forth in the December 9, 2013 engagement agreement.

**Non-Competition Agreements**

Our executive officers have signed non-competition agreements, which provide that all inventions become the immediate property of the Company and require invention assignments. The agreements provide that the executive officers will hold proprietary information in the strictest confidence and not use the confidential information for any purpose not expressly authorized by us.

## DESCRIPTION OF SECURITIES

### Authorized Capital Stock

### Introduction

In the discussion that follows, we have summarized selected provisions of our certificate of incorporation, bylaws and Delaware law relating to our capital stock. This summary is not complete. This discussion is subject to the relevant provisions of Delaware law and is qualified in its entirety by reference to our articles of incorporation and our bylaws. You should read the provisions of our certificate of incorporation and our bylaws as currently in effect for provisions that may be important to you.

### Authorized Capital Stock

The total authorized shares of capital stock of the Company currently consists of 200,000,000 shares of common stock, par value $0.001 per share, and 50,000,000 shares of preferred stock, par value $0.001 per share.

### Common Stock

Holders of our common stock are entitled to receive notice of and to attend all meetings of our stockholders, and to one vote for each share on all matters submitted to a stockholder vote. Holders of common stock do not have cumulative voting rights. Therefore, holders of a majority of the shares of common stock voting for the election of directors can elect all of the directors. Holders of our common stock representing a majority of the voting power of our capital stock issued, outstanding and entitled to vote, represented in person or by proxy, are necessary to constitute a quorum at any meeting of our stockholders. A vote by the holders of a majority of our outstanding shares is required to effectuate certain fundamental corporate changes such as liquidation, merger or an amendment to our articles of incorporation.

In the event of liquidation, dissolution or winding up, each outstanding share entitles its holder to participate pro rata in all assets that remain after payment of liabilities and after providing for each class of stock, if any, having preference over the common stock. Holders of our common stock have no pre-emptive rights, no conversion rights and there are no redemption provisions applicable to our common stock.

As of January 22, 2014 there were 24,903,150 shares of Common Stock issued and outstanding, which were held by 349 holders of record.

### Dividends

Holders of common stock are entitled to share in all dividends that the board of directors, in its discretion, declares from legally available funds. We have not paid any cash dividends on our Common Stock and do not plan to pay any such dividends in the foreseeable future. We currently intend to use all available funds to develop our business. We can give no assurances that we will ever have excess funds available to pay dividends.

### Preferred Stock

We are authorized to issue up to 50,000,000 shares of preferred stock, par value $0.001 per share, in one or more series as may be determined by our Board of Directors, who may establish, from time to time, the number of shares to be included in each series, may fix the designation, powers, preferences and rights of the shares of each such series and any qualifications, limitations or restrictions thereof. Any preferred stock so issued by the Board may rank senior to the common stock with respect to the payment of dividends or amounts upon liquidation, dissolution or winding up of us, or both. Moreover, while providing desirable flexibility in connection with possible acquisitions and other corporate purposes, under certain circumstances, the issuance of preferred stock or the existence of the unissued preferred stock might tend to discourage or render more difficult a merger or other change of control. We currently do not have any preferred stock outstanding.

### Warrants

*Common Stock Warrants*

The Common Stock Warrants have a five year term from each closing that occurred on December 27, 2013 and January 10, 2014, and are exercisable for an aggregate of up to 276,529 shares of the Company's common stock at an initial per share exercise price of $9.00, subject to adjustment as set forth below. The Company may also call this warrant for redemption upon written notice to all warrant holders at any time the closing price of the common stock exceeds $15.00 (as may be adjusted pursuant to warrant agreement) for 20 consecutive trading days, as reported by Bloomberg, provided at such time there is an effective registration statement covering the resale of the shares underlying the warrants. In the 60 business days following the date the redemption notice is deemed given in accordance with the agreement, investors may choose to exercise this warrant or a portion of the warrant by paying the then applicable exercise price per share for every share exercised. Any shares not exercised on the last day of the exercise period will be redeemed by the Company at $0.001 per share.

The exercise prices of the Common Stock Warrants are subject to adjustment upon certain events. If the Company at any time while the warrants remain outstanding and unexpired shall declare a dividend or make a distribution on the outstanding Common Stock payable in shares of its capital stock, or split, subdivide or combine the securities as to which purchase rights under this Warrant exist into a different number of securities of the same class, the exercise price for such securities shall be proportionately decreased in the case of a dividend, split or subdivision or proportionately increased in the case of a combination.

*Series A & Series B Warrants*

The Series A Warrants had a 120 day term from January 28, 2013 and were exercisable for an aggregate of up to 3,118,968 shares of the Company's common stock at an initial per share exercise price of $1.65, subject to adjustment as set forth below (anti-dilution). The Company also had a right of first refusal on the holder's sale of the warrant shares. The Series A Warrants either expired on May 28, 2013 or were exercise prior to expiration.

The Series B Warrants have a five year term from January 28, 2013 and are exercisable for an aggregate of up to 1,59,484 shares of the Company's common stock at an initial per share exercise price of $2.48, subject to adjustment as set forth below. These warrants have a cashless exercise provision. The Company also has a right of first refusal on the holder's sale of the warrant shares. The Company may also call this warrant for redemption upon written notice to all warrant holders at any time the closing price of the common stock exceeds $1.50 (as may be adjusted pursuant to warrant agreement) for 20 consecutive trading days, as reported by Bloomberg, provided at such time there is an effective registration statement covering the resale of the shares underlying the warrants. In the 60 business days following the date the redemption notice is deemed given in accordance with the agreement, investors may choose to exercise this warrant or a portion of the warrant by paying the then applicable exercise price per share for every share exercised. Any shares not exercised on the last day of the exercise period will be redeemed by the Company at $0.001 per share.

The exercise prices of the Series A Warrants and Series B Warrants are subject to adjustment upon certain events. If the Company at any time while the warrants remain outstanding and unexpired shall declare a dividend or make a distribution on the outstanding Common Stock payable in shares of its capital stock, or split, subdivide or combine the securities as to which purchase rights under this Warrant exist into a different number of securities of the same class, the exercise price for such securities shall be proportionately decreased in the case of a dividend, split or subdivision or proportionately increased in the case of a combination.

In addition, for so long as there are any warrants outstanding, if and whenever at any time and from time to time after the warrant issue date, as applicable, the Company shall issue any shares of common stock for no consideration or a consideration per share less than the exercise price, as applicable, then, forthwith upon such issue or sale, the warrants shall be subject to a proportional adjustment determined by multiplying such warrant exercise price by the following fraction:

$$\frac{N(0) + N(1)}{N(0) + N(2)}$$

Where:

N(0) = the number of shares of common stock outstanding (calculated on a Fully Diluted Basis) immediately prior to the issuance of such additional shares of common stock or common stock Equivalents;

N(1) = the number of shares of common stock which the aggregate consideration, if any (including the aggregate Net Consideration Per Share with respect to the issuance of common stock equivalents), received or receivable by the Company for the total number of such additional shares of common stock so issued or deemed to be issued would purchase at the warrant exercise price, as applicable, in effect immediately prior to such issuance; and

N(2) = the number of such additional shares of common stock so issued or deemed to be issued.

*Stock Offering Warrants*

The Stock Offering Warrants have a term ending on January 31, 2019 and are exercisable for an aggregate of up to 2,700,971 shares of the Company's common stock at an initial per share exercise price of $0.78, subject to adjustment as set forth below (anti-dilution). The Company also has a right of first refusal on the holder's sale of the warrant shares.

These warrants have a cashless exercise provision. The Company also has a right of first refusal on the holder's sale of the warrant shares. The exercise prices of the Stock Offering Warrants are subject to adjustment upon certain events. If the Company at any time while the warrants remain outstanding and unexpired shall declare a dividend or make a distribution on the outstanding Common Stock payable in shares of its capital stock, or split, subdivide or combine the securities as to which purchase rights under this Warrant exist into a different number of securities of the same class, the exercise price for such securities shall be proportionately decreased in the case of a dividend, split or subdivision or proportionately increased in the case of a combination.

In addition, for so long as there are any warrants outstanding, if and whenever at any time and from time to time after the warrant issue date, as applicable, the Company shall issue any shares of common stock for no consideration or a consideration per share less than the exercise price, as applicable, then, forthwith upon such issue or sale, the warrants shall be subject to a proportional adjustment determined by multiplying such warrant exercise price by the following fraction:

$$\frac{N(0) + N(1)}{N(0) + N(2)}$$

Where:

N(0) = the number of shares of common stock outstanding (calculated on a Fully Diluted Basis) immediately prior to the issuance of such additional shares of common stock or common stock Equivalents;

N(1) = the number of shares of common stock which the aggregate consideration, if any (including the aggregate Net Consideration Per Share with respect to the issuance of common stock equivalents), received or receivable by the Company for the total number of such additional shares of common stock so issued or deemed to be issued would purchase at the warrant exercise price, as applicable, in effect immediately prior to such issuance; and

N(2) = the number of such additional shares of common stock so issued or deemed to be issued.

*Consulting Firm Warrants*

The Consulting Firm Warrants have a term ending on December 17, 2019 and are exercisable for an aggregate of up to 3,755,562 shares of the Company's common stock. These warrants may not be exercised by the Holder upon less than 90 days prior written notice of such exercise and provided further that that the Holder may elect, in its sole discretion, to waive the Prior Notice Requirement, in whole or in part, upon 65 days prior written notice of such waiver. These warrants have a cashless exercise provision and were issued at an initial per share exercise price of $0.001, subject to adjustment as if the Company at any time while the warrants remain outstanding and unexpired shall declare a dividend or make a distribution on the outstanding Common Stock payable in shares of its capital stock, or split, subdivide or combine the securities as to which purchase rights under this Warrant exist into a different number of securities of the same class, the exercise price for such securities shall be proportionately decreased in the case of a dividend, split or subdivision or proportionately increased in the case of a combination. The warrants are also subject to piggy-back registration rights. The holder has also agreed that following the consummation of the pubco transaction (which occurred on December 28, 2012), the holder will not sell or otherwise transfer any shares of common stock of the Company owned by holder, as a result of the exercise of the warrant until the date that is the earlier of (i) twelve (12) months from the closing date of the pubco transaction; or (ii) six (6) months following the effective date of the Registration Statement of which this prospectus is a part.

*Placement Agent Warrants*

The Company issued three types of warrants to the Placement Agent, Placement Agent Stock Offering Warrants, Placement Agent Common Stock Warrants, and Placement Agent December 2013 Offering Warrants.

Placement Agent Stock Offering Warrants

The Placement Agent Stock Offering Warrants have a term ending on January 31, 2019 and are exercisable for an aggregate of up to 1,245,210 shares of the Company's common stock at an initial per share exercise price of $0.78, subject to adjustment as set forth below (anti dilution). These warrants have a cashless exercise provision. The exercise prices of the warrants are subject to adjustment upon certain events. If the Company at any time while the warrants remain outstanding and unexpired shall declare a dividend or make a distribution on the outstanding Common Stock payable in shares of its capital stock, or split, subdivide or combine the securities as to which purchase rights under this Warrant exist into a different number of securities of the same class, the exercise price for such securities shall be proportionately decreased in the case of a dividend, split or subdivision or proportionately increased in the case of a combination.

In addition, for so long as there are any warrants outstanding, if and whenever at any time and from time to time after the warrant issue date, as applicable, the Company shall issue any shares of common stock for no consideration or a consideration per share less than the exercise price, as applicable, then, forthwith upon such issue or sale, the warrants shall be subject to a proportional adjustment determined by multiplying such warrant exercise price by the following fraction:

$$\frac{N(0) + N(1)}{N(0) + N(2)}$$

Where:

N(0) = the number of shares of common stock outstanding (calculated on a Fully Diluted Basis) immediately prior to the issuance of such additional shares of common stock or common stock Equivalents;

N(1) = the number of shares of common stock which the aggregate consideration, if any (including the aggregate Net Consideration Per Share with respect to the issuance of common stock equivalents), received or receivable by the Company for the total number of such additional shares of common stock so issued or deemed to be issued would purchase at the warrant exercise

price, as applicable, in effect immediately prior to such issuance; and

N(2) = the number of such additional shares of common stock so issued or deemed to be issued.

Placement Agent Common Stock Warrants

The Placement Agent Common Stock Warrants have a five year term from January 28, 2013 and are exercisable for an aggregate of up to 467,845 shares of the Company's common stock at an initial per share exercise price of $2.48, subject to adjustment as set forth below. These warrants have a cashless exercise provision. The Company may also call this warrant for redemption upon written notice to all warrant holders at any time the closing price of the common stock exceeds $1.50 (as may be adjusted pursuant to warrant agreement) for 20 consecutive trading days, as reported by Bloomberg, provided at such time there is an effective registration statement covering the resale of the shares underlying the warrants. In the 60 business days following the date the redemption notice is deemed given in accordance with the agreement, investors may choose to exercise this warrant or a portion of the warrant by paying the then applicable exercise price per share for every share exercised. Any shares not exercised on the last day of the exercise period will be redeemed by the Company at $0.001 per share.

The exercise prices of the warrants are subject to adjustment upon certain events. If the Company at any time while the warrants remain outstanding and unexpired shall declare a dividend or make a distribution on the outstanding Common Stock payable in shares of its capital stock, or split, subdivide or combine the securities as to which purchase rights under this Warrant exist into a different number of securities of the same class, the exercise price for such securities shall be proportionately decreased in the case of a dividend, split or subdivision or proportionately increased in the case of a combination.

In addition, for so long as there are any warrants outstanding, if and whenever at any time and from time to time after the warrant issue date, as applicable, the Company shall issue any shares of common stock for no consideration or a consideration per share less than the exercise price, as applicable, then, forthwith upon such issue or sale, the warrants shall be subject to a proportional adjustment determined by multiplying such warrant exercise price by the following fraction:

$$\frac{N(0) + N(1)}{N(0) + N(2)}$$

Where:

N(0) = the number of shares of common stock outstanding (calculated on a Fully Diluted Basis) immediately prior to the issuance of such additional shares of common stock or common stock Equivalents;

N(1) = the number of shares of common stock which the aggregate consideration, if any (including the aggregate Net Consideration Per Share with respect to the issuance of common stock equivalents), received or receivable by the Company for the total number of such additional shares of common stock so issued or deemed to be issued would purchase at the warrant exercise price, as applicable, in effect immediately prior to such issuance; and

N(2) = the number of such additional shares of common stock so issued or deemed to be issued.

Placement Agent December 2013 Offering Warrants

The Placement Agent December 2013 Offering Warrants have a five year term from January 10, 2014 and are exercisable for an aggregate of up to 138,265 shares of the Company's common stock at an initial per share exercise price of $9.00, subject to adjustment as set forth below. These warrants have a cashless exercise provision. The Company may also call this warrant for redemption upon written notice to all warrant holders at any time the closing price of the common stock exceeds $15.00 (as may be adjusted pursuant to warrant agreement) for 20 consecutive trading days, as reported by Bloomberg, provided at such time there is an effective registration statement covering the resale of the shares underlying the warrants. In the 60 business days following the date the redemption notice is deemed given in accordance with the agreement, investors may choose to exercise this warrant or a portion of the warrant by paying the then applicable exercise price per share for every share exercised. Any shares not exercised on the last day of the exercise period will be redeemed by the Company at $0.001 per share.

The exercise prices of the warrants are subject to adjustment upon certain events. If the Company at any time while the warrants remain outstanding and unexpired shall declare a dividend or make a distribution on the outstanding Common Stock payable in shares of its capital stock, or split, subdivide or combine the securities as to which purchase rights under this Warrant exist into a different number of securities of the same class, the exercise price for such securities shall be proportionately decreased in the case of a dividend, split or subdivision or proportionately increased in the case of a combination.

**Anti-takeover Effects of Our Articles of Incorporation and By-laws**

Our certificate of incorporation and bylaws include provisions that may have the effect of delaying, deferring or preventing another party from acquiring control of us. These provisions encourage persons considering unsolicited tender offers or other unilateral takeover proposals to negotiate with our board of directors rather than pursue non-negotiated takeover attempts.

*No Cumulative Voting Rights.* According to our Bylaws and Articles of Incorporation, neither the holders of our common stock nor the holders of our preferred stock have cumulative voting rights in the election of our directors. The combination of the present ownership by a few stockholders of a significant portion of our issued and outstanding common stock and lack of cumulative voting makes it more difficult for other stockholders to replace our Board of Directors or for a third party to obtain control of our Company by replacing our Board of Directors.

*Undesignated preferred stock.* We believe the availability of the preferred stock under our certificate of incorporation provides us with flexibility in addressing corporate issues that may arise. The existence of authorized but unissued shares of preferred stock may enable our board of directors to render more difficult or discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise. For example, if in the due exercise of its fiduciary obligations, our board of directors were to determine that a takeover proposal is not in the best interests of our stockholders, our board of directors could issue shares of preferred stock without stockholder approval in one or more private offerings or other transactions that might dilute the voting or other rights of the proposed acquirer or insurgent stockholder or stockholder group. In this regard, our certificate of incorporation grants our board of directors broad power to establish the rights and preferences of authorized and unissued shares of preferred stock. Our board of directors will make any determination to issue shares based on its judgment as to our and our stockholders' best interests.

*Staggered Board.* Pursuant to our Articles of Incorporation our directors are divided into three classes, designated Class I, Class II and Class III. Class I shall consists of two independent directors, Class II shall consist of two directors that were appointed as directors to Actinium Corporation by the holders of the former Series E preferred stock holders of Actinium Corporation, and Class III shall consist of the chief executive officer. Each director shall serve a term ending on the date of the third annual meeting of shareholders following the annual meeting at which the director was elected. Notwithstanding the foregoing, each director shall serve until his successor is duly elected and qualified, or until his or her retirement, death, resignation or removal. In order to implement a staggered board of directors, Class I shall serve a six month term from the date of incorporation; Class II shall serve an 18 month term from the date of incorporation; and Class II shall serve a 30 month term from the date of incorporation. Directors elected at each annual meeting commencing in 2013 shall be elected for a three year term as specified above.

**Anti-takeover Effects of Delaware Law**

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.

**Listing**

Our common stock is listed on the OTCQB under the symbol "ATNM."

**Transfer Agent**

The transfer agent and registrar for our common stock is Action Stock Transfer Corporation. The transfer agent's address is 2469 E. Fort Union Boulevard, Suite 214, Salt Lake City, UT 84121, and its telephone number is (801) 274-1088.

## PLAN OF DISTRIBUTION

The common shares being offered for resale by the selling stockholders consist of 1,382,649 shares. We will pay any fees and expenses incurred by us incident to the registration of the securities.

We also have a resale registration statement that was declared effective by the Securities and Exchange Commission on November 8, 2013. The November 2013 prospectus covers the sale by the selling stockholders of up to (i) 16,162,319 shares of common stock, par value $0.001 per share, held by the selling stockholders, (ii) 1,559,438 shares of our common stock issuable upon exercise of Series B warrants held by the selling stockholders at an exercise price of $2.48 per share, (iii) 2,673,652 shares of our common stock issuable upon exercise of the 2011 stock offering warrants held by the selling stockholders at an exercise price of $0.78 per share, (iv) 3,755,562 shares of our common stock issuable upon exercise of consulting firm warrants held by the selling stockholders at an exercise price of $0.01 per share, (v) 1,120,499 shares of our common stock issuable upon exercise of placement agent warrants held by the selling stockholders at an exercise price of $0.78 per share, (vi) 464,027 shares of our common stock issuable upon exercise of placement agent warrants held by the selling stockholders at an exercise price of $2.48 per share.

Each selling stockholder of the securities and any of their pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their securities covered hereby on the OTCQB 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.

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 Securities Exchange Act of 1934, as amended (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).

## SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering there has been a limited public market for our common stock, and a significant public market for our common stock may never develop or be sustained after this offering. We cannot predict the effect, if any, that market sales of shares or the availability of shares for sale will have on the market price prevailing from time to time. Only a limited number of shares will be available for sale shortly after this offering due to contractual and legal restrictions on resale. However, sales of our common stock in the public market after the restrictions lapse, or the perception that these sales may occur, could adversely affect the market price of our common stock and our ability to raise equity capital in the future.

Upon completion of this offering, we expect to have 25,179,682 shares of common stock outstanding. The 1,382,649 shares of common stock being sold in this offering will be freely tradable without restriction or further registration under the Securities Act, unless the shares are purchased by "affiliates" of our company, as that term is defined in Rule 144 of the Securities Act. All remaining shares were issued and sold by us in private transactions and are eligible for public sale only if registered under the Securities Act, or if they qualify for an exemption from registration, including, among others, the exemption provided by Rules 144 promulgated by the SEC under the Securities Act.

*Restrictions on the Use of Rule 144 by Shell Companies or Former Shell Companies*

Rule 144 is not available for resale of securities issued by any shell companies (other than business combination-related shell companies) or any issuer that has been at any time previously a shell company. The SEC has provided an exception to this prohibition, however, if the following conditions are met:

- the issuer of the securities that was formerly a shell company has ceased to be a shell company;
- the issuer of the securities is subject to the reporting requirements of Section 13 or 15(d) of the Exchange Act;
- the issuer of the securities has filed all Exchange Act reports and materials required to be filed, as applicable, during the preceding 12 months (or such shorter period that the issuer was required to file such reports and materials), other than Form 8-K reports; and
- at least one year has elapsed from the time that the issuer filed current Form 10 type information with the SEC reflecting its status as an entity that is not a shell company.

As a result, none of our stockholders is currently able to sell shares of our common stock in reliance on Rule 144. Assuming we continue to meet the requirements set forth above, Rule 144 will become available to our stockholders one year from the date we filed the information required in SEC Form 10. Our stockholders may currently sell their shares of our common stock only pursuant to a registration statement that has been declared effective under the Securities Act or pursuant to another exemption from registration.

## LEGAL MATTERS

The validity of the shares of common stock offered by this prospectus and certain other legal matters as to Delaware law will be passed upon for us by Hiscock & Barclay, LLP, Syracuse, New York.

## EXPERTS

Our audited consolidated financial statements appearing in this prospectus and registration statement have been audited by GBH CPAs, PC, an independent registered public accounting firm, as set forth in their report thereon appearing elsewhere herein and in the registration statement, and are included in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

## WHERE YOU CAN FIND MORE INFORMATION

We filed with the SEC 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 SEC. Our filings with the SEC are available to the public on the SEC'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 SEC 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 SEC's prescribed rates, any document we file with the SEC, including the registration statement (and its exhibits) of which this prospectus is a part, at the SEC's Public Reference Room located at 100 F Street, N.E., Washington, D.C. 20549. You can call the SEC at 1-800-SEC-0330 to obtain information on the operation of the Public Reference Room.

## FINANCIAL STATEMENTS

**Actinium Pharmaceuticals, Inc.**
**For period ended September 30, 2013**

The accompanying financial statements have been prepared by the Company and are unaudited. In the opinion of management, all adjustments (which include all normal recurring adjustments) necessary to present fairly the financial position, results of operations and cash flows at September 30, 2013 and 2012 and for the periods then ended have been made. Certain information and footnote disclosures normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States of America have been condensed or omitted. It is suggested that these financial statements be read in conjunction with the financial statements and notes thereto included in the Company's audited financial statements for the year ended December 31, 2012. The results of operations for the period ended September 30, 2013 are not necessarily indicative of the operating results for the full year.

**Actinium Pharmaceuticals, Inc.**
**(Formerly Cactus Ventures, Inc.)**
**(A Development Stage Company)**
**Consolidated Balance Sheets**
**(Unaudited)**

| | September 30, 2013 | December 31, 2012 |
|---|---|---|
| **Assets** | | |
| **Current Assets:** | | |
| Cash and cash equivalents | $ 3,990,063 | $ 5,618,669 |
| Prepaid expenses and other current assets | 53,000 | 167,143 |
| **Total Current Assets** | 4,043,063 | 5,785,812 |
| Property and equipment, net of accumulated depreciation | 6,918 | 3,010 |
| **Total Assets** | **$ 4,049,981** | **$ 5,788,822** |
| **Liabilities and Stockholders' Equity** | | |
| **Current Liabilities:** | | |
| Accounts payable and accrued expenses | $ 312,001 | $ 897,044 |
| Accounts payable and accrued expenses - related party | 375,686 | 31,185 |
| Note payable | - | 140,000 |
| Derivative liabilities | 2,757,966 | 3,574,958 |
| **Total Current Liabilities** | 3,445,653 | 4,643,187 |
| **Total Liabilities** | 3,445,653 | 4,643,187 |
| **Commitments and contingencies** | | |
| **Stockholders' Equity:** | | |
| Preferred stock, $0.001 par value; 10,000,000 authorized | | |
| 0 shares issued and outstanding | - | - |
| Common stock, $0.001 par value; 100,000,000 shares authorized; | | |
| 23,656,582 and 21,391,665 shares issued and outstanding, respectively | 23,657 | 21,392 |
| Additional paid in capital | 61,218,085 | 56,867,706 |
| Deficit accumulated during the development stage | (60,637,414) | (55,743,463) |
| **Total Stockholders' Equity** | 604,328 | 1,145,635 |
| **Total Liabilities and Stockholders' Equity** | **$ 4,049,981** | **$ 5,788,822** |

See accompanying notes to consolidated financial statements.

**Actinium Pharmaceuticals, Inc.**
**(Formerly Cactus Ventures, Inc.)**
**(A Development Stage Company)**
**Consolidated Statements of Operations**
**(Unaudited)**

| | For the three months ended September 30, | | For the nine months ended September 30, | | For the Period from June 13, 2000 (Inception) to September 30, |
|---|---|---|---|---|---|
| | 2013 | 2012 | 2013 | 2012 | 2013 |
| **Revenue** | $ - | $ - | $ - | $ - | $ - |
| **Operating expenses:** | | | | | |
| Research and development, net of reimbursements | 778,232 | 1,677,301 | 2,373,200 | 2,723,459 | 28,793,719 |
| General and administrative | 830,730 | 722,037 | 2,730,233 | 1,520,221 | 27,235,208 |
| Depreciation and amortization expense | - | 112 | - | 429 | 3,262,462 |
| Loss on disposition of equipment | - | - | 4,122 | - | 554,308 |
| **Total operating expenses** | 1,608,962 | 2,399,450 | 5,107,555 | 4,244,109 | 59,845,697 |
| **Loss from operations** | (1,608,962) | (2,399,450) | (5,107,555) | (4,244,109) | (59,845,697) |
| **Other income (expense):** | | | | | |
| Interest expense | (1,299) | (318,623) | (2,508) | (952,241) | (1,967,215) |
| Gain on extinguishment of liability | - | - | - | - | 260,000 |
| Change in fair value - derivative liabilities | 189,348 | (294,381) | 216,112 | (287,604) | 915,498 |
| **Total other income (expense)** | 188,049 | (613,004) | 213,604 | (1,239,845) | (791,717) |
| **Net loss** | **$ (1,420,913)** | **$ (3,012,454)** | **$ (4,893,951)** | **$ (5,483,954)** | **$ (60,637,414)** |
| **Net loss per common share - basic and diluted** | $ (0.06) | $ (3.76) | $ (0.22) | $ (6.84) | |
| **Weighted average number of common shares outstanding - basic and diluted** | 23,601,895 | 801,799 | 22,401,711 | 801,799 | |

See accompanying notes to consolidated financial statements.

**Actinium Pharmaceuticals, Inc.**
**(Formerly Cactus Ventures, Inc.)**
**(A Development Stage Company)**
**Consolidated Statements of Cash Flows**
**(Unaudited)**

| | For the Nine Months Ended September 30, 2013 | For the Nine Months Ended September 30, 2012 | For the Period from June 13, 2000 (Inception) to September 30, 2013 |
|---|---|---|---|
| **Cash Flows From Operating Activities:** | | | |
| Net loss | $ (4,893,951) | $ (5,483,954) | $ (60,637,414) |
| Adjustments to reconcile net loss to net cash provided by (used in) operating activities: | | | |
| Stock-based compensation expense | 284,371 | 312,500 | 6,336,407 |
| Depreciation expense | - | 429 | 3,262,462 |
| Loss on disposition of equipment | 4,122 | - | 554,308 |
| Amortization of debt discount | - | 678,116 | 900,000 |
| Amortization of deferred financing costs | - | 219,725 | 292,692 |
| Gain on extinguishment of liability | - | - | (260,000) |
| Change in fair value derivative liabilities | (216,112) | 287,604 | (915,498) |
| Changes in operating assets and liabilities: | | | |
| (Increase) decrease in: | | | |
| Prepaid expenses and other current assets | 114,143 | 14,386 | 87,000 |
| Increase (decrease) in: | | | |
| Accounts payable and accrued liabilities | (585,043) | 173,614 | 653,730 |
| Accounts payable and accrued liabilities - related party | 344,501 | 2,100 | 375,686 |
| **Net Cash Used In Operating Activities** | (4,947,969) | (3,795,480) | (49,350,627) |
| | | | |
| **Cash Flows From Investing Activities:** | | | |
| Payment made for patent rights | - | - | (3,000,000) |
| Purchase of property and equipment | (8,030) | (1,812) | (823,689) |
| **Net Cash Used In Investing Activities** | (8,030) | (1,812) | (3,823,689) |
| | | | |
| **Cash Flows From Financing Activities:** | | | |
| Borrowings on convertible debt, net of offering costs | - | - | 645,888 |
| Payments on note payable | (140,000) | - | (140,000) |
| Sales of common stock, net of offering costs | - | 660,163 | 53,191,098 |
| Proceeds from the exercise of warrants for cash | 3,467,393 | - | 3,467,393 |
| **Net Cash Provided By Financing Activities** | 3,327,393 | 660,163 | 57,164,379 |
| | | | |
| **Net change in cash** | (1,628,606) | (3,137,129) | 3,990,063 |
| | | | |
| Cash at beginning of period | 5,618,669 | 5,703,798 | - |
| | | | |
| **Cash at end of period** | **$ 3,990,063** | **$ 2,566,669** | **$ 3,990,063** |
| | | | |
| **Supplemental disclosures of cash flow information:** | | | |
| Cash paid for interest | $ 561 | $ - | $ 1,243 |
| Cash paid for taxes | $ - | $ - | $ - |
| | | | |
| **Supplemental disclosure of non-cash investing and financing activities:** | | | |
| | | | |
| Beneficial conversion feature discount | $ - | $ - | $ 372,850 |
| Fair value of warrants issued with debt | $ - | $ - | $ 377,150 |
| Fair value of warrants issued with stock | $ - | $ 318,087 | $ 5,985,238 |
| Fair value of warrants issued to the placement agent | $ - | $ 159,044 | $ 2,170,282 |
| Conversion of notes payable and accrued interest to stock | $ - | $ - | $ 981,729 |
| Transfer from derivative liability classification to equity classification | $ 600,880 | $ - | $ 4,832,204 |

See accompanying notes to consolidated financial statements.

**Actinium Pharmaceuticals, Inc.**
**(Formerly Cactus Ventures, Inc.)**
**(A Development Stage Company)**
**Notes to Consolidated Financial Statements**
**(Unaudited)**

**Note 1 – Description of Business and Summary of Significant Accounting Policies**

**Nature of Business –** Actinium Pharmaceuticals, Inc. formerly known as Cactus Ventures, Inc. (the "Company", "Actinium", "Cactus"), was incorporated under the laws of the State of Nevada on October 6, 1997. The Company was a shell entity that was in the market for a merger with an appropriate operating company.

On December 28, 2012, the Company entered into a transaction (the "Share Exchange"), pursuant to which the Company acquired 100% of the issued and outstanding equity securities of Actinium Pharmaceuticals, Inc. ("API"), in exchange for the issuance of approximately 99% of the issued and outstanding common stock, par value $0.01 per share, of the Company. The Share Exchange closed on December 28, 2012. As a result of the Share Exchange, the former shareholders of API became the controlling shareholders of the Company. At the closing, each API shareholder received 0.333 shares (the "Exchange Ratio") of Actinium common stock for each API share exchanged. At the closing, all of the API shareholders' options and warrants to purchase API common stock was exchanged at the Exchange Ratio for new options or warrants, as applicable, to purchase Actinium common stock. The Share Exchange was accounted for as a reverse takeover/recapitalization effected by a share exchange, wherein API is considered the acquirer for accounting and financial reporting purposes. The capital, share price, and earnings per share amount in these consolidated financial statements for the period prior to the reverse merger were restated to reflect the recapitalization in accordance with the exchange ratio established in the merger except otherwise noted.

API, incorporated on June 13, 2000, is a biotechnology company committed to developing breakthrough therapies for life threatening diseases using its alpha particle immunotherapy (APIT) platform and other related and similar technologies. API, together with its wholly owned subsidiary, MedActinium, Inc. (MAI), (hereinafter referred to collectively as "API") has initiated collaborative efforts with large institutions to establish the proof of concept of alpha particle immunotherapy and has supported one Phase I/Il clinical trial and one Phase I clinical trial at Memorial Sloan-Kettering Cancer Center (MSKCC) under an MSKCC Physician Investigational New Drug Application. In 2012, API launched a multi-center corporate sponsored trial in acute myeloid leukemia (AML) patients. API's objective, through research and development, is to produce reliable cancer fighting products which utilize monoclonal antibodies linked with alpha particle emitters or other appropriate payloads to provide very potent targeted therapies. The initial clinical trials of API's compounds have been with patients having acute myeloid leukemia and it is believed that API's APIT platform will have wider applicability for different types of cancer where suitable monoclonal antibodies can be found.

As a result of the Share Exchange, the Company is now a holding company operating through API, a clinical-stage biopharmaceutical company developing certain cancer treatments.

On March 20, 2013, in anticipation of the Company changing its name to Actinium Pharmaceuticals, Inc. and its domicile from Nevada to Delaware, the Company's subsidiary, Actinium Pharmaceuticals, Inc., changed its name to Actinium Corporation. On April 11, 2013, the Company changed its domicile from the State of Nevada to the State of Delaware and changed its name from Cactus Ventures, Inc. to Actinium Pharmaceuticals, Inc.

On September 25, 2013, in accordance with a Certificate of Ownership Merging Actinium Corporation into the Actinium Pharmaceuticals, Inc. (filed in Delaware, the Company merged (the "Merger") into itself Actinium Corporation (a 93.7% owned subsidiary), and Actinium Corporation ceased to exist. As a result of the Merger, Actinium Corporation stock owned by the Company has been cancelled and each share of Actinium Corporation not owned by the Company was exchanged for 0.333 shares of Company common stock. A total of 3,970,137 shares of Actinium Corporation common stock was exchanged for 1,322,055 shares of Company common stock.

**Basis of Presentation - Unaudited Interim Financial Information –** The accompanying unaudited interim consolidated financial statements and related notes have been prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP") for interim financial information, and in accordance with the rules and regulations of the United States Securities and Exchange Commission (the "SEC") with respect to Form 10-Q and Article 8 of Regulation S-X. Accordingly, they do not include all of the information and footnotes required by U.S. GAAP for complete financial statements. The unaudited interim consolidated financial statements furnished reflect all adjustments (consisting of normal recurring adjustments) which are, in the opinion of management, necessary for a fair statement of the results for the interim periods presented. Interim results are not necessarily indicative of the results for the full year. These unaudited interim consolidated financial statements should be read in conjunction with the consolidated financial statements of the Company for the year ended December 31, 2012 and notes thereto contained in the Company's annual report on Form 10-K for the year ended December 31, 2012, as filed with the SEC March 29, 2013.

**Development Stage Company –** The Company is considered a development stage company and has had no commercial revenue to date.

**Principles of Consolidation –** The consolidated financial statements include the Company's accounts and those of the Company's wholly owned subsidiaries. All significant intercompany accounts and transactions have been eliminated.

**Use of Estimates in Financial Statement Presentation –** The preparation of these consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

**Reclassification –** Certain prior period amounts have been reclassified to conform to current period presentation.

**Cash and Cash Equivalents –** The Company considers all highly liquid accounts with original maturities of three months or less to be cash equivalents. Such balances are usually in excess of FDIC insured limits. At September 30, 2013 and December 31, 2012, all of the Company's cash was deposited in one bank.

**Property and Equipment –** Machinery and equipment are recorded at cost and depreciated on a straight-line basis over estimated useful lives of five years. Furniture and fixtures are recorded at cost and depreciated on a straight-line basis over estimated useful lives of seven years. When assets are retired or sold, the cost and related accumulated depreciation are removed from the accounts, and any related gain or loss is reflected in operations. Repairs and maintenance expenditures are charged to operations.

**Impairment of Long-Lived Assets –** Management reviews long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount may not be realizable or at a minimum annually during the fourth quarter of the year. If an evaluation is required, the estimated future undiscounted cash flows associated with the asset are compared to the asset's carrying value to determine if an impairment of such asset is necessary. The effect of any impairment would be to expense the difference between the fair value of such asset and its carrying value.

**Derivatives –** All derivatives are recorded at fair value on the balance sheet. Fair values for securities traded in the open market and derivatives are based on quoted market prices. Where market prices are not readily available, fair values are determined using market based pricing models incorporating readily observable market data and requiring judgment and estimates.

**Fair Value of Financial Instruments –** Fair value is defined as the price that would be received to sell an asset, or paid to transfer a liability, in an orderly transaction between market participants. A fair value hierarchy has been established for valuation inputs that gives the highest priority to quoted prices in active markets for identical assets or liabilities and the lowest priority to unobservable inputs. The fair value hierarchy is as follows:

Level 1 Inputs – Unadjusted quoted prices in active markets for identical assets or liabilities that the reporting entity has the ability to access at the measurement date.

Level 2 Inputs – Inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly. These might include quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable for the asset or liability (such as interest rates, volatilities, prepayment speeds, credit risks, etc.) or inputs that are derived principally from or corroborated by market data by correlation or other means.

Level 3 Inputs – Unobservable inputs for determining the fair values of assets or liabilities that reflect an entity's own assumptions about the assumptions that market participants would use in pricing the assets or liabilities.

The following tables set forth assets and liabilities measured at fair value on a recurring and non-recurring basis by level within the fair value hierarchy as of September 30, 2013 and December 31. As required by ASC 820, financial assets and liabilities are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. The Company's assessment of the significance of a particular input to the fair value measurement requires judgment, and may affect the valuation of fair value assets and liabilities and their placement within the fair value hierarchy levels.

| | Level 1 | Level 2 | Level 3 | Total |
|---|---|---|---|---|
| Derivative liabilities: | | | | |
| At September 30, 2013 | - | - | $ 2,757,966 | $ 2,757,966 |
| At December 31, 2012 | - | - | 3,574,958 | 3,574,958 |

**Income Taxes –** The Company uses the asset and liability method in accounting for income taxes. Under this method, deferred tax assets and liabilities are determined based on differences between financial reporting and income tax carrying amounts of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The Company reviews deferred tax assets for a valuation allowance based upon whether it is more likely than not that the deferred tax asset will be fully realized. A valuation allowance, if necessary, is provided against deferred tax assets, based upon management's assessment as to their realization.

**Research and Development Costs –** Research and development costs are expensed as incurred. Research and development reimbursements and grants are recorded by the Company as a reduction of research and development costs.

**Share-Based Payments –** The Company estimates the fair value of each stock option award at the grant date by using the Black-Scholes option pricing model and value of common shares based on the last common stock valuation done by third party valuation expert of the Company's common stock on the date of the share grant. The fair value determined represents the cost for the award and is recognized over the vesting period during which an employee is required to provide service in exchange for the award. As share-based compensation expense is recognized based on awards ultimately expected to vest, the Company reduces the expense for estimated forfeitures based on historical forfeiture rates. Previously recognized compensation costs may be adjusted to reflect the actual forfeiture rate for the entire award at the end of the vesting period. Excess tax benefits, if any, are recognized as an addition to paid-in capital.

**Earnings (Loss) Per Common Share –** The Company provides basic and diluted earnings per common share information for each period presented. Basic earnings (loss) per common share is computed by dividing the net income (loss) available to common stockholders by the weighted average number of common shares outstanding during the reporting period. Diluted earnings per common share is computed by dividing the net income available to common stockholders by the weighted average number of common shares outstanding plus dilutive securities. Since the Company has only incurred losses, basic and diluted net loss per common share are the same. The potentially dilutive securities (options, warrants and convertible instruments) were excluded from the diluted loss per common share calculation because their effect would have been antidilutive. For the nine months ended September 30, 2013, potentially issuable shares included stock options to purchase 2,280,184 shares and warrants to purchase 9,441,942 shares of the Company's common stock. For the nine months ended September 30, 2012, potentially issuable shares included stock options to purchase 1,968,829 shares; warrants in the amount of 5,861,044 shares; convertible notes payable in the amount of 1,152,692 shares; and convertible preferred stock in the amount of 13,831,762 shares of the Company's common stock have been excluded from the calculation.

**Recent Accounting Pronouncements –** The Company does not expect that any recently issued accounting pronouncements will have a significant impact on the results of operations, financial position, or cash flows of the Company.

**Subsequent Events –** The Company's management reviewed all material events through the date the consolidated financial statements were issued for subsequent event disclosure consideration.

**Note 2 – Going Concern**

As reflected in the accompanying consolidated financial statements, the Company has suffered recurring losses from operations since its inception. The Company has a net loss of $4,893,951 and net cash used in operations of $4,947,969, for the nine months ended September 30, 2013; and a deficit accumulated during the development stage of $60,637,414 at September 30, 2013. In addition, the Company has not completed its efforts to establish a stable recurring source of revenues sufficient to cover its operating costs for the next twelve months. These factors raise substantial doubt regarding the Company's ability to continue as a going concern.

The ability of the Company to continue its operations is dependent on the successful execution of management's plans, which include the expectation of raising debt or equity based capital, with some additional funding from other traditional financing sources, including term notes, until such time that funds provided by operations are sufficient to fund working capital requirements. The Company may need to issue additional equity and incur additional liabilities with related parties to sustain the Company's existence although no commitments for funding have been made and no assurance can be made that such commitments will be available.

The accompanying consolidated financial statements have been prepared on a going concern basis, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. These financial statements do not include any adjustments relating to the recovery of assets or the classification of liabilities that might be necessary should the Company be unable to continue as a going concern.

**Note 3 – Property and Equipment**

Property and equipment consisted of the following at September 30, 2013 and December 31, 2012:

| | Lives | 2013 | 2012 |
|---|---|---|---|
| Office equipment | 5 years | $ 162,384 | $ 156,162 |
| Furniture and fixture | 7 years | 3,100 | 1,292 |
| | | | |
| Total property and equipment | | 165,484 | 157,454 |
| Less: accumulated depreciation | | (154,444) | (154,444) |
| Loss on disposition of equipment | | (4,122) | - |
| | | | |
| Property and equipment, net | | $ 6,918 | $ 3,010 |

Depreciation expense for the nine months ended September 30, 2013 and 2012 were $0 and $429 respectively.

**Note 4 – Note Payable**

On December 28, 2012, the Company entered into a premium finance agreement to pay a $140,000 premium for its director and officer liability insurance policy. Pursuant to the agreement, the Company paid a down payment of $28,000 in January 2013 and is required to pay $12,636 in monthly installment for nine months. As of September 30, 2013, the outstanding balance related to the premium finance agreement was $0.

**Note 5 – Derivatives**

The Company has determined that certain warrants the Company has issued contain provisions that protect holders from future issuances of the Company's common stock at prices below such warrants' respective exercise prices and these provisions could result in modification of the warrants' exercise price based on a variable that is not an input to the fair value of a "fixed-for-fixed" option as defined under FASB ASC Topic No. 815 – 40. The warrants granted in connection with the issuance of the Company's Stock Offering and 2012 Common Stock Offering, the Convertible Notes (previously issued and converted) and the placement agent warrants contain anti-dilution provisions that provide for a reduction in the exercise price of such warrants in the event that future common stock (or securities convertible into or exercisable for common stock) is issued (or becomes contractually issuable) at a price per share (a "Lower Price") that is less than the exercise price of such warrant at the time. The amount of any such adjustment is determined in accordance with the provisions of the warrant agreement and depends upon the number of shares of common stock issued (or deemed issued) at the Lower Price and the extent to which the Lower Price is less than the exercise price of the warrant at the time.

Activities for derivative warrant instruments during the nine months ended September 30, 2013 were as follows:

| | Units | Fair Value |
|---|---|---|
| Balance, December 31, 2012 | 5,146,338 | $ 3,574,958 |
| Reclassification to paid-in capital | (3,130,536) | (600,880) |
| Change in fair value | - | (216,112) |
| Balance, September 30, 2013 | 2,015,802 | $ 2,757,966 |

The fair values of the derivative warrants were calculated using a modified binomial valuation model with the following assumptions at September 30, 2013 and December 31, 2012.

| | December 31, 2012 | September 30, 2013 |
|---|---|---|
| Market value of common stock on measurement date (1) | $ 1.17 | $ 1.65 |
| Adjusted exercise price | $ 0.48 - $0.81 | $ 1.50 - $2.475 |
| Risk free interest rate (2) | 0.10% - 0.77% | 0.33% |
| Warrant lives in years | 4 months/5 years | 0 days/4.22 years |
| Expected volatility (3) | 125% - 161% | 139% |
| Expected dividend yield (4) | - | - |
| Probability of stock offering in any period over 5 years (5) | 25% | 25% - 40% |

(1) The market value of common stock is based on an enterprise valuation.

(2) The risk-free interest rate was determined by management using the Treasury Bill as of the respective measurement date.

(3) Because the Company does not have adequate trading history to determine its historical trading volatility, the volatility factor was estimated by management using the historical volatilities of comparable companies in the same industry and region.

(4) Management determined the dividend yield to be 0% based upon its expectation that it will not pay dividends for the foreseeable future.

(5) Management has determined that the probability of a stock offering is 25% - 40% for each quarter of the next five years.

**Note 6 – Commitments and Contingencies**

**Employment Contracts**

On September 16, 2013, the Company's Board of Directors appointed Dr. Kaushik J. Dave as its new Chief Executive Officer (CEO) and Director. Material terms of the Employment Agreement are as follows:

**a** A base salary at an annual rate of $350,000, which will be re-evaluated upon the six month anniversary of the start date and reimbursement of certain expenses.

**b** The CEO shall be entitled to participate in an executive bonus program, which shall be established by the Board pursuant to which the Board shall award bonuses to the CEO, based upon the achievement of written individual and corporate objectives such as the Board shall determine. Upon the attainment of such performance objectives, the CEO shall be entitled to a cash bonus in an amount to be determined by the Board with a target of forty percent (40%) of the base salary.

**c** An option to purchase common shares of the Company and restricted stock (the "Grant"). The Grant will consist of (i) an option grant to purchase 675,000 common shares of the Company; (ii) 125,000 shares of restricted and (iii) 100,000 shares of restricted stock a sign-on bonus of which fifty percent will vest at the one year anniversary of the start date upon starting work. An additional twenty-five percent each will vest at eighteen months and twenty-four months after the start date. As of October 25, 2013, the option has not been granted by the Board.

**License and Research Agreements**

The Company has entered into license and research and development agreements with third parties under which the Company is obligated to make payments in the form of upfront payments as well as milestone and royalty payments. Notable inclusions in this category are:

a. Abbott Biotherapeutics Corp – The Company entered into a Product Development and Patent License Agreement with Abbott Biotherapeutics Corp. (formerly Facet Biotech formerly known as Protein Design Labs) in 2003 to secure exclusive rights to a specific antibody when conjugated with alpha emitting radioisotopes. Upon execution of the agreement, the Company made a license fee payment of $3,000,000.

The Company agreed to make milestone payments totaling $7,750,000 for the achievement of the following agreed to and contracted milestones:

| Milestones | Payments |
|---|---|
| (1) when Company initiates a Phase I Clinical Trial of a licensed product | $ 750,000 |
| (2) when Company initiates a Phase II Clinical Trial of a licensed product | 750,000 |
| (3) when Company initiates a Phase III Clinical Trial of a licensed product | 1,500,000 |
| (4) Biological License Application filing with U.S. FDA | 1,750,000 |
| (5) First commercial sale | 1,500,000 |
| (6) after the first $10,000,000 in net sales | 1,500,000 |

Under the agreement, the Company shall pay to Abbott Biotherapeutics Corp on a country-by-country basis a royalty of 12% of net sales of all licensed products until the later of: (1) 12.5 years after the first commercial sale, or (2) when the patents expire.

The Company met its first milestone in 2012 and upon reaching the milestone the Company paid Abbott Biotherapeutics Corp. a milestone payment of $750,000 on July 24, 2012. The milestone payment for the Phase I Clinical Trial was recorded as research and development expense.

b. Memorial Sloan Kettering Cancer Center (MSKCC) – In February 2002, the Company entered into a license agreement with MSKCC that requires a technology access fee of $50,000 upon execution, an annual maintenance fee of $50,000 and annual research funding of $50,000 for as long as the agreement is in force.

| Milestones | Payments |
|---|---|
| (1) filing of an New Drug Application (“NDA”) or regulatory approval for each licensed product | $ 750,000 |
| (2) upon the receipt of regulatory approval from the U.S. FDA for each licensed product | 1,750,000 |

Under the agreement, the Company shall pay to MSKCC on a country-by-country basis a royalty of 2% of net sales of all licensed products until the later of: (1) 10 years from the first commercial sale, or (2) when the patents expire.

The Company expects to file the NDA for regulatory approval in the 2016-2017 time frame.

c. Oak Ridge National Laboratory (ORNL) – API is contracted to purchase $233,100 of radioactive material to be used for research and development, with a renewal option at the contract end. The Company is currently negotiating the 2013 agreement.

d. AptivSolutions provides project management services for the study of the drug Ac-225-HuM195 (Actimab-A) used in the Company clinical trials, Phase I and Phase II. The total project is estimated to cost approximately $1.9 million and requires a 12.5% down payment of the total estimated project cost. The down payment totaling $239,000 was paid in 2007 and 2012. On August 6, 2012, October 22, 2012 and May 16, 2013, the agreement was amended to provide for additional services. The total project is now estimated at approximately $2.2 million. AptivSolutions bills the Company when services are rendered and the Company records the related expense to research and development costs.

e. On June 15, 2012, the Company entered into a license and sponsored research agreement with Fred Hutchinson Cancer Research Center (FHCRC). The Company will build upon previous and ongoing clinical trials, with BC8 (licensed antibody). FHCRC has currently completed Phase I and Phase II of the clinical trial and the Company intends to start preparation for a pivotal trial leading to an FDA approval. The Company has been granted exclusive rights to the BC8 antibody and related master cell bank developed by FHCRC. The cost to develop the trial will range from $13.2 million to $23.5 million, depending on the trial design as required by the FDA. Under the terms of the sponsored research agreement, the Company will fund the FHCRC lab with $150,000 per year for the first two years and $250,000 thereafter. Payments made toward funding the lab will be credited toward royalty payments owed to FHCRC in the given year. A milestone payment of $1 million will be due to FHCRC upon FDA approval of the first drug. Upon commercial sale of the drug, royalty payments of 2% of net sales will be due to FHCRC.

f. On March 27, 2012, the Company entered into a clinical trial agreement with MSKCC. The Company will pay $31,185 for each patient that has completed the clinical trial. Upon execution of the agreement, the Company is required to pay a start-up fee of $79,623. The amount due of $79,623 was paid on July 10, 2012.

g. On July 19, 2012, the Company entered into a clinical trial agreement with FHCRC. The Company will pay $31,366 for each patient that has completed the clinical trial. Upon execution of the agreement, the Company is required to pay a start-up fee of $19,749. During the clinical trial additional fees apply and will be invoiced when applicable. The amount due has not been invoiced but accrued by the Company as of September 30, 2013.

h. On August 28, 2012, the Company entered into a clinical trial agreement with The University of Texas M.D. Anderson Cancer Center. The total estimated cost of conducting the clinical trial is approximately $500,000, which includes a non- refundable institutional fee of $14,500. The estimated cost is based on treating 24 patients through 2013. Upon execution of the agreement, the Company is required to make a payment of $33,946.

i. On September 26, 2012, the Company entered into a clinical trial agreement with Johns Hopkins University. The Phase 1/2 clinical trial will be conducted with Actinium 225. The clinical trial will be conducted under the protocols established by the Company and pursuant to an Investigational New Drug Exemption (IND 10807) held by the Company. The Company will pay $38,501 per patient, who has completed the clinical trial. The Company is required to pay a start-up fee of $22,847, an annual pharmacy fee of $2,025 and an amendment processing fee of $500, when applicable.

j. On November 21, 2012, the Company entered into a clinical trial agreement with the University of Pennsylvania. The Phase 1/2 clinical trial will be conducted with Actinium 225. The clinical trial will be conducted under the protocols established by the Company and pursuant to an Investigational New Drug Exemption (IND 10807) held by the Company. The Company will pay $31,771 per patient, who has completed the clinical trial. The Company will be required to pay a start-up fee of $16,000 and additional administrative fees, when applicable.

On August 1, 2012, the Company entered into a rental agreement for office space at 501 Fifth Avenue, New York, NY. The agreement terminated on May 31, 2013. On June 1, 2013, the Company entered into a rental agreement for office space at 546 Fifth Avenue, New York, NY. This agreement terminates on December 31, 2013. Upon the expiration of the term, the agreement automatically renews on a month-to-month basis and requires a two month notice of termination. The Company paid a one month refundable deposit.

On February 28, 2013, the Company entered into a Separation and Settlement Agreement with its former CEO. Pursuant to the agreement, the Company paid the former CEO $125,000 on March 8, 2013 and a second payment of $125,000 on September 1, 2013. The Company also paid the former CEO a performance bonus of $60,000 for his service from August 15, 2012 to December 31, 2012.

**Note 7 – Equity**

**Approval of the 2013 Stock Plan**

The Board approved the Company's 2013 Stock Plan. The expiration date of the plan is September 9, 2023 and the total number of underlying shares of the Company's common stock available for grant to employees, directors and consultants of the Company under the plan is 2,750,000 shares.

**Approval of the Equity Incentive Plan**

The Board approved the Company's 2013 Equity Incentive Plan. The expiration date of the plan is September 9, 2023 and the total number of shares of the Company's common stock available for grant to employees, directors and consultants of the Company under the plan is 450,000 shares.

**Options**

The following is a summary of option activities:

| | Number of Units | Weighted Average Exercise Price | Weighted Average Remaining Contractual Term (in years) | Aggregate Intrinsic Value |
|---|---|---|---|---|
| Outstanding, December 31, 2012 | 2,330,134 | $ 0.96 | 8.91 | $ 685,800 |
| Cancellation | (49,950) | | | |
| Outstanding, September 30, 2013 | 2,280,184 | $ 0.95 | 8.17 | $ 1,609,035 |

All options issued and outstanding are being amortized over their respective vesting periods. The unrecognized compensation expense at September 30, 2013 was $1,014,474.

**Warrants**

The following is a summary of warrant activities:

| | Number of Units | Weighted Average Exercise Price | Weighted Average Remaining Contractual Term (in years) | Aggregate Intrinsic Value |
|---|---|---|---|---|
| Outstanding, December 31, 2012 | 12,770,636 | $ 0.97 | 4.48 | $ 6,114,768 |
| Warrants exercised | (2,304,910) | $ 1.65 | | |
| Warrants expired | (1,023,784) | $ 1.65 | | |
| Outstanding, September 30, 2013 | 9,441,942 | $ 0. 77 | 5.09 | $ 9,611,403 |

During the three months ended September 31, 2013 and 2012, the Company recorded option and warrant expenses of $95,971, and $72,100, respectively. During the nine months ended September 31, 2013 and 2012, the Company recorded option and warrant expenses of $284,371 and $168,000, respectively.

**Note 8 – Subsequent Events**

Management has evaluated subsequent events and has concluded no events warrant disclosure.

**ACTINIUM PHARMACEUTICALS, INC.**
**(Formerly Cactus Ventures, Inc.)**
**(A Development Stage Company)**
**Consolidated Financial Statements**

As of December 31, 2012 and 2011 and for the period
from June 13, 2000 (inception) to December 31, 2012

## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors
Actinium Pharmaceuticals, Inc.
(Formerly Cactus Ventures, Inc.)
(A Development Stage Company)
Newark, NJ

We have audited the accompanying consolidated balance sheets of Actinium Pharmaceuticals, Inc. (Formerly Cactus Ventures, Inc.) (a Development Stage Company) (the "Company") as of December 31, 2012 and 2011, and the related consolidated statements of operations, changes in stockholders' equity and cash flows for the years then ended and for the period from June 13, 2000 (Inception) to December 31, 2012. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Actinium Pharmaceuticals, Inc. (Formerly Cactus Ventures, Inc.) as of December 31, 2012 and 2011 and the results of their operations and their cash flows for the years then ended and for the period from June 13, 2000 (Inception) to December 31, 2012, in conformity with accounting principles generally accepted in the United States of America.

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 2 to the consolidated financial statements, the Company has not generated any revenue since its inception, has a history of operating losses, and has an accumulated deficit since its inception. Those conditions raise substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to those matters are also described in Note 2. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

*/s/ GBH CPAs, PC*

GBH CPAs, PC
www.gbhcpas.com
Houston, Texas
March 15, 2013

**Actinium Pharmaceuticals, Inc.**
**(Formerly Cactus Ventures, Inc.)**
**(A Development Stage Company)**
**Consolidated Balance Sheets**

| | December 31, 2012 | December 31, 2011 |
|---|---|---|
| ASSETS | | |
| Current assets: | | |
| Cash | $ 5,618,669 | $ 5,703,798 |
| R&D reimbursement receivable | - | 237,834 |
| Prepaid expenses and other current assets | 167,143 | 5,384 |
| Deferred financing costs, net of accumulated amortization | - | 252,248 |
| Total current assets | 5,785,812 | 6,199,264 |
| Property and equipment, net of accumulated depreciation | 3,010 | 1,233 |
| TOTAL ASSETS | $ 5,788,822 | $ 6,200,497 |
| LIABILITIES AND STOCKHOLDERS' EQUITY | | |
| Current liabilities: | | |
| Accounts payable and accrued expenses | $ 897,044 | $ 644,511 |
| Accounts payable and accrued expenses – related party | 31,185 | - |
| Note payable | 140,000 | - |
| Convertible notes payable, net of unamortized discount | - | 124,363 |
| Derivative liabilities | 3,574,958 | 4,439,613 |
| Total current liabilities | 4,643,187 | 5,208,487 |
| Commitments and contingencies | | |
| Stockholders' equity: | | |
| Preferred stock, $0.01 par value; 100,000,000 shares authorized; 0 shares issued and outstanding | - | - |
| Common stock, $0.01 par value, 100,000,000 shares authorized; 21,391,665 and 13,664,802 shares issued and outstanding, respectively | 213,916 | 136,648 |
| Additional paid-in capital | 56,675,182 | 48,237,620 |
| Deficit accumulated during the development stage | (55,743,463) | (47,382,258) |
| Total stockholders' equity | 1,145,635 | 992,010 |
| TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY | $ 5,788,822 | $ 6,200,497 |

See accompanying summary of accounting policies and notes to consolidated financial statements.

**Actinium Pharmaceuticals, Inc.**
**(Formerly Cactus Ventures, Inc.)**
**(A Development Stage Company)**
**Consolidated Statements of Operations**

| | For the Years Ended December 31, | | For the Period from June 13, 2000 (Inception) to December 31, |
|---|---|---|---|
| | 2012 | 2011 | 2012 |
| Revenues | $ - | $ - | $ - |
| Operating expenses: | | | |
| Research and development, net of reimbursements | 3,440,485 | 323,788 | 26,420,519 |
| General and administrative | 4,506,232 | 2,959,246 | 24,504,975 |
| Depreciation and amortization expense | 581 | 633 | 3,262,462 |
| Loss on disposition of equipment | - | - | 550,186 |
| Total operating expenses | 7,947,298 | 3,283,667 | 54,738,142 |
| Loss from operations | (7,947,298) | (3,283,667) | (54,738,142) |
| Other (income) expense: | | | |
| Interest expense | 1,099,327 | 175,094 | 1,964,707 |
| Gain on extinguishment of liability | - | - | (260,000) |
| Gain on change in fair value of derivative liabilities | (685,420) | (13,966) | (699,386) |
| Total other (income) expense | 413,907 | 161,128 | 1,005,321 |
| Net loss | $ (8,361,205) | $ (3,444,795) | $ (55,743,463) |
| Net loss per common share - basic and diluted | $ (7.58) | $ (4.30) | |
| Weighted average number of common shares outstanding - basic and diluted | 1,103,521 | 801,799 | |

See accompanying summary of accounting policies and notes to consolidated financial statements.

**Actinium Pharmaceuticals, Inc.**
**(Formerly Cactus Ventures, Inc.)**
**(A Development Stage Company)**
**Consolidated Statement of Changes in Stockholders' Equity**
**For the Period From June 13, 2000 (Inception) to December 31, 2012**

| | Common Stock | | Additional Paid-in | Deficit Accumulated During the Development | Total Stockholders' Equity |
|---|---|---|---|---|---|
| | Shares | Amount | Capital | Stage | (Deficit) |
| Issuance of founder shares | 999,000 | $ 9,990 | $ 20,010 | $ - | $ 30,000 |
| Proceeds from issuance of stock | 145,687 | 1,457 | 1,748,543 | - | 1,750,000 |
| Net loss | - | - | - | (672,286) | (672,286) |
| Balances, December 31, 2000 | 1,144,687 | 11,447 | 1,768,553 | (672,286) | 1,107,714 |
| Proceeds from issuance of stock | 187,313 | 1,873 | 2,248,127 | - | 2,250,000 |
| Net loss | - | - | - | (5,090,621) | (5,090,621) |
| Balances, December 31, 2001 | 1,332,000 | 13,320 | 4,016,680 | (5,762,907) | (1,732,907) |
| Proceeds from issuance of stock | 180,375 | 1,804 | 3,248,196 | - | 3,250,000 |
| Net loss | - | - | - | (3,192,384) | (3,192,384) |
| Balances, December 31, 2002 | 1,512,375 | 15,124 | 7,264,876 | (8,955,291) | (1,675,291) |
| Proceeds from issuance of stock | 208,992 | 2,090 | 6,779,160 | - | 6,781,250 |
| Net loss | - | - | - | (3,532,044) | (3,532,044) |
| Balances, December 31, 2003 | 1,721,367 | 17,214 | 14,044,036 | (12,487,335) | 1,573,915 |
| Proceeds from issuance of stock | 765,900 | 7,659 | 4,592,341 | - | 4,600,000 |
| Net loss | - | - | - | (5,734,791) | (5,734,791) |
| Balances, December 31, 2004 | 2,487,267 | 24,873 | 18,636,377 | (18,222,126) | 439,124 |
| Proceeds from issuance of stock | 649,350 | 6,494 | 3,893,506 | - | 3,900,000 |
| Option expense | - | - | 315,388 | - | 315,388 |
| Net loss | - | - | - | (4,580,237) | (4,580,237) |
| Balances, December 31, 2005 | 3,136,617 | $ 31,367 | $ 22,845,271 | $ (22,802,363) | $ 74,275 |

See accompanying summary of accounting policies and notes to consolidated financial statements.

**Actinium Pharmaceuticals, Inc.**
**(Formerly Cactus Ventures, Inc.)**
**(A Development Stage Company)**
**Consolidated Statement of Changes in Stockholders' Equity**
**For the Period From June 13, 2000 (Inception) to December 31, 2012**

(Continued)

| | Common Stock | | Additional Paid-in | Deficit Accumulated During the Development | Total Stockholders' Equity |
|---|---|---|---|---|---|
| | Shares | Amount | Capital | Stage | (Deficit) |
| Balances, December 31, 2005 | 3,136,617 | $ 31,367 | $ 22,845,271 | $ (22,802,363) | $ 74,275 |
| Proceeds from issuance of stock | 839,042 | 8,390 | 7,542,151 | - | 7,550,541 |
| Option expense | - | - | 252,308 | - | 252,308 |
| Net loss | - | - | - | (6,053,362) | (6,053,362) |
| Balances, December 31, 2006 | 3,975,659 | 39,757 | 30,639,730 | (28,855,725) | 1,823,762 |
| Proceeds from issuance of stock | 732,600 | 7,326 | 6,592,674 | - | 6,600,000 |
| Common stock issued for services | 66,402 | 664 | 398,146 | - | 398,810 |
| Option expense | - | - | 255,061 | - | 255,061 |
| Net loss | - | - | - | (5,617,581) | (5,617,581) |
| Balances, December 31, 2007 | 4,774,661 | 47,747 | 37,885,611 | (34,473,306) | 3,460,052 |
| Proceeds from issuance of stock | 999,000 | 9,990 | 5,990,010 | - | 6,000,000 |
| Option expense | - | - | 269,618 | - | 269,618 |
| Net loss | - | - | - | (5,570,905) | (5,570,905) |
| Balances, December 31, 2008 | 5,773,661 | 57,737 | 44,145,239 | (40,044,211) | 4,158,765 |
| Option expense | - | - | 112,382 | - | 112,382 |
| Net loss | - | - | - | (3,425,986) | (3,425,986) |
| Balances, December 31, 2009 | 5,773,661 | 57,737 | 44,257,621 | (43,470,197) | 845,161 |
| Option expense | - | - | 21,166 | - | 21,166 |
| Net loss | - | - | - | (467,266) | (467,266) |
| Balances, December 31, 2010 | 5,773,661 | $ 57,737 | $ 44,278,787 | $ (43,937,463) | $ 399,061 |

See accompanying summary of accounting policies and notes to consolidated financial statements.

**Actinium Pharmaceuticals, Inc.**
**(Formerly Cactus Ventures, Inc.)**
**(A Development Stage Company)**
**Consolidated Statement of Changes in Stockholders' Equity**
**For the Period From June 13, 2000 (Inception) to December 31, 2012**

(Continued)

| | Common Stock | | Additional Paid-in | Deficit Accumulated During the Development | Total Stockholders' Equity |
|---|---|---|---|---|---|
| | Shares | Amount | Capital | Stage | (Deficit) |
| Balances, December 31, 2010 | 5,773,661 | $ 57,737 | $ 44,278,787 | $ (43,937,463) | $ 399,061 |
| Proceeds from issuance of stock | 7,891,141 | 78,911 | 5,300,456 | - | 5,379,367 |
| Option expense | - | - | 19,935 | - | 19,935 |
| Warrant expense | - | - | 2,153,442 | - | 2,153,442 |
| Fair value of derivative warrants | - | - | (3,887,850) | - | (3,887,850) |
| Beneficial conversion feature discount | - | - | 372,850 | - | 372,850 |
| Net loss | - | - | - | (3,444,795) | (3,444,795) |
| Balances, December 31, 2011 | 13,664,802 | 136,648 | $ 48,237,620 | $ (47,382,258) | $ 992,010 |
| Proceeds from issuance of stock | 4,087,747 | 40,877 | 5,089,063 | | 5,129,940 |
| Conversion of notes payable and accrued interest to stock | 1,252,550 | 12,525 | 969,204 | | 981,729 |
| Shares issued at the reverse merger | 2,386,566 | 23,866 | (23,866) | | - |
| Option expense | - | - | 266,172 | - | 266,172 |
| Warrant expense | - | - | 1,957,754 | - | 1,957,754 |
| Fair value of derivative warrants | - | - | (4,052,089) | - | (4,052,089) |
| Transfer from liability classification to equity classification | - | - | 4,231,324 | - | 4,231,324 |
| Net loss | - | - | - | (8,361,205) | (8,361,205) |
| Balances, December 31, 2012 | 21,391,665 | $ 213,916 | $ 56,675,182 | $ (55,743,463) | $ 1,145,635 |

See accompanying summary of accounting policies and notes to consolidated financial statements.

**Actinium Pharmaceuticals, Inc.**
**(Formerly Cactus Ventures, Inc.)**
**(A Development Stage Company)**
**Statements of Cash Flows**

| | For the Year Ended December 31, | | For the Period from June 13, 2000 (Inception) to December 31, |
|---|---|---|---|
| | 2012 | 2011 | 2012 |
| CASH FLOWS FROM OPERATING ACTIVITIES: | | | |
| Net loss | $ (8,361,205) | $ (3,444,795) | $ (55,743,463) |
| Adjustments to reconcile net loss to net cash used in operating activities: | | | |
| Stock-based compensation expense | 2,223,926 | 2,173,377 | 6,052,036 |
| Depreciation expense | 581 | 633 | 3,262,462 |
| Loss on disposition of equipment | - | - | 550,186 |
| Amortization of debt discount | 775,637 | 124,363 | 900,000 |
| Amortization of deferred financing costs | 252,248 | 40,444 | 292,692 |
| Gain on extinguishment of liability | - | - | (260,000) |
| Gain on change in fair value of derivative liabilities | (685,420) | (13,966) | (699,386) |
| Changes in operating assets and liabilities: | | | |
| R&D reimbursement receivable | 234,088 | 41,567 | (3,746) |
| Prepaid expenses and other current assets | (18,013) | 4,766 | (23,397) |
| Accounts payable and accrued expenses | 334,263 | 556,019 | 1,238,773 |
| Accounts payable and accrued expenses - related parties | 31,185 | - | 31,185 |
| Net cash used in operating activities | (5,212,710) | (517,592) | (44,402,658) |
| CASH FLOWS FROM INVESTING ACTIVITIES: | | | |
| Payment made for patent rights | - | - | (3,000,000) |
| Purchases of property and equipment | (2,359) | - | (815,659) |
| Net cash used in investing activities | (2,359) | - | (3,815,659) |
| CASH FLOWS FROM FINANCING ACTIVITIES: | | | |
| Borrowings on convertible debt, net of offering costs | - | 645,888 | 645,888 |
| Sales of stock, net of offering costs | 5,129,940 | 5,379,367 | 53,191,098 |
| Net cash provided by financing activities | 5,129,940 | 6,025,255 | 53,836,986 |
| Net increase (decrease) in cash | (85,129) | 5,507,663 | 5,618,669 |
| Cash at beginning of period | 5,703,798 | 196,135 | - |
| Cash at end of period | $ 5,618,669 | $ 5,703,798 | $ 5,618,669 |
| SUPPLEMENTAL CASH FLOWS INFORMATION: | | | |
| Cash paid for: | | | |
| Income tax | $ - | $ - | $ - |
| Interest | - | - | 682 |
| NONCASH INVESTING AND FINANCING ACTIVITIES: | | | |
| Beneficial conversion feature discount | $ - | $ 372,850 | $ 372,850 |
| Fair value of warrants issued with debt | - | 377,150 | 377,150 |
| Fair value of warrants issued with stock | 3,393,338 | 2,591,900 | 5,985,238 |
| Fair value of warrants issued to the placement agent | 658,753 | 1,484,529 | 2,170,282 |
| Conversion of notes payable and accrued interest to stock | 981,729 | - | 981,729 |
| Transfer from liability classification to equity classification | 4,231,324 | - | 4,231,324 |

See accompanying summary of accounting policies and notes to consolidated financial statements.

**Actinium Pharmaceuticals, Inc.**
**(Formerly Cactus Ventures, Inc.)**
**(A Development Stage Company)**
**Notes to Consolidated Financial Statements**

**Note 1 – Description of Business and Summary of Significant Accounting Policies**

**Nature of Business – Actinium Pharmaceuticals, Inc (Formerly** Cactus Ventures, Inc.) (the "Company", "Cactus"), was incorporated under the laws of the State of Nevada on October 6, 1997. The Company was a shell entity that is in the market for a merger with an appropriate operating company.

On December 28, 2012, the Company entered into a transaction (the "Share Exchange"), pursuant to which the Company agreed to acquire 100% of the issued and outstanding equity securities of Actinium Pharmaceuticals, Inc. ("Actinium"), in exchange for the issuance of approximately 99% of the issued and outstanding common stock, par value $0.01 per share, of the Company. The Share Exchange was closed on December 28, 2012 when shareholders representing over 20% of the issued and outstanding shares of Actinium had finished the exchange process. On August 22, 2013, shareholders representing 38% of the issued and outstanding shares of Actinium completed the exchange. As a result of the Share Exchange, the former shareholders of Actinium became the controlling shareholders of the Company. At the closing, each Actinium shareholder shall receive 0.333 shares (the "Exchange Ratio") of Cactus common stock for each Actinium share exchanged. At the closing, all of the Actinium shareholders' options and warrants to purchase Actinium common stock was exchanged at the Exchange Ratio for new options or warrants, as applicable, to purchase Cactus common stock. The Share Exchange was accounted for as a reverse takeover/recapitalization effected by a share exchange, wherein Actinium is considered the acquirer for accounting and financial reporting purposes. The capital, share price, and earnings per share amount in these consolidated financial statements for the period prior to the reverse merger were restated to reflect the recapitalization in accordance with the exchange ratio established in the merger except otherwise noted.

Actinium, incorporated on June 13, 2000, is a biotechnology company committed to developing breakthrough therapies for life threatening diseases using its alpha particle immunotherapy (APIT) platform and other related and similar technologies. Actinium, together with its wholly owned subsidiary, MedActinium, Inc. (MAI), (hereinafter referred to collectively as "Actinium") has initiated collaborative efforts with large institutions to establish the proof of concept of alpha particle immunotherapy and has supported one Phase I/Il clinical trial and one Phase I clinical trial at Memorial Sloan-Kettering Cancer Center (MSKCC) under an MSKCC Physician Investigational New Drug Application. In 2012, Actinium launched a multi-center corporate sponsored trial in acute myeloid leukemia (AML) patients. Actinium's objective, through research and development, is to produce reliable cancer fighting products which utilize monoclonal antibodies linked with alpha particle emitters or other appropriate payloads to provide very potent targeted therapies. The initial clinical trials of Actinium's compounds have been with patients having acute myeloid leukemia and it is believed that Actinium's APIT platform will have wider applicability for different types of cancer where suitable monoclonal antibodies can be found.

As a result of the Share Exchange, the Company is now a holding company operating through Actinium, a clinical-stage biopharmaceutical company developing certain cancer treatments.

**Development Stage Company –** The Company is considered a development stage company and has had no commercial revenue to date.

**Principles of Consolidation –** The consolidated financial statements include the Company's accounts and those of the Company's wholly owned subsidiaries. All significant intercompany accounts and transactions have been eliminated.

**Use of Estimates in Financial Statement Presentation –** The preparation of these consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

**Reclassification –** Certain prior period amounts have been reclassified to conform to current period presentation.

**Cash and Cash Equivalents –** The Company considers all highly liquid accounts with original maturities of three months or less to be cash equivalents. Such balances are usually in excess of FDIC insured limits. At December 31, 2012 and 2011, all of the Company's cash was deposited in one bank.

**Property and Equipment –** Machinery and equipment are recorded at cost and depreciated on a straight-line basis over estimated useful lives of five years. Furniture and fixtures are recorded at cost and depreciated on a straight-line basis over estimated useful lives of seven years. When assets are retired or sold, the cost and related accumulated depreciation are removed from the accounts, and any related gain or loss is reflected in operations. Repairs and maintenance expenditures are charged to operations.

**Actinium Pharmaceuticals, Inc.**
**(Formerly Cactus Ventures, Inc.)**
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**Notes to Consolidated Financial Statements**

**Impairment of Long-Lived Assets –** Management reviews long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount may not be realizable or at a minimum annually during the fourth quarter of the year. If an evaluation is required, the estimated future undiscounted cash flows associated with the asset are compared to the asset's carrying value to determine if an impairment of such asset is necessary. The effect of any impairment would be to expense the difference between the fair value of such asset and its carrying value.

**Derivatives –** All derivatives are recorded at fair value on the balance sheet. Fair values for securities traded in the open market and derivatives are based on quoted market prices. Where market prices are not readily available, fair values are determined using market based pricing models incorporating readily observable market data and requiring judgment and estimates.

**Fair Value of Financial Instruments –** Fair value is defined as the price that would be received to sell an asset, or paid to transfer a liability, in an orderly transaction between market participants. A fair value hierarchy has been established for valuation inputs that gives the highest priority to quoted prices in active markets for identical assets or liabilities and the lowest priority to unobservable inputs. The fair value hierarchy is as follows:

Level 1 Inputs – Unadjusted quoted prices in active markets for identical assets or liabilities that the reporting entity has the ability to access at the measurement date.

Level 2 Inputs – Inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly. These might include quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable for the asset or liability (such as interest rates, volatilities, prepayment speeds, credit risks, etc.) or inputs that are derived principally from or corroborated by market data by correlation or other means.

Level 3 Inputs – Unobservable inputs for determining the fair values of assets or liabilities that reflect an entity's own assumptions about the assumptions that market participants would use in pricing the assets or liabilities.

The following tables set forth assets and liabilities measured at fair value on a recurring and non-recurring basis by level within the fair value hierarchy as of December 31, 2012 and 2011. As required by ASC 820, financial assets and liabilities are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. The Company's assessment of the significance of a particular input to the fair value measurement requires judgment, and may affect the valuation of fair value assets and liabilities and their placement within the fair value hierarchy levels.

| | Level 1 | Level 2 | Level 3 | Total |
|---|---|---|---|---|
| Derivative liabilities: | | | | |
| At December 31, 2012 | - | - | $ 3,574,958 | $ 3,574,958 |
| At December 31, 2011 | - | - | 4,439,613 | 4,439,613 |

**Actinium Pharmaceuticals, Inc.**
**(Formerly Cactus Ventures, Inc.)**
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**Notes to Consolidated Financial Statements**

**Income Taxes –** The Company uses the asset and liability method in accounting for income taxes. Under this method, deferred tax assets and liabilities are determined based on differences between financial reporting and income tax carrying amounts of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The Company reviews deferred tax assets for a valuation allowance based upon whether it is more likely than not that the deferred tax asset will be fully realized. A valuation allowance, if necessary, is provided against deferred tax assets, based upon management's assessment as to their realization.

**Research and Development Costs –** Research and development costs are expensed as incurred. Research and development reimbursements and grants are recorded by the Company as a reduction of research and development costs.

**Share-Based Payments –** The Company estimates the fair value of each stock option award at the grant date by using the Black-Scholes option pricing model and value of common shares based on the last common stock valuation done by third party valuation expert of the Company's common stock on the date of the share grant. The fair value determined represents the cost for the award and is recognized over the vesting period during which an employee is required to provide service in exchange for the award. As share-based compensation expense is recognized based on awards ultimately expected to vest, the Company reduces the expense for estimated forfeitures based on historical forfeiture rates. Previously recognized compensation costs may be adjusted to reflect the actual forfeiture rate for the entire award at the end of the vesting period. Excess tax benefits, if any, are recognized as an addition to paid-in capital.

**Earnings (Loss) Per Common Share –** The Company provides basic and diluted earnings per common share information for each period presented. Basic earnings (loss) per common share is computed by dividing the net income (loss) available to common stockholders by the weighted average number of common shares outstanding during the reporting period. Diluted earnings per common share is computed by dividing the net income available to common stockholders by the weighted average number of common shares outstanding plus dilutive securities. Since the Company has only incurred losses, basic and diluted net loss per common share are the same. The potentially dilutive securities (options, warrants and convertible instruments) were excluded from the diluted loss per common share calculation because their effect would have been anti dilutive. For the year ended December 31, 2012, potentially issuable shares included stock options to purchase 2,330,134 shares and warrants to purchase 12,770,596 shares of the Company's common stock. For the year ended December 31, 2011, potentially issuable shares includes options and warrants to purchase 273,859 shares of the Company's common stock and notes payable convertible to 3,448,276 shares of the Company's common stock have been excluded from the calculation.

**Recent Accounting Pronouncements –** The Company does not expect that any recently issued accounting pronouncements will have a significant impact on the results of operations, financial position, or cash flows of the Company.

**Subsequent Events –** The Company's management reviewed all material events from January 1, 2013 through March 15, 2013.

**Actinium Pharmaceuticals, Inc.**
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**Notes to Consolidated Financial Statements**

**Note 2 – Going Concern**

As reflected in the accompanying consolidated financial statements, the Company has suffered recurring losses from operations since its inception. The Company has a net loss of $8,361,205 and net cash used in operations of $5,212,710, for the year ended December 31, 2012; and an accumulated deficit of $55,743,463 at December 31, 2012. In addition, the Company has not completed its efforts to establish a stable recurring source of revenues sufficient to cover its operating costs for the next twelve months. These factors raise substantial doubt regarding the Company's ability to continue as a going concern.

The ability of the Company to continue its operations is dependent on the successful execution of management's plans, which include the expectation of raising debt or equity based capital, with some additional funding from other traditional financing sources, including term notes, until such time that funds provided by operations are sufficient to fund working capital requirements. The Company may need to issue additional equity and incur additional liabilities with related parties to sustain the Company's existence although no commitments for funding have been made and no assurance can be made that such commitments will be available.

The accompanying consolidated financial statements have been prepared on a going concern basis, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. These financial statements do not include any adjustments relating to the recovery of assets or the classification of liabilities that might be necessary should the Company be unable to continue as a going concern.

**Note 3 – Related Party Transactions**

***MSKCC:***

In 2010, General Atlantic Group Limited donated all of the equity shares of its wholly owned subsidiary, Actinium Holdings Ltd. (formerly named General Atlantic Investments Limited) to Memorial Sloan Kettering Cancer Center (MSKCC), a principal owner of the Company.

On February 11, 2002, the Company entered into a License, Development and Commercialization Agreement with Sloan-Kettering Institute of Cancer Research (SKI), an entity related to MSKCC. The agreement was amended in August 2006. Pursuant to the agreement, the Company licenses certain intellectual property from SKI, including critical patents with respect to the Company's core technology, and also supports ongoing research and clinical development of related drug candidates. Certain amounts due under this agreement were deferred and then forgiven under the forbearance-related arrangements described above. On June 19, 2011, the Company nonetheless agreed to pay SKI (a) $50,000 in 2011, (b) $200,000 in 2012 and (c) $250,000 in 2013 under this agreement, in respect of the $50,000 annual maintenance fees and research payments. Since January 1, 2011, the Company has paid $100,000 under this agreement and as of December 31, 2012, the Company agreed to pay an additional $150,000 for research to be conducted in 2013.

On March 27, 2012, the Company entered into an additional clinical trial agreement with MSKCC Cancer Center with respect to conducting a Phase 1/2 trial of combination therapy of low dose cytarabine and fractionated dose of Lintuzumab-Ac225. The Company will pay $31,185 for each patient that has completed the clinical trial. Upon execution of the agreement, the Company was required to pay a start-up fee of $79,623, which was paid on July 10, 2012.

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MSKCC agreed, subject to certain conditions, to utilize the donated funds for certain clinical and preclinical programs and activities related to the Company's drug development and clinical study programs, including the payment of certain costs and expenses that would otherwise have been borne by the Company. The following is a summary of activities related to the MSKCC arrangements for years ended December 31, 2012 and 2011:

| | 2012 | 2011 |
|---|---|---|
| Qualified R&D costs incurred by the Company | $ - | $ 655,786 |
| Reimbursements received from MSKCC | 237,834 | 966,341 |

In 2012 and 2011, the Company received total R&D reimbursement payments of $237,834 and $299,200, respectively, from MSKCC.

As of December 31, 2012 and 2011, the Company had a net receivable of $0 and $237,834, respectively, from MSKCC.

***Dr. Rosemary Mazanet:***

On January 1, 2012, the Company entered into a Consulting Services Agreement with Dr. Rosemary Mazanet, a director of Cactus. Pursuant to the agreement, Dr. Mazanet is to provide, among other things, consulting services in the areas of implementation of the Actimab™-A trial including all aspects of study initiation until first patient in at each clinical site. Dr. Mazanet receives compensation of $100,000 per year and may receive additional compensation in the form of options at determined by the board of the Company. Since January 1, 2011, Dr. Mazanet has also received options to purchase 99,900 shares of common stock of the Company. These options have exercise price ranging from $0.78 to $1.5 and have a life of 10 years.

***Jamess Capital Group, LLC:***

On May 9, 2011, the Company entered into a transaction management agreement with Jamess Capital Group, LLC. (formerly known as Amerasia Capital Group, LLC), a consulting firm affiliated with Mr. Sandesh Seth, a Director of the Company ("Management Firm"). The Management Firm received a monthly fee of $12,500 which is terminable by the Company three months after the effective date of the going public transaction and designees of Jamess, including entities affiliated with Mr. Seth, were issued warrants to purchase common stock equal to 10% of the fully-diluted capital stock of the Company as of the effective date of the going public transaction. The fully diluted shares for this calculation included all issued and outstanding shares as well as those reserved under the Employee Stock Option Plan. The Management Firm is also eligible to be reimbursed upon the submission of proper documentation for ordinary and necessary out-of-pocket expenses not to exceed $5,000 per month.

***Placement Agent:***

On August 7, 2012, the Company entered into an engagement agreement with its placement agent for the 2012 Common Stock Offering, of which Mr. Seth, a director of the Company is Head of Healthcare Investment Banking. Pursuant to the agreement, the placement agent was engaged as the exclusive agent for the 2012 Common Stock Offering. In consideration for its services, the placement agent will receive (a) a cash fee equal to 10% of the gross proceeds raised in the 2012 Common Stock Offering, (b) a non-accountable expense reimbursement equal to 2% of the gross proceeds raised in the 2012 Common Stock Offering, and (c) reimbursement of $100,000 for legal expenses incurred by the placement agent. The placement agent or its designees have also received warrants to purchase shares of the Company's Common Stock in an amount equal to 10% of the shares of common stock issued as part of the units sold in the 2012 Common Stock Offering and the shares of Common Stock issuable upon exercise of the B warrants included in such units. The placement agent will also receive the same fee and expense schedule for any cash exercise of warrants within 6 months of the final closing of the 2012 Common Stock Offering and a 5% solicitation fee for any warrants exercised as a result of being called for redemption by the Company. Upon the final closing of the 2012 Common Stock Offering of the units, the placement agent has been engaged by the Company to provide certain financial advisory services to the Company for a period of at least 6 months for a monthly fee of $25,000. The agreement also provides that (i) if the Company consummates any merger, acquisition, business combination or other transaction (other than the Share Exchange) with any party introduced to it by the placement agent, the placement agent would receive a fee equal to 10% of the aggregate consideration in such transactions, and (ii) if, within a period of 12 months after termination of the advisory services described above, the Company requires a financing or similar advisory transaction the placement agent will have the right to act as the Company's financial advisor and investment banker in such financing or transaction pursuant to a set fee schedule set forth in the August 7, 2012 engagement agreement. For a period ending one year after the expiration of all lock-up agreements entered into in connection with the Share Exchange, any change in the size of the Company board of directors must be approved by the placement agent. The placement agent also was engaged by the Company as placement agent for its Stock Offering and Convertible Notes financing in 2011 and, as a part of the fee for that engagement, designees of the placement agent also hold warrants to purchase 1,251,015 shares of the Company's Common Stock.

***Guagenti & Associates LLC:***

In 2010, the Company entered into an agreement with Guagenti & Associates LLC ("G&A"). G&A is affiliated with Enza Guagenti, the former Chief Financial Officer of Cactus. Pursuant to the agreement, the Company leases storage space in Newark, NJ from G&A. The rent is $300 per month. Since January 1, 2011, the Company has paid $7,200 pursuant to this agreement. Ms. Guagenti resigned as the Company's Chief Financial Officer on March 9, 2013.

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**Note 4 – Property and Equipment**

Property and equipment consisted of the following at December 31, 2012 and 2011:

| | Lives | 2012 | 2011 |
|---|---|---|---|
| Office equipment | 5 years | $ 156,162 | $ 153,804 |
| Furniture and fixture | 7 years | 1,292 | 1,292 |
| Total property, plant and equipment | | 157,454 | 155,096 |
| Less: accumulated depreciation | | (154,444) | (153,863) |
| Property and equipment | | $ 3,010 | $ 1,233 |

Depreciation expense for the years ended December 31, 2012 and 2011 were $581 and $633, respectively.

**Note 5 – Note Payable and Convertible Notes**

Note Payable

On December 28, 2012, the Company entered into a premium finance agreement to pay $140,000 premium of its director and officer insurance policy. Pursuant to the agreement, the Company paid a down payment of $28,000 in January 2013 and has to pay $12,636 in monthly installment for nine months. As of December 31, 2012, outstanding balance related to the premium finance agreement was $140,000.

Convertible Notes

On December 27, 2011, the Company completed a private offering of 8% Senior Subordinated Unsecured Convertible Promissory Notes (“Convertible Notes”) in the amount of $900,000 and received net proceeds of $750,000. The convertible notes were issued at 83.33% of the principal amount resulting in an original issue discount of $150,000. The Convertible Notes mature one year from the date of issuance. Interest accrues at the rate of 8% per year on the outstanding principal amount, accrued semi-annually and to be paid at maturity.

The principal amount of the Convertible Notes and accrued interest are automatically converted to common stock at the earlier of: (1) the effective date of a Qualified Public Offering, (2) a Public Company Transaction, defined as (i) a reverse merger or similar transaction between the Company and a corporation whose securities are publicly traded in the United States or other jurisdiction mutually agreed between the Company and Placement Agent, or (ii) the quotation of the Company’s securities for purchase and sale on a U.S. quotation service, or (iii) the filing with an applicable regulatory body which will result in the Company becoming an entity whose securities are traded on a public exchange in the U.S. or other mutually agreed upon jurisdiction, or (3) the acquisition or receipt by the Company of no less than $4,000,000 of gross proceeds in subsequent offerings of its common stock or equivalents following the issuance of the Company’s stock (See Note 9) and the Convertible Notes.

In connection with the issuance of the Convertible Notes, warrants to purchase a total of 287,061 shares of common stock were issued to investors. The Placement Agent and the Management Firm (See Note 9) were issued warrants to purchase 143,532 shares and 126,829 shares of common stock, respectively. The warrants issued to the Placement Agent are exercisable at $0.78 per share and expire on January 31, 2019. The warrants issued to the Management Firm are exercisable at $0.01 per share and expire on January 31, 2019.

The Company analyzed the Convertible Notes and the Warrants for derivative accounting consideration under FASB ASC 470 and determined that the investor warrants and the placement agent warrants, with a grant date fair value of $565,729 (See Note 6), qualified for accounting treatment as a financial derivative (See Note 6) and the Convertible Notes were determined to also have a beneficial conversion feature discount of $372,850 resulting from the conversion price of $0.78 per share which is below the fair value of $1.11 per share on the date of the Convertible Notes.

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The total fees, including cash payments and the fair value of the warrants issued to the Placement Agent, incurred in connection with the financing were $292,692. These fees were amortized over the life (one year) of the Convertible Notes using the straight-line method as it approximates the effective interest method. The $150,000 original issue discount on the Convertible Notes was also amortized over the life of the Notes on a straight line basis.

On October 23, 2012, the investors extended the note maturity date for 90 days. The maturity date of the notes has been extended to January 31, 2013, February 18, 2013 or March 27, 2013 for the 24 notes.

On December 19, 2012, the Convertible Notes and the accrued interests were automatically converted to common stock when the Company closed on an offering of its common stock in which the gross proceeds exceeded the $4,000,000 threshold. The Convertible Notes and accrued interest were converted into 1,252,550 shares of the Company's common stock.

During the years ended December 31, 2012, the Company recorded amortization expense related to the deferred financing costs and the debt discount of $252,248 and $775,637, respectively. During the years ended December 31, 2011, the Company recorded amortization expense related to the deferred financing costs and the debt discount of $40,444 and $124,363, respectively.

A summary of the 8% Senior Subordinated Unsecured Convertible Promissory Notes as of December 31, 2012 and 2011 are as follows:

| | 2012 | 2011 |
|---|---|---|
| Principal amount | $ 900,000 | $ 900,000 |
| Less: original issuance discount | (150,000) | (150,000) |
| Less: discount related to fair value of derivative warrants | (377,150) | (377,150) |
| Less: discount related to the beneficial conversion feature | (372,850) | (372,850) |
| Add: amortization of discount | 900,000 | 124,363 |
| Less: principal amount converted to stock | (900,000) | - |
| | | |
| Carrying value at December 31, 2012 and 2011, respectively | $ - | $ 124,363 |

**Note 6 – Derivatives**

The Company has determined that certain warrants the Company has issued contain provisions that protect holders from future issuances of the Company's common stock at prices below such warrants' respective exercise prices and these provisions could result in modification of the warrants' exercise price based on a variable that is not an input to the fair value of a "fixed-for-fixed" option as defined under FASB ASC Topic No. 815 – 40. The warrants granted in connection with the issuance of the Company's Stock Offering and 2012 Common Stock Offering (See Note 9), the Convertible Notes (See Note 5) and the placement agent warrants contain anti-dilution provisions that provide for a reduction in the exercise price of such warrants in the event that future common stock (or securities convertible into or exercisable for common stock) is issued (or becomes contractually issuable) at a price per share (a "Lower Price") that is less than the exercise price of such warrant at the time. The amount of any such adjustment is determined in accordance with the provisions of the warrant agreement and depends upon the number of shares of common stock issued (or deemed issued) at the Lower Price and the extent to which the Lower Price is less than the exercise price of the warrant at the time.

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Activities for derivative warrant instruments during the years ended December 31, 2012 and 2011 were as follows:

| | Units | Fair Value |
|---|---|---|
| Balance, December 31, 2010 | - | $ - |
| Warrants issued with Convertible Notes (See Note 5) | 287,061 | 377,150 |
| Placement agent warrants related to issuance of Convertible Notes (See Note 5) | 143,532 | 188,579 |
| Warrants issued with Stock Offering (See Note 9) | 1,972,785 | 2,591,900 |
| Placement agent warrants related to issuance of stock (See Note 9) | 986,393 | 1,295,950 |
| Change in fair value | - | (13,966) |
| Balance, December 31, 2011 | 3,389,771 | 4,439,613 |
| Warrants issued with Stock Offering (See Note 9) | 242,190 | 318,087 |
| Placement agent warrants related to Stock Offering (See Note 9) | 121,095 | 159,044 |
| Warrants issued with 2012 Common Stock Offering-A (See Note 9) | 3,118,988 | 1,409,554 |
| Warrants issued with 2012 Common Stock Offering-B (See Note 9) | 1,559,505 | 1,665,697 |
| Placement agent warrants related to 2012 Common Stock Offering (See Note 9) | 467,845 | 499,707 |
| Transfer from liability classification to equity classification | (3,753,056) | (4,231,324) |
| Change in fair value | - | (685,420) |
| Balance, December 31, 2012 | 5,146,338 | $ 3,574,958 |

On December 19, 2012, as the result of the Share Exchange, it was determined that the floor for resetting the exercise price was met and the exercise price of the certain warrants was set to be $0.26 (before Exchange Ratio adjustment). Therefore, these warrants were considered indexed to the Company's stock and qualified for the scope exception under FASB ASC 815-10 allowing for a transfer from liability classification to equity classification.

The fair values of the warrants issued in the Company's stock and Convertible Notes Offering and the warrants issued to the Company's placement agent were recognized as derivative warrant instruments at issuance and are measured at fair value at each reporting period. The Company determined the fair values of these warrants using a modified binomial valuation model.

The fair values of the derivative warrants were calculated using a modified binomial valuation model with the following assumptions at each balance sheet date, the transfer date on December 19, 2012, and the date for the new grants in January and December 2012. (The market value of common stock, adjusted exercise price and offering price presented does not reflect the impact of the Share Exchange.)

| | December 31, 2011 | January 31, 2012 | December 19, 2012 | December 27, 2012 | December 31, 2012 |
|---|---|---|---|---|---|
| Market value of common stock on measurement date (1) | $ 0.37 | $ 0.37 | $ 0.39 | $ 0.39 | $ 0.39 |
| Adjusted exercise price | $ 0.24 - $0.26 | $ 0.23 - $0.26 | $ 0.41 - $0.83 | $ 0.22 - $0.26 | $ 0.41 - $0.83 |
| Risk free interest rate (2) | 1.35% | 1.24% | 0.10% - 0.77% | 0.94% | 0.10% - 0.77% |
| Warrant lives in years | 7 years | 7 years | 4 months/5years | 6 years | 4 months/5years |
| Expected volatility (3) | 156% | 157% | 125% - 161% | 161% | 125% - 161% |
| Expected dividend yield (4) | - | - | - | - | - |
| Probability of stock offering in any period over 5 years (5) | 25% | 25% | 25% | 25% | 25% |
| Range of percentage of existing shares offered (6) | 35% | 35% | 35% | 35% | 35% |
| Offering price range (7) | $ 0.18 - $0.55 | $ 0.13 - $0.56 | $ 0.01 - $0.55 | $ 0.12 - $0.60 | $ 0.01 - $0.55 |

(1) The market value of common stock is based on an enterprise valuation.

(2) The risk-free interest rate was determined by management using the average of 5 and 7 year and the 3-month Treasury Bill as of the respective measurement date.

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(3) Because the Company does not have adequate trading history to determine its historical trading volatility, the volatility factor was estimated by management using the historical volatilities of comparable companies in the same industry and region.

(4) Management determined the dividend yield to be 0% based upon its expectation that it will not pay dividends for the foreseeable future.

(5) Management has determined that the probability of a stock offering is 25% for each quarter of the next five years.

(6) Management estimates that the range of percentages of existing shares offered in each stock offering will be between 35% of the shares outstanding.

(7) Represents the estimated offering price range in future offerings as determined by management.

**Note 7 – Income Taxes**

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the Company's deferred tax assets and liabilities at December 31, 2012 and 2011 are as follows:

| | 2012 | 2011 |
|---|---|---|
| Deferred tax assets: | | |
| Net operating losses | $ 13,609,036 | $ 13,089,314 |
| Share-based compensation | 1,497,556 | 741,420 |
| Other differences in tax basis | 233,043 | 4,749 |
| | | |
| Total deferred tax assets | 15,339,635 | 13,835,483 |
| Less: valuation allowance | (15,339,635) | (13,835,483) |
| | | |
| Deferred tax assets, net | $ - | $ - |

As of December 31, 2012, for U.S. federal income tax reporting purposes, the Company has approximately $43 million of unused net operating losses ("NOLs") available for carry forward to future years. The benefit from the carry forward of such NOLs will begin expiring during the year ended December 31, 2020. Because United States tax laws limit the time during which NOL carry forwards may be applied against future taxable income, the Company may be unable to take full advantage of its NOL for federal income tax purposes should the Company generate taxable income. Further, the benefit from utilization of NOLs carry forwards could be subject to limitations due to material ownership changes that could occur in the Company as it continues to raise additional capital. Based on such limitations, the Company has significant NOLs for which realization of tax benefits is uncertain.

The difference between the income tax provision and the amount that would result if the U.S. Federal statutory rate of 34% were applied to pre-tax income (loss) for the years ended December 31, 2012 and 2011 are as follows:

| | For the years ended | | | |
|---|---|---|---|---|
| | December 31, 2012 | | December 31, 2011 | |
| Federal income taxes at 34% | $ (2,842,810) | -34.00% | $ (1,171,230) | -34.00% |
| Share-based compensation costs | 756,136 | 9.04% | 736,796 | 21.39% |
| Change in fair value of derivatives | 233,043 | 2.79% | 4,748 | 0.13% |
| Amortization of debt discounts | 349,480 | 4.18% | 56,033 | 1.63% |
| Change in valuation allowance | 1,504,151 | 17.99% | 373,653 | 10.85% |
| | | | | |
| Provision for income tax | $ - | - | $ - | - |

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**Note 8 – Commitments and Contingencies**

The Company has entered into license and research and development agreements with third parties under which the Company is obligated to make payments in the form of upfront payments as well as milestone and royalty payments. Notable inclusions in this category are:

a. Abbott Biotherapeutics Corp – The Company entered into a Product Development and Patent License Agreement with Abbott Biotherapeutics Corp. (formerly Facet Biotech formerly known as Protein Design Labs) in 2003 to secure exclusive rights to a specific antibody when conjugated with alpha emitting radioisotopes. Upon execution of the agreement, the Company made a license fee payment of $3,000,000.

The Company agreed to make milestone payments totaling $7,750,000 for the achievement of the following agreed to and contracted milestones:

| Milestones | Payments |
|---|---|
| (1) when Company initiates a Phase I Clinical Trial of a licensed product | $ 750,000 |
| (2) when Company initiates a Phase II Clinical Trial of a licensed product | 750,000 |
| (3) when Company initiates a Phase III Clinical Trial of a licensed product | 1,500,000 |
| (4) Biological License Application filing with U.S. FDA | 1,750,000 |
| (5) First commercial sale | 1,500,000 |
| (6) after the first $10,000,000 in net sales | 1,500,000 |

Under the agreement, the Company shall pay to Abbott Biotherapeutics Corp on a country-by-country basis a royalty of 12% of net sales of all licensed products until the later of: (1) 12.5 years after the first commercial sale, or (2) when the patents expire.

As of December 31, 2012, the Company met its first milestone and upon reaching the milestone the Company paid Abbott Biotherapeutics Corp. a milestone payment of $750,000 on July 24, 2012. The milestone payment for the Phase I Clinical Trial was recorded as research and development expense.

b. MSKCC – In February 2002, the Company entered into a license agreement with MSKCC that requires a technology access fee of $50,000 upon execution, an annual maintenance fee of $50,000 and an annual research funding of $50,000 for as long as the agreement is in force.

| Milestones | Payments |
|---|---|
| (1) filing of an New Drug Application (“NDA”) or regulatory approval for each licensed product | $ 750,000 |
| (2) upon the receipt of regulatory approval from the U.S. FDA for each licensed product | 1,750,000 |

Under the agreement, the Company shall pay to MSKCC on a country-by-country basis a royalty of 2% of net sales of all licensed products until the later of: (1) 10 years from the first commercial sale, or (2) when the patents expire.

The Company expects to file the NDA for regulatory approval in 2015.

c. Oak Ridge National Laboratory (ORNL) – API has contracted to purchase radioactive material to be used for research and development through December 2012. API is contracted to purchase $233,100 of radioactive material to be used for research and development, with a renewal option at the contract end. The Company is currently negotiating the 2013 agreement.

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d. AptivSolutions provides project management services for the study of the drug Ac-225-HuM195 (Actimab™-A) used in the Company clinical trials, Phase I and Phase II. The total project is estimated to cost $1,859,333 and requires a 12.5% down payment of the total estimated project cost. The down payment totaling $239,000 was paid in 2007 and 2012. On August 6, 2012, the agreement was amended to provide for additional services. The total project is now estimated at $1,997,732. AptivSolutions bills the Company when services are rendered and the Company records the related expense to research and development costs.

e. On June 15, 2012, the Company entered into a license and sponsored research agreement with Fred Hutchinson Cancer Research Center (FHCRC). The Company will build upon previous and ongoing clinical trials, with BC8 (licensed antibody) and eventually develop a clinical trial with Actinium 225. FHCRC has currently completed Phase I and Phase II of the clinical trial and the Company intends to start preparation for a pivotal trial leading to an FDA approval. The Company has been granted exclusive rights to the BC8 antibody and related master cell bank developed by FHCRC. The cost to develop the trial will range from $13.2 million to $23.5 million, depending on the trial design as required by the FDA. Under the terms of the sponsored research agreement, the Company will fund the FHCRC lab with $150,000 per year for the first two years and $250,000 thereafter. Payments made toward funding the lab will be credited toward royalty payments owed to FHCRC in the given year. A milestone payment of $1 million will be due to FHCRC upon FDA approval of the first drug. Upon commercial sale of the drug, royalty payments of 2% of net sales will be due to FHCRC.

f. On March 27, 2012, the Company entered into a clinical trial agreement with Memorial Sloan Kettering Cancer Center. The Company will pay $31,185 for each patient that has completed the clinical trial. Upon execution of the agreement, the Company is required to pay a start-up fee of $79,623. The amount due of $79,623 was paid on July 10, 2012.

g. On May 9, 2011, Actinium entered into a transaction management agreement with Jamess Capital Group, LLC. (formerly known as Amerasia Capital Group, LLC), a consulting firm affiliated with Mr. Sandesh Seth, a Director of Cactus Ventures, Inc. by virtue of his position as a director of Actinium Pharmaceuticals. Mr. Seth is a Managing Partner of the consulting firm some of whose member interests are held by entities owned by officers and employees of the Placement Agent. None of Cactus' current officers or directors had a prior relationship or affiliation with Cactus prior to the closing of the Share Exchange. Pursuant to the agreement, the management firm was engaged to provide consulting services to Actinium related to the consummation of a going public transaction for Actinium. The management firm received a monthly fee of $12,500 which is terminable by the Company three months after the effective date of the going public transaction and designees of Jamess, including entities affiliated with Mr. Seth, were issued warrants to purchase common stock equal to 10% of the fully-diluted capital stock of the Company as of the effective date of the going public transaction. The fully diluted shares for this calculation included all issued and outstanding shares as well as those reserved under the Employee Stock Option Plan. Jamess Capital Group does not retain beneficial ownership of the warrants as they were issued to designees of the members in amounts which do not qualify either Jamess or the warrant holders for inclusion in the beneficial ownership table. The warrants contain a provision wherein the holder may waive the 90 day exercise notice requirement by giving 65 days prior notice of such waiver. The shares available by exercise of this Warrant are also restricted and may not be sold or otherwise transferred until the earlier of twelve months from the closing date of the Pubco Transaction; or for six months after the planned Registration Statement is declared effective. The consulting firm is also eligible to be reimbursed upon the submission of proper documentation for ordinary and necessary out-of-pocket expenses not to exceed $5,000 per month.

h. On July 19, 2012, the Company entered into a clinical trial agreement with FHCRC. The Company will pay $31,366 for each patient that has completed the clinical trial. Upon execution of the agreement, the Company is required to pay a start-up fee of $19,749. During the clinical trial additional fees apply and will be invoiced when applicable. The amount due has not been invoiced but accrued by the Company as of December 31, 2012.

i. On August 28, 2012, the Company entered into a clinical trial agreement with The University of Texas M.D. Anderson Cancer Center. The total estimated cost of conducting the clinical trial is $481,204, which includes a non- refundable institutional fee of $14,500. The estimated cost is based on treating 24 patients through 2013. Upon execution of the agreement, the Company is required to make a payment of $33,946. The amount due has not been invoiced but accrued by the Company as of December 31, 2012.

j. On September 26, 2012, the Company entered into a clinical trial agreement with Johns Hopkins University. The Phase 1/2 clinical trial will be conducted with Actinium 225. The clinical trial will be conducted under the protocols established by the Company and pursuant to an Investigational New Drug Exemption (IND 10807) held by the Company. The Company will pay $38,501 per patient, who has completed the clinical trial. The Company is required to pay a start-up fee of $22,847, an annual pharmacy fee of $2,025 and an amendment processing fee of $500, when applicable. The amount due has not been invoiced but accrued by the Company as of December 31, 2012.

k. On November 21, 2012, the Company entered into a clinical trial agreement with the University of Pennsylvania. The Phase 1/2 clinical trial will be conducted with Actinium 225. The clinical trial will be conducted under the protocols established by the Company and pursuant to an Investigational New Drug Exemption (IND 10807) held by the Company. The Company will pay $31,771 per patient, who has completed the clinical trial. The Company will be required to pay a start-up fee of $16,000 and additional administrative fees, when applicable.

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On August 1, 2012, the Company entered into a rental agreement for office space at 501 Fifth Avenue, 3rd Floor, New York, NY 10017. The agreement terminates January 31, 2013 unless a Notice of Termination is provided to the landlord 60 days prior to January 1, 2013. The agreement automatically renews on a month-to-month basis and requires a two month notice of termination. The Company paid a two month refundable deposit.

**Note 9 – Equity**

From inception to December 31, 2010, the Company raised $42,711,791 by issuing 5,707,259 shares of the Company's stock and issued 66,402 shares, valued at $398,810, for services.

During 2011, the Company raised $6,184,967 by selling 7,891,141 shares of the Company's stock and warrants to purchase 19,972,785 shares of the Company's stock through an offering ("Stock Offering"). A net amount of $5,379,367 was received by the Company in 2011. The Company paid Laidlaw & Company (UK) Ltd. ("Laidlaw & Co."), the placement agent, total cash fees of $742,196, which consisted of placement agent commission of $618,497 and expense reimbursement of $123,699. The Company also issued Laidlaw & Co. warrants to purchase an aggregate of 986,393 shares of the Company's common stock, with an exercise price of $0.78 per share and a term of 7 years. These placement agent warrants were valued at their grant date fair value of $188,579. In addition, the Company paid Laidlaw & Co.'s outside counsel, McCormick & O'Brien PLLC, $60,904 for its services as the placement agent's legal counsel and Signature Bank $2,500 for the bank escrow fee.

During 2012, the Company raised $759,300 by selling 968,759 shares and warrants to purchase 242,190 shares of the Company's common stock under the Company's Stock Offering. A net amount of $660,164 was received by the Company in 2012. The Company paid Laidlaw & Co. total cash fees of $91,116, which consisted of placement agent commission of $75,930 and expense reimbursement of $15,186. The Company also issued Laidlaw & Co. warrants to purchase an aggregate of 121,095 shares of the Company's common stock, with an exercise price of $0.78 per share and a term of 7 years. These placement agent warrants were valued at their grant date fair value of $159,044. In addition, the Company paid Laidlaw & Co.'s outside counsel, McCormick & O'Brien PLLC, $8,020 for its services as the placement agent's legal counsel.

In 2012, the Company also raised $5,151,450 through an offering of 3,118,988 shares of its common stock and "A Warrants" to purchase 3,118,988 shares of the Company's common stock, exercisable at a price of $1.65 per share for a period of 120 days from the day of the final closing of the offering, and "B Warrants" to purchase 1,559,505 shares of the Company's common stock, exercisable at a price of $2.48 per share for a period of 5 years from the date of the final closing of the offering. ("2012 Common Stock Offering") A net amount of $4,469,776 was received by the Company. Pursuant to the 2012 Common Stock Offering agreement, the Company paid Laidlaw & Co. total cash fees of $618,174, which consisted of placement agent commission of $515,145 and expense reimbursement of $103,029. The Company also issued the placement agent warrants to purchase an aggregate of 467,845 shares of the Company's common stock, with an exercise price of $0.78 per share and a term of 5 years. These placement agent warrants were valued at $499,707 and recorded as derivative liabilities. In addition, the Company paid the Laidlaw & Co.'s outside counsel, Richardson & Patel, LLP, $60,000 for its services as the Laidlaw & Co.'s legal counsel and Signature Bank $3,500 for the bank escrow fee.

During 2012, the Company's convertible notes, plus accrued interest, were converted to 1,252,550 shares of the Company's common stock as a result of the 2012 Common Stock Offering.

As a result of the Share Exchange described in Note 1, the Company issued 400,000 shares to the original shareholders of the Company and 1,986,566 shares to the former shareholders of Actinium.

**Placement Agent –** In connection with the money raised in 2011, the Company issued Laidlaw & Co. warrants to purchase an aggregate of 1,129,925 shares of common stock, with an exercise price of $0.78 per share. With the money raised in 2012, the Company issued Laidlaw & Co. warrants to purchase an aggregate of 588,940 shares of common stock, with an exercise price of $0.78 per share.

**Management Firm –** In 2011, the Company entered into a management agreement with Jamess Capital Group, LLC (formerly, AmerAsia Inc., "Jamess") for Jamess to provide consulting services related to funding and Actinium becoming a publicly traded entity. In 2011, the Company incurred $96,744 in management fees. In addition, Actinium issued Jamess warrants to purchase an aggregate of 1,974,774 shares of common stock, with an exercise price of $0.01 per share. The warrants have a fair value of $2,153,442 (see Note 11) and included a cashless exercise provision. In 2012, the Company issued Jamess warrants to purchase 1,716,340 shares of common stock with an exercise price of $0.01 per share. The warrants have a fair value of $1,957,754 (see Note 11) and included a cashless exercise provision.

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**Note 10 – Stock Option Plan**

The Company has adopted a 2003 Stock Plan under which it may grant up to 757,575 options to purchase common stock. The 2003 Stock Plan was amended in 2008 to increase the number of shares that it may grant up to 978,154. Option awards are generally granted with an exercise price equal to the market price of the Company's stock at the date of the grant. However, since the Company is not publicly traded, the fair market value of the stock represents the Board of Directors' best estimate, based on the information available, on the date of the grant. The awards generally vest over a four or five year period at a rate of approximately 2% per month.

In 2011, the 2003 Stock Plan was amended to increase the number of shares by 3,217,880. Total shares reserved for issuance under the Plan will be increased to 6,155,280.

In accordance with the terms of the 2012 Common Stock Offering, the Company adopted a 2012 Employee Stock Option Plan ("2012 ESOP") and reserved 15% of the total issued and outstanding shares as of the final closing of the 2012 Common Stock Offering. Total shares reserved for issuance under the 2012 ESOP was 9,455,776 shares.

During 2006, options to purchase 206,060 shares of common stock were granted to several employees at an exercise price of $1.35 per share. These options have a term of 10 years and vest over a 4-5 year period. Fair value of $1,051,281 was calculated using the Black-Scholes option-pricing model. Variables used in the Black-Scholes option-pricing model include (1) discount rate of 4.29% (2) expected life of 5 years, (3) expected volatility of 156%, and (4) zero expected dividends.

During 2007, options to purchase 113,220 shares of common stock were granted to several employees at an exercise price of $1.35 per share. These options have a term of 10 years and vest over a 4-5 year period. Fair value of $137,652 was calculated using the Black-Scholes option-pricing model. Variables used in the Black-Scholes option-pricing model include (1) discount rate of 3.46% (2) expected life of 5 years, (3) expected volatility of 143%, and (4) zero expected dividends.

During 2008, options to purchase 69,941 shares of common stock were granted to an employee at an exercise price of $0.90 per share. These options have a term of 10 years and vest over a 4-5 year period. Fair value of $44,159 was calculated using the Black-Scholes option-pricing model. Variables used in the Black-Scholes option-pricing model include (1) discount rate of 3.46% (2) expected life of 5 years, (3) expected volatility of 139%, and (4) zero expected dividends.

During 2009, 20,613 options to one employee were cancelled as the result of termination of the employment and 128,050 options to one employee were forfeited as the employee deceased during the year.

During the year of 2010, options to purchase 33,300 shares of common stock were granted to an employee at an exercise price of $0.90 per share. These options have a term of 10 years and vest over a 4-5 year period. Fair value of $24,996 was calculated using the Black-Scholes option-pricing model. Variables used in the Black-Scholes option-pricing model include (1) discount rate of 2.16% (2) expected life of 5 years, (3) expected volatility of 171%, and (4) zero expected dividends.

In February 2012, the Company re-priced 273,859 units of employee stock options to reflect the current per share fair market value of the Company's common stock. The exercise prices of all of the current outstanding stock options were reduced to $1.28 per share. The Company recorded an incremental compensation cost of $34,879 as a result of the re-pricing of options.

During 2012, options to purchase 2,056,275 shares of common stock were issued to several employees and consultants at an exercise price ranging from $0.78 to $1.5 per share. These options have a term of 10 years and vest over a 4 year period. The fair value of $1,519,777 was calculated using the Black-Scholes option-pricing model. Variables used in the Black-Scholes option-pricing model include: (1) discount rate of 1.8% (2) expected life of 7 years, (3) expected volatility of 160.44% ~ 162.49%, and (4) zero expected dividends.

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The following is a summary of stock option activities for the years ended December 31, 2012 and 2011:

| | Number of Units | Weighted Average Exercise Price | Weighted Average Remaining Contractual Term (in years) | Aggregate Intrinsic Value |
|---|---|---|---|---|
| Outstanding, December 31, 2010 | 273,859 | $ 1.29 | 5.51 | $ - |
| Granted | - | - | - | |
| Outstanding, December 31, 2011 | 273,859 | 1.29 | 5.51 | - |
| Granted | 2,056,275 | 0.96 | 8.89 | |
| Outstanding, December 31, 2012 | 2,330,134 | $ 0.96 | 8.91 | $ 685,800 |

All options issued and outstanding are being amortized over their respective vesting periods. The unrecognized compensation expense at December 31, 2012 and 2011 were $1,998,435 and $14,528, respectively. During the years ended December 31, 2012 and 2011, the Company recorded option expense of $266,172 and $19,935, respectively.

**Note 11 – Warrants**

During the year ended December 31, 2011, warrants to purchase 1,974,774 shares of common stock were granted to the Management Firm at an exercise price of $0.01 per share. These warrants have a term of 7 years and vest immediately. Fair value of $2,153,442 was calculated using the Black-Scholes option-pricing model. Variables used in the Black-Scholes option-pricing model include (1) discount rate ranging from 1.92% to 3.17%, (2) warrant life of 10 years, (3) expected volatility ranging from 64.77% to 70.72%, and (4) zero expected dividends. The management firm receives warrants equal to ten (10%) percent of the issued and outstanding capital stock of the Company on a fully-diluted basis on the effective date of the agreement. The warrants are subject to weighted average non-dilution provisions to be calculated on the basis of the post-money fully diluted capitalization of the Company upon closing of any transaction, financing or otherwise, up to and including the Public Company transaction, provided that such anti-dilution provisions shall not extend beyond the date of any exercise of the warrants by the management firm prior to the closing of the Public Company transaction. Since these warrants vest immediately, the Company recorded the entire fair value of $2,153,442 as stock-based compensation expense during the year on these warrants issued by the Company.

During the year ended December 31, 2011, the Company also issued the following warrants:

| | |
|---|---|
| Warrants issued with convertible notes (See Note 5) | 287,061 |
| Warrants issued to investors with Stock Offering (See Note 9) | 1,972,766 |
| Placement agent warrants related to issuance of: | |
| Convertible Notes | 143,532 |
| Stock Offering (See Note 6 and Note 9) | 986,383 |
| Total | 3,389,742 |

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During the year ended December 31, 2012, warrants to purchase an aggregate of 1,716,340 shares of common stock were granted to the Management Firm at an exercise price of $0.01 per share. These warrants have a term of 7 years and vest immediately. Fair value of $1,957,754 was calculated using the Black-Scholes option-pricing model. Variables used in the Black-Scholes option-pricing model include (1) discount rate of 1.82%, (2) warrant life of 7 years, (3) expected volatility of 60.64%, and (4) zero expected dividends. Since these warrants vest immediately, the Company recorded the entire fair value of $1,957,754 as stock-based compensation expense during the year on these warrants issued by the Company.

During the year ended December 31, 2012, the Company also issued the following warrants:

| | |
|---|---|
| Warrants issued to investors with Stock Offering (See Note 6) | 242,189 |
| Warrants issued to investors with Common Stock | 4,678,491 |
| Placement agent warrants related to issuance of: | |
| Stock Offering (See Note 6 and Note 9) | 121,094 |
| 2012 Common Stock Offering | 467,845 |
| Warrants issued to investors with stock – accrued dividend | 180,115 |
| Total | 5,689,734 |

The following is a summary of warrant activities for the years ended December 31, 2011 and 2012:

| | Number of Units | Weighted Average Exercise Price | Weighted Average Remaining Contractual Term (in years) | Aggregate Intrinsic Value |
|---|---|---|---|---|
| Outstanding, December 31, 2010 | - | $ - | - | $ - |
| Granted | 5,364,557 | 0.51 | 6.76 | |
| | | | | |
| Outstanding, December 31, 2011 | 5,364,557 | 0.51 | 6.76 | 3,261,367 |
| Granted | 7,406,079 | 1.32 | 3.76 | |
| | | | | |
| Outstanding, December 31, 2012 | 12,770,636 | $ 0.97 | 4.48 | $ 6,114,768 |

**Note 12 – Employee Defined Contribution Plan**

In 2004, the Company established an employee deferred contribution plan. The plan requires 12 consecutive months of service and a minimum of 500 hours of service for participation. The Plan provides for employer matching of 50% of the employee contribution and discretionary contributions. Employees can contribute up to the maximum allowable under the Internal Revenue Service Code Section 401(k). The amount contributed by the Company for the years ended December 31, 2012 and 2011 was $8,942 and $8,885, respectively.

**Note 13 – Subsequent Events**

In February 28, 2013, the Company entered into a Separation and Settlement Agreement with its former CEO, Jack Talley. Pursuant to the agreement, the Company will pay Mr. Talley in 2 equal installments the aggregate amount of $250,000 and a performance bonus of $60,000 for his service from August 15, 2012 to December 31, 2012. The $60,000 bonus was included in the accounts payable and accrued liabilities on the Company's balance sheet at December 31, 2012.

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**1,382,649 Shares of Common Stock**

**ACTINIUM PHARMACEUTICALS, INC.**
**(FORMERLY CACTUS VENTURES, INC.)**

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**PROSPECTUS**

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YOU SHOULD RELY ONLY ON THE INFORMATION CONTAINED IN THIS DOCUMENT OR THAT WE HAVE REFERRED YOU TO. WE HAVE NOT AUTHORIZED ANYONE TO PROVIDE YOU WITH INFORMATION THAT IS DIFFERENT. THIS PROSPECTUS IS NOT AN OFFER TO SELL COMMON STOCK AND IS NOT SOLICITING AN OFFER TO BUY COMMON STOCK IN ANY STATE WHERE THE OFFER OR SALE IS NOT PERMITTED.

Until _____, all dealers that effect transactions in these securities whether or not participating in this offering may be required to deliver a prospectus. This is in addition to the dealer's obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

**The date of this prospectus is _____, 2014**

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## PART II— INFORMATION NOT REQUIRED IN THE PROSPECTUS

### Item 13. Other Expenses Of Issuance And Distribution.

| | | |
|---|---|---|
| Securities and Exchange Commission registration fee | $ | 1,400 |
| Transfer Agent Fees | $ | 1,000 |
| Accounting fees and expenses | | 5,000 |
| Legal fees and expense | $ | 100,000 |
| Blue Sky fees and expenses | $ | 7,000 |
| **Total** | $ | 114,000 |

All amounts are estimates other than the SEC's registration fee. We are paying all expenses of the offering listed above. No portion of these expenses will be borne by the selling stockholders. The selling stockholders, however, will pay any other expenses incurred in selling their common stock, including any brokerage commissions or costs of sale.

### Item 14. Indemnification of Directors and Officers.

Section 102(b)(7) of the Delaware General Corporation Law 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 General Corporation Law of the State of Delaware 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 bylaws provide that we will indemnify our directors and officers to the fullest extent authorized by the General Corporation Law of the State of Delaware. Expenses (including attorneys' fees) incurred by an officer or director of the Corporation in defending any civil, criminal, administrative or investigative action, suit or proceeding may be paid by the Company in advance of the final disposition of such action, suit or proceeding upon receipt of an undertaking by or on behalf of such director or officer to repay such amount if it shall ultimately be determined that such person is not entitled to be indemnified by the Company as authorized under Delaware law. Such expenses (including attorneys' fees) incurred by former directors and officers or other employees and agents of the Company or by persons serving at the request of the Company as directors, officers, employees or agents of another corporation, partnership, joint venture, trust or other enterprise may be so paid upon such terms and conditions, if any, as the Company deems appropriate.

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.

**Actinium Holdings Ltd. Indemnification**

Pursuant to a letter Agreement dated, July 2011, between API and Actinium Holdings Ltd., API agreed to indemnify certain officers and directors of a predecessor company. Pursuant to the agreement, API will not, and will not permit any of its subsidiaries to, eliminate or otherwise reduce the right of any present or former director or officer of API, Actinium Pharmaceuticals Limited, a Bermuda corporation that merged into the Company ("APL"), and/or the present and former subsidiaries of API or APL (all such entities, collectively, the "Company Group") who currently serves, or at any time prior to the date thereof served, in any such capacity (all such directors and officers, collectively "Company Group Managers") to be indemnified against any costs or expenses (including reasonable attorneys' fees), judgments, fines, losses, claims, damages or liabilities of any nature whatsoever, incurred in connection with any claim, action, suit, proceeding or investigation, whether civil, criminal, administrative or investigative, arising out of or pertaining to matters existing or occurring on, prior to or after the date thereof, whether asserted or claimed prior to, on or after the date thereof, arising, in whole or in part, out of or pertaining to the fact that he or she is or was, or at any time in the future will have been, a Company Group Manager or is or was, or at any time in the future will have been, serving at the request of any entity in the Company Group (or at the request of any present or former affiliate (as such term is defined in Rule 405 under the Securities Act of 1933, as amended) of API for and on behalf of any entity in the Company Group as a director, officer, employee, fiduciary or agent of another corporation, partnership, joint venture, trust, other entity or otherwise, or to be advanced expenses, in any of the foregoing cases, to the fullest extent that such Company Group Manager would be entitled to be indemnified or advanced expenses under applicable law, API's or any such subsidiaries' certificate or articles of incorporation or bylaws or equivalent documents or any applicable contract (collectively, the "Applicable Documents"), in each case, as in effect on the date thereof.

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.

At the present time, there is no pending litigation or proceeding involving a director, officer, employee, or other agent of ours in which indemnification would be required or permitted. We are not aware of any threatened litigation or proceeding that may result in a claim for such indemnification.

**Item 15. Recent Sales of Unregistered Securities.**

During 2011, Actinium Corporation raised $6,184,967 through an offering of 23,697,119 shares (pre-Actinium Share Exchange) of the 2011 Series E preferred shares and 5,924,285 warrants (pre-Actinium share exchange). A net amount of $5,379,367 was received by the Company in 2011.

On December 27, 2011, Actinium Corporation completed a private offering of 8% Senior Subordinated Unsecured Convertible Promissory Notes ("Convertible Notes") in the amount of $900,000 and received net proceeds of $750,000. The convertible notes were issued at 83.33% of the principal amount resulting in an original issue discount of $150,000.The Convertible Notes mature one year from the date of issuance. Interest accrues at the rate of 8% per year on the outstanding principal amount, accrued semi-annually and to be paid at maturity.

In January 2012, the Actinium raised $759,300 through its final offering of the 2011 Series E preferred shares. A net amount of $660,163 was received by Actinium Corporation.

On December 19, 2012, Actinium Corporation completed a private offering of units. Upon taking into account the exchange ratio in the Share Exchange that closed on December 28, 2012 the units consisted of an aggregate of (i) 3,118,968 shares of its common stock, (ii) Series A warrants to purchase 3,118,969 shares of its common stock which have a 120 day term from December 19, 2012 and an initial per share exercise price of $1.65, subject to adjustment, (iii) Series B warrants to purchase up to 1,559,484 shares of common stock which have a 5 year term and an initial per share exercise price of $2.48, subject to adjustment. The price per unit was $1.65 for aggregate gross proceeds of $5,151,448.

On December 28, 2012, we entered into a Share Exchange Agreement with (i) Actinium Corporation and (ii) the former shareholders of Actinium Corporation pursuant to which we acquired 12,939,986 shares of capital stock of Actinium from the Actinium Corporation Shareholders in exchange for the issuance of 4,309,015 shares of common stock to the Actinium Corporation shareholders.

On March 11, 2013, we entered into a second Share Exchange Agreement with (i) Actinium Corporation and (ii) the former shareholders of Actinium Corporation pursuant to which we acquired 22,055,225 shares of capital stock of Actinium Corporation from the Actinium Corporation Shareholders in exchange for the issuance of 7,344,390 shares of common stock to the Actinium Corporation shareholders.

On August 22, 2013, we entered into a third Share Exchange Agreement with (i) Actinium Corporation and (ii) the former shareholders of Actinium Corporation pursuant to which we acquired 24,052,702 shares of capital stock of Actinium Corporation from the Actinium Corporation Shareholders in exchange for the issuance of 8,009,550 shares of common stock to the Actinium Corporation shareholders.

On September 25, 2013 in accordance with a Certificate of Ownership Merging Actinium Corporation into the Company, the Company merged into itself Actinium Corporation, and Actinium Corporation ceased to exist. As a result of the merger, Actinium Corporation stock owned by the Company has been cancelled and each share of Actinium Corporation not owned by the Company was exchanged for 0.333 shares of Company common stock. An aggregate of 1,325,840 shares of the Company's common stock were exchanged for shares for 3,981,501 shares of Actinium Corporation.

On December 27, 2013 and January 10, 2014, we completed a private offering of units. The units consisted of an aggregate of (i)1,106,120

shares of its common stock, and (ii) common stock warrants to purchase 276,529 shares of its common stock which have a five year term and an exercise price of $9.00  The price per unit was $6.00 for aggregate gross proceeds of $6,636,720.

The above securities were offered and sold in reliance upon exemptions from registration pursuant to Section 4(2) of the Securities Act and Rule 506 of Regulation D ("Regulation D") promulgated under the Securities Act. The Company made this determination based on the representations of the investors which included, in pertinent part, that each such investor was an "accredited investor" within the meaning of Rule 501 of Regulation D (there were no non-accredited investors in any of the offerings) and upon such further representations from each investor that (i) such investor is acquiring the securities for its own account for investment and not for the account of any other person and not with a view to or for distribution, assignment or resale in connection with any distribution within the meaning of the Securities Act, (ii) such investor agrees not to sell or otherwise transfer the purchased securities or shares underlying such securities unless they are registered under the Securities Act and any applicable state securities laws, or an exemption or exemptions from such registration are available, (iii) such investor has knowledge and experience in financial and business matters such that such investor is capable of evaluating the merits and risks of an investment in us, (iv) such investor had access to all of the Company's documents, records, and books pertaining to the investment and was provided the opportunity to ask questions and receive answers regarding the terms and conditions of the Offering and to obtain any additional information which the Company possessed or was able to acquire without unreasonable effort and expense, and (v) such investor has no need for the liquidity in its investment in us and could afford the complete loss of such investment. In addition, there was no general solicitation or advertising for securities issued in reliance upon Regulation D.

**Item 16. Exhibits.**

See Exhibit Index following the signature page.

**Item 17. Undertakings.**

The undersigned registrant hereby undertakes:

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

i. To include any prospectus required by section 10(a)(3) of the Securities Act of 1933;

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

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

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

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

(5) Each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

## SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereonto duly authorized, in the City of New York, State of New York, on January 31, 2014.

**ACTINIUM PHARMACEUTICALS, INC.**

By: /s/ Kaushik J. Dave
Kaushik J. Dave
President and Chief Executive Officer
(Duly Authorized Officer and Principal Executive Officer)

By: /s/ Sergio Traversa
Sergio Traversa
Interim Chief Financial Officer (Duly Authorized Officer and
(Principal Financial and Accounting Officer)

## POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Sergio Traversa and Sandesh Seth, and each of them, his true and lawful attorneys-in-fact and agents with full power of substitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement, and to sign any registration statement for the same offering covered by the registration statement that is to be effective upon filing pursuant to Rule 462(b) promulgated under the Securities Act, and all post-effective amendments thereto, and to file the same, with all exhibits thereto and all documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or his or their substitute or substitutes, may lawfully do or cause to be done or by virtue hereof.

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 | Capacity | Date |
|---|---|---|
| /s/ Kaushik J. Dave<br>Kaushik J. Dave | President, Chief Executive Officer and Director<br>(Principal Executive officer) | January 31, 2014 |
| /s/ Sergio Traversa<br>Sergio Traversa | Interim Chief Financial Officer<br>(Principal Financial and Accounting Officer) | January 31, 2014 |
| /s/ David Nicholson<br>David Nicholson | Director | January 31, 2014 |
| /s/ Richard I. Steinhart<br>Richard I. Steinhart | Director | January 31, 2014 |
| /s/ Sandesh Seth<br>Sandesh Seth | Director | January 31, 2014 |

## EXHIBIT INDEX

| Exhibit Number | Description |
|---|---|
| 2.1 | Share Exchange Agreement, dated December 28, 2012, by and among Cactus Ventures, Inc., Actinium Pharmaceuticals, Inc., Diane S. Button, and the shareholders of Actinium Pharmaceuticals, Inc. (incorporated by reference to Exhibit 2.1 to Form 8-K filed on January 2, 2013). |
| 2.2 | Share Exchange Agreement, dated March 11, 2013, by and among Cactus Ventures, Inc., Actinium Pharmaceuticals, Inc, and the shareholders of Actinium Pharmaceuticals, Inc. (incorporated by reference to Exhibit 10.1 to Form 8-K filed on March 11, 2013). |
| 2.3 | Share Exchange Agreement, dated August 22, 2013, by and among Actinium Pharmaceuticals, Inc, Actinium Corporation, and the shareholders of Actinium Corporation (incorporated by reference to Exhibit 2.3 to Form S-1/A filed on August 22, 2013). |
| 3.1 | Articles 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). |
| 3.2 | Fifth Restated Certificate of Incorporation of Actinium Corporation (fka, Actinium Pharmaceuticals, Inc.) (incorporated by reference to Exhibit 3.5 to Form 8-K filed on January 2, 2013). |
| 3.3 | Bylaws of Actinium Pharmaceuticals, Inc. (incorporated by reference to Exhibit 3.2 of the Company's Form filed with the SEC on April 17, 2007). |
| 3.4 | Bylaws of Actinium Corporation (fka, Actinium Pharmaceuticals, Inc.) (incorporated by reference to Exhibit 3.7 to Form 8-K filed on January 2, 2013). |
| 3.5 | Certificate of Amendment to Articles of Incorporation filed January 7, 2014.** |
| 4.1 | Form of A Warrant, dated December 19, 2012 (incorporated by reference to Exhibit 4.1 to Form 8-K filed on January 2, 2013). |
| 4.2 | Form of B Warrant, dated December 19, 2012 (incorporated by reference to Exhibit 4.2 to Form 8-K filed on January 2, 2013). |
| 4.3 | Form of Lock Up Agreement, dated December ____, 2012 (incorporated by reference to Exhibit 4.3 to Form 8-K filed on January 2, 2013). |
| 4.4 | Form of Stock Offering Warrant, dated April 12, 2013. |
| 4.5 | Form of Placement Agent Warrant, dated December 19, 2012. |
| 4.6 | Form of Consulting Firm Warrant, dated December 17, 2012. |
| 4.7 | Lock-up Agreement, dated August 22, 2013 (incorporated by reference to Exhibit 4.7 to Form S-1/A filed on August 22, 2013). |
| 4.8 | Form of Common Stock Warrant, dated December 27, 2013 and January 10, 2014.** |
| 4.9 | Form of Lock-Up Agreement, dated December 27, 2013.** |
| 5.1 | Opinion of Hiscock & Barclay, LLP * |
| 10.1 | Registration Rights Agreement, by and among Actinium Pharmaceuticals, Inc., General Atlantic Investments Limited, and Certain Stockholders, dated June 30, 2000 (incorporated by reference to Exhibit 10.1 to Form 8-K filed on January 2, 2013). |
| 10.2 | Amendment No. 1 to June 30, 2000 Registration Rights Agreement, dated September 29, 2011 (incorporated by reference to Exhibit 10.2 to Form 8-K/A filed on January 4, 2013). |
| 10.3 | First Amended and Restated Stockholders Agreement, by and among Actinium Pharmaceuticals, Inc., Actinium Holdings Limited, N.V. Organon, and the Stockholders Listed Therein, dated October 5, 2011(incorporated by reference to Exhibit 10.3 to Form 8-K/A filed on January 4, 2013). |
| 10.4 | Second Amended and Restated Investor Rights Agreement, by and among Actinium Pharmaceuticals, Inc., Actinium Holdings Limited, and the Investors Listed Therein, dated October 5, 2011 (incorporated by reference to Exhibit 3.5 to Form 8-K filed on January 4, 2013). |
| 10.5 | Intentionally left blank. |
| 10.6 | Form of Subscription Agreement, dated December 19, 2012 (incorporated by reference to Exhibit 10.6 to Form 8-K filed on January 2, 2013). |
| 10.7 | Form of Unit Purchase Agreement, dated December 19, 2012 (incorporated by reference to Exhibit 10.7 to Form 8-K filed on January 2, 2013). |
| 10.8 | Employment Agreement, dated January 2, 2006, between Actinium Pharmaceuticals, Inc. and Dragan Cicic (incorporated by reference to Exhibit 10.8 to Form 8-K/A filed on January 4, 2013). |
| 10.9 | License, Development and Commercialization Agreement between Sloan-Kettering Institute of Cancer Research, and Actinium Pharmaceuticals, Inc., dated February 11, 2002; as amended by the First Amendment dated August 7, 2006 (incorporated by reference to Exhibit 10.9 to Form 8-K/A filed on January 4, 2013). |
| 10.10 | Phase 1/2 Study on the safety and efficiency of 225ACAc-HuM195 in patients with advanced Myeloid malignancies with Millennix Oncology, Averion Project, dated December 6, 2006 (incorporated by reference to Exhibit 3.5 to Form 8-K filed on January 4, 2013). |
| 10.11 | Product Development and Patent License Agreement, dated February 27, 2003, by and between Abbott Biotherapeutics and Actinium Pharmaceuticals, Inc. (incorporated by reference to Exhibit 10.11 to Form 8-K/A filed on January 4, 2013). |
| 10.12 | Clinical Trial Agreement, dated July 19, 2012, by and between Fred Hutchinson Cancer Center and Actinium Pharmaceuticals, Inc. (incorporated by reference to Exhibit 10.12 to Form 8-K/A filed on January 4, 2013). |
| 10.13 | Employment Letter between Jack V. Talley and Actinium Pharmaceuticals, Inc., effective August 15, 2012 (incorporated by reference to Exhibit 3.5 to Form 8-K filed on January 4, 2013). |

| | |
|---|---|
| 10.14 | Employment Letter between Enza Guagenti and Actinium Pharmaceuticals, Inc., effective August 15, 2012 (incorporated by reference to Exhibit 10.14 to Form 8-K/A filed on January 4, 2013). |
| 10.15 | Clinical Trial Agreement, dated January 18, 2001, between Actinium Pharmaceuticals, Inc. and Memorial Sloan Kettering Cancer Center for the purpose of conducting a clinical trial entitled "Phase 1/2 trial of 213Bi-M195 and cytarabine for Acute Myeloid Leukemia." (incorporated by reference to Exhibit 10.15 to Form 8-K/A filed on January 4, 2013). |
| 10.16 | Clinical Trial Agreement with The Trustees of the University of Pennsylvania, dated November 8, 2012 (incorporated by reference to Exhibit 10.16 to Form 8-K/A filed on January 4, 2013). |
| 10.17 | Clinical Trial Agreement, dated March 27, 2012, with Memorial Sloan-Kettering Cancer Center (incorporated by reference to Exhibit 10.17 to Form 8-K/A filed on January 4, 2013). |
| 10.18 | Clinical Trial Agreement, dated September 22, 2012, with Johns Hopkins University, dated September 24, 2012 (incorporated by reference to Exhibit 10.18 to Form 8-K/A filed on January 4, 2013). |
| 10.19 | License Agreement, dated June 14, 2012, for BC8 antibody with Fred Hutchinson Cancer Research Center (incorporated by reference to Exhibit 10.19 to Form 8-K/A filed on January 4, 2013). |
| 10.20 | 2012 Unit Investor Rights Agreement, dated December 19, 2012, by and among Actinium Pharmaceuticals, Inc., the persons identified on Exhibit A attached thereto hereto, and the Placement Agent (incorporated by reference to Exhibit 10.20 to Form 8-K/A filed on January 4, 2013). |
| 10.21 | Project Agreement, dated September 30, 2011, between Actinium Pharmaceuticals, Inc. and Aptiv Solutions, Inc. (incorporated by reference to Exhibit 10.21 to Form 8-K/A filed on January 4, 2013). |
| 10.22 | Proposal, dated March 30, 2007, with IsoTherapeutics Group, LLC (incorporated by reference to Exhibit 10.22 to Form 8-K/A filed on January 4, 2013). |
| 10.23 | Clinical Trial Agreement with The University of Texas M.D. Anderson Cancer, dated March 1, 2012 (incorporated by reference to Exhibit 10.23 to Form 8-K/A filed on January 4, 2013). |
| 10.24 | Amendment No. 1 to Research Agreement, dated November 7, 2012, between Actinium Pharmaceuticals, Inc. and The University of Texas M.D. Anderson Cancer (incorporated by reference to Exhibit 10.24 to Form 8-K/A filed on January 4, 2013). |
| 10.25 | Letter Agreement, dated June 19, 2011, between Actinium Pharmaceuticals, Inc. and Sloan-Kettering Institute for Cancer Research (incorporated by reference to Exhibit 10.25 to Form 8-K/A filed on January 4, 2013). |
| 10.26 | Letter Agreement, dated April 9, 2010, between Actinium Pharmaceuticals, Inc. and Sloan-Kettering Institute for Cancer Research (incorporated by reference to Exhibit 10.26 to Form 8-K/A filed on January 4, 2013). |
| 10.27 | Letter Agreement, dated July __, 2010, between Actinium Pharmaceuticals, Inc. and Actinium Holdings Limited (Waiver of Anti-Dilution Rights) (incorporated by reference to Exhibit 10.27 to Form 8-K/A filed on January 4, 2013). |
| 10.28 | Clinical Trial Agreement, dated April 12, 2006, with Sloan-Kettering Institute for Cancer Research and Memorial Hospital for Cancer and Allied Diseases (incorporated by reference to Exhibit 10.28 to Form 8-K /A filed on January 4, 2013). |
| 10.29 | Letter Agreement, dated __, 2011, between Actinium Pharmaceuticals, Inc. and Actinium Holdings Limited (Waiver of Registration Rights) (incorporated by reference to Exhibit 10.29 to Form 8-K/A filed on January 4, 2013). |
| 10.30 | Agreement, dated November 29, 2012, by and between Oak Ridge National Laboratory and Actinium Pharmaceuticals, Inc. (incorporated by reference to Exhibit 10.30 to Form S-1/A filed on August 22, 2013). |
| 10.31 | Transaction Management Agreement, dated May 9, 2011, by and between Jamess Capital Group, LLC (fka, AmerAsia Capital Group LLC) and Actinium Corporation (fka, Actinium Pharmaceuticals Inc.) (incorporated by reference to Exhibit 10.31 to Form S-1 filed on September 30, 2013). |
| 10.32 | Employment Agreement, effective September 16, 2013, by and between Actinium Pharmaceuticals, Inc. and Kaushik J. Dave (incorporated by reference to Exhibit 10.32 to Form S-1/A filed on October 28, 2013). |
| 10.33 | Actinium Pharmaceuticals, Inc. Amended and Restated 2013 Stock Plan.** |
| 10.34 | Actinium Pharmaceuticals, Inc. Amended and Restated 2013 Equity Incentive Plan.** |
| 10.35 | Form of Unit Purchase Agreement, dated December 27, 2013 and January 10, 2014.** |
| 10.36 | Form of Subscription Agreement, dated December 27, 2013 and January 10, 2014.** |
| 10.37 | Form of Registration Rights Agreement, dated December 27, 2013 and January 10, 2014.** |
| 10.38 | Letter Agreement, dated September 4, 2013, between Actinium Pharmaceuticals, Inc. and Sloan-Kettering Institute for Cancer Research.** |
| 14.1 | Code of Ethics (incorporated by reference to Exhibit 14.1 to Form 8-K filed on January 2, 2013). |
| 16.1 | Letter from R.R. Hawkins (prior auditor) (incorporated by reference to Exhibit 16.1 to Form S-1/A filed on August 22, 2013). |
| 21.1 | List of Subsidiaries (incorporated by reference to Exhibit 21.1 to Form 10-K filed on March 29, 2013). |
| 23.1 | Consent of GBH CPAs, PC ** |
| 23.2 | Consent of Hiscock & Barclay, LLP (included in Exhibit 5.1). |
| 101 | Interactive Data File for nine month period ended September 30, 2013 furnished XBRL and Interative Data File for the nine month period ended September 30, 2012, and the Interactive Data File for the year ended December 31, 2012 furnished in XBRL and Interactive Data File for the year ended December 31, 2011 furnished in XBLR. ** |

* To be filed by amendment

** Filed herewith.

# CERTIFICATE OF AMENDMENT TO ARTICLES OF INCORPORATION OF ACTINIUM PHARMACEUTICALS, INC.

1. Name of corporation:

   Actinium Pharmaceuticals, Inc.

2. The articles have been amended as follows (provide article numbers, if available):

   Article FOURTH

"FOURTH: The amount of the total stock this Corporation is authorized to issue is 250,000,000 shares with a par value of $0.001 per share.

(a) Common Stock. The aggregate number of shares of Common Stock which the Corporation shall have authority to issue is 200,000,000 shares at a par value of $0.001 per share

(b) Preferred Stock. The aggregate number of shares of Preferred Stock which the corporation shall have authority to issue is 50,000,000 shares, par value $0.001, which may be issued in series, with such designations, preferences, stated values, rights, qualifications or limitations as determined solely by the Board of Directors of the Corporation.

(c) Preemptive rights. No stockholder of the Corporation shall have any preemptive right to subscribe to an additional issue of stock or to any security convertible into such stock of the Corporation."

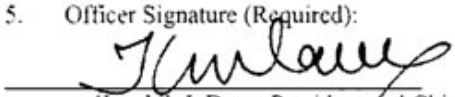
Article TENTH (b)

"(b) Term. The directors shall be divided into three classes, designated Class I, Class II, and Class III. Class I shall consist of two independent directors, Class II Shall consist of two directors, and Class III shall consist of the chief executive officer. Each director shall serve until his successor is duly elected and qualified, or until his retirement, death, resignation or removal. In order to implement a staggered Board of directors, Class I shall serve a twelve (12) month term from the date of the 2013 annual shareholders meeting; Class II shall serve a thirty (30) month term from the date of the 2013 annual shareholders meeting; and Class III shall serve a thirty-six (36) month term from the date of the 2013 annual shareholders meeting."

3. The vote by which the stockholders holding shares in the corporation entitling them to exercise at least a majority of the voting power, or such greater proportion of the voting power as may be required in the case of a vote by classes or series, or as may be required by the provisions of the articles of incorporation have voted in favor of (i) the amendment to Article FOURTH is: 76.9% and (ii) the amendment to Article TENTH (b) is 79.1% .

4. Effective date of filing (optional): Upon filing

5. Officer Signature (Required):



Kaushik J. Dave, President and Chief Executive Officer

*State of Delaware*
*Secretary of State*
*Division of Corporations*
*Delivered 12:51 PM 01/07/2014*
*FILED 11:36 AM 01/07/2014*
*SRV 140014502 - 5306858 FILE*

NEITHER THIS SECURITY NOR THE SECURITIES FOR WHICH THIS SECURITY IS EXERCISABLE HAVE BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION OR THE SECURITIES COMMISSION OF ANY STATE IN RELIANCE UPON AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD OR OTHERWISE TRANSFERRED, PLEDGED OR HYPOTHECATED EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT OR PURSUANT TO AN AVAILABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN ACCORDANCE WITH APPLICABLE STATE SECURITIES LAWS AS EVIDENCED BY A LEGAL OPINION OF COUNSEL TO THE TRANSFEROR TO SUCH EFFECT, THE SUBSTANCE OF WHICH SHALL BE REASONABLY ACCEPTABLE TO THE COMPANY. THIS SECURITY AND THE SECURITIES ISSUABLE UPON EXERCISE OF THIS SECURITY MAY BE PLEDGED IN CONNECTION WITH A BONA FIDE MARGIN ACCOUNT OR OTHER LOAN SECURED BY SUCH SECURITIES.

**COMMON STOCK PURCHASE WARRANT**

**ACTINIUM PHARMACEUTICALS, INC.**

Warrant Shares: [_____] Initial Exercise Date: _____, 2013

THIS COMMON STOCK PURCHASE WARRANT (the "***Warrant***") certifies that, for value received, _____ (the "***Holder***") is entitled, upon the terms and subject to the limitations on exercise and the conditions hereinafter set forth, at any time on or after the date hereof (the "***Initial Exercise Date***") and on or prior to the close of business on the five year anniversary of the Initial Exercise Date (the "***Termination Date***") but not thereafter, to subscribe for and purchase from Actinium Pharmaceuticals, Inc., a Delaware corporation (the "***Company***"), up to _____ shares (the "***Warrant Shares***") of Common Stock. The purchase price of one share of Common Stock under this Warrant shall be equal to the Exercise Price, as defined in Section 2(b).

Section 1. Definitions. For the purposes hereof, in addition to the terms defined elsewhere in this Warrant, (a) capitalized terms not otherwise defined herein shall have the meanings set forth in the Purchase Agreement and (b) the following terms shall have the following meanings:

"***Business Day***" means any day except any Saturday, any Sunday, any day which shall be a federal legal holiday in the United States or any day on which banking institutions in the State of New York are authorized or required by law or other governmental action to close.

"***Common Stock Equivalents***" means any securities of the Company or the Subsidiaries which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, rights, options, warrants or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive Common Stock.

"***Offering***" shall bear such meaning as ascribed to it in the Subscription Agreement.

"***Person***" means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

"***Purchase Agreement***" means the Unit Purchase Agreement, dated as of _____, 2013 among the Company and the original Holder, as amended, modified or supplemented from time to time in accordance with its terms.

"***Securities Act***" means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

"***Subscription Agreement***" means the Subscription Agreement, dated as of _____, 2013 among the Company and the original Holder, as amended, modified or supplemented from time to time in accordance with its terms.

"***Subsidiary***" shall have the meaning set forth in the Purchase Agreement.

"***Trading Day***" means a day on which the New York Stock Exchange is open for business.

"***Trading Market***" means the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE MKT, LLC, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, the New York Stock Exchange or the OTC Bulletin Board, or the other OTC markets, including the OTCQX, OTCQB and OTC Pink markets.

"***Transaction Documents***" shall have the meaning set forth in the Purchase Agreement.

"***VWAP***" means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a national securities exchange, the daily volume weighted average price of the Common Stock for such date (or the nearest preceding date) on the trading market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. New York City time to 4:02 p.m. New York City time); (b) if the Common Stock is quoted on the OTC Bulletin Board, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on the OTC Bulletin Board; (c) if the Common Stock is not then listed or quoted for trading on the OTC Bulletin Board and if prices for the Common Stock are then reported on the OTC markets, including the OTCQX, OTCQB and OTC Pink markets, or in the "Pink Sheets" published by Pink Sheets, LLC (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported; or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the holders of a majority in interest of the Warrants then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company; provided that in each case where Bloomberg L.P. data is being relied upon, Holder shall provide to the Company a copy of such information for the Company's records

Section 2. Exercise.

a) Exercise of Warrant. Exercise of the purchase rights represented by this Warrant may be made, in whole or in part, at any time or times on or after the Initial Exercise Date and on or before the Termination Date by delivery to the Company (or such other office or agency of the Company as it may designate by notice in writing to the registered Holder at the address of the Holder appearing on the books of the Company) of a duly executed notice of exercise ("***Notice of Exercise***") form annexed hereto; and, within 3 Trading Days of the date said Notice of Exercise is delivered to the Company, the Company shall have received payment of the aggregate Exercise Price of the shares thereby purchased by wire transfer or cashier's check drawn on a United States bank. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company until the Holder has purchased all of the Warrant Shares available hereunder and the Warrant has been exercised in full, in which case, the Holder shall surrender this Warrant to the Company for cancellation within 3 Trading Days of the date the final Notice of Exercise is delivered to the Company. Partial exercises of this Warrant resulting in purchases of a portion of the total number of Warrant Shares available hereunder shall have the effect of lowering the outstanding number of Warrant Shares purchasable hereunder in an amount equal to the applicable number of Warrant Shares purchased. The Holder and the Company shall maintain records showing the number of Warrant Shares purchased and the date of such purchases. In the event of any dispute or discrepancy, the records of the Company shall be controlling and determinative in the absence of manifest error. **The Holder and any assignee, by acceptance of this Warrant, acknowledge and agree that, by reason of the provisions of this paragraph, following the purchase of a portion of the Warrant Shares hereunder, the number of Warrant Shares available for purchase hereunder at any given time may be less than the amount stated on the face hereof.**

b) Exercise Price. The exercise price per share of the Common Stock under this Warrant shall be **$9.00**, subject to adjustment hereunder (the "***Exercise Price***").

c) Exercise Limitations. Holder shall not have the right to exercise any portion of this Warrant, pursuant to Section 2 or otherwise, to the extent that after giving effect to such issuance after exercise, the Holder (together with the Holder's affiliates, and any other person or entity acting as a group together with the Holder or any of the Holder's affiliates), would beneficially own in excess of the Beneficial Ownership Limitation (as defined below). For purposes of this Section, beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. Holder is solely responsible for any schedules required to be filed in accordance therewith. The Company shall have no obligation to verify or confirm the accuracy of such filings. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder or its affiliates since the date as of which such number of outstanding shares of Common Stock was reported. The "***Beneficial Ownership Limitation***" shall be 4.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of Warrant Shares issuable upon exercise of this Warrant. The Holder, upon not less than 61 days' prior notice to the Company, may increase or decrease the Beneficial Ownership Limitation provisions of this Section 2.3, provided that the Beneficial Ownership Limitation in no event exceeds 9.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of Warrant Shares upon exercise of this Warrant held by the Holder and the provisions of this Section 2.3 shall continue to apply. Any such increase or decrease will not be effective until the 61st day after such notice is delivered to the Company. The limitations contained in this paragraph shall apply to a successor holder of this Warrant.

d) Mechanics of Exercise.

i. Delivery of Certificates Upon Exercise. Certificates for shares purchased hereunder shall be transmitted by the Company's transfer agent (the "***Transfer Agent***") to the Holder by crediting the account of the Holder's prime broker with the Depository Trust Company through its Deposit Withdrawal Agent Commission ("***DWAC***") system if the Company is then a participant in such system and either (A) there is an effective registration statement permitting the resale of the Warrant Shares by the Holder or (B) the shares are eligible for resale without volume or manner-of-sale limitations pursuant to Rule 144, and otherwise by physical delivery of certificates to the address specified by the Holder in the Notice of Exercise within 4 Trading Days from the delivery to the Company of the Notice of Exercise Form, surrender of this Warrant (if required) and payment of the aggregate Exercise Price as set forth above (the "***Warrant Share Delivery Date***"). For the avoidance of doubt, in the absence of an effective registration statement permitting the resale of the Warrant Shares or the eligibility of the Warrant Shares for resale without volume or manner-of-sale limitations pursuant to Rule 144, the Warrant Shares issuable upon exercise of this Warrant may be issued as unregistered shares with a customary Rule 144 restrictive legend. This Warrant shall be deemed to have been exercised on the date the Exercise Price is received by the Company. The Warrant Shares shall be deemed to have been issued, and Holder or any other person so designated to be named therein shall be deemed to have become a holder of record of such shares for all purposes, as of the date the Warrant has been exercised by payment to the Company of the Exercise Price and all taxes required to be paid by the Holder, if any, pursuant to Section 2(e)(vi) prior to the issuance of such shares, have been paid. If the Company is obligated to and fails for any reason to deliver to the Holder certificates evidencing the Warrant Shares subject to a Notice of Exercise by the Warrant Share Delivery Date, the Company shall pay to the Holder, in cash, as liquidated damages and not as a penalty, for each $1,000 of Warrant Shares subject to such exercise, $10 per Trading Day (increasing to $20 per Trading Day on the seventh Trading Day after such liquidated damages begin to accrue) for each Trading Day after such Warrant Share Delivery Date until such certificates are delivered.

ii. Delivery of New Warrants Upon Exercise. If this Warrant shall have been exercised in part, the Company shall, at the request of a Holder and upon surrender of this Warrant certificate, at the time of delivery of the certificate or certificates representing Warrant Shares, deliver to Holder a new Warrant evidencing the rights of Holder to purchase the unpurchased Warrant Shares called for by this Warrant, which new Warrant shall in all other respects be identical with this Warrant.

iii. Rescission Rights. If the Company fails to cause the Transfer Agent to transmit to the Holder a certificate or the certificates representing the Warrant Shares pursuant to Section 2(d)(i) by the Warrant Share Delivery Date, then the Holder will have the right to rescind such exercise.

iv. Compensation for Buy-In on Failure to Timely Deliver Certificates Upon Exercise. In addition to any other rights available to the Holder, if the Company fails for any reason to deliver to the Holder such certificate or certificates by the Warrant Share Delivery Date, and if after such Share Delivery Date the Holder is required by its brokerage firm to purchase (in an open market transaction or otherwise), or the Holder's brokerage firm otherwise purchases, shares of Common Stock to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder was entitled to receive upon the conversion relating to such Share Delivery Date (a "Buy-In"), then the Company shall (A) pay in cash to the Holder (in addition to any other remedies available to or elected by the Holder) the amount by which (x) the Holder's total purchase price (including any brokerage commissions) for the Common Stock so purchased exceeds (y) the product of (1) the aggregate number of shares of Common Stock that the Holder was entitled to receive from the conversion at issue multiplied by (2) the actual sale price at which the sell order giving rise to such purchase obligation was executed (including any brokerage commissions) and (B) at the option of the Holder, either reissue (if surrendered) this Warrant in a principal amount equal to the principal amount of the attempted conversion or deliver to the Holder the number of shares of Common Stock that would have been issued if the Company had timely complied with its delivery requirements under this Warrant. For example, if the Holder purchases Common Stock having a total purchase price of $11,000 to cover a Buy-In with respect to an attempted exercise of this Warrant with respect to which the actual sale price of the Warrant Shares (including any brokerage commissions) giving rise to such purchase obligation was a total of $10,000 under clause (A) of the immediately preceding sentence, the Company shall be required to pay the Holder $1,000. The Holder shall provide the Company written notice indicating the amounts payable to the Holder in respect of the Buy-In and, upon request of the Company, evidence of the amount of such loss. Nothing herein shall limit a Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver certificates representing shares of Common Stock upon conversion of this Warrant as required pursuant to the terms hereof.

v . No Fractional Shares or Scrip. No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant. As to any fraction of a share which Holder would otherwise be entitled to purchase upon such exercise, the Company shall, at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Exercise Price or round up to the next whole share.

v i . Charges, Taxes and Expenses. Issuance of certificates for Warrant Shares shall be made without charge to the Holder for any issue or transfer tax or other incidental expense in respect of the issuance of such certificate, all of which taxes and expenses shall be paid by the Company, and such certificates shall be issued in the name of the Holder or in such name or names as may be directed by the Holder; provided, however, that in the event certificates for Warrant Shares are to be issued in a name other than the name of the Holder, this Warrant when surrendered for exercise shall be accompanied by the assignment form ("***Assignment Form***") attached hereto duly executed by the Holder and the Company may require, as a condition thereto, the payment of a sum sufficient to reimburse it for any transfer tax incidental thereto. The Company shall pay all Transfer Agent fees required for same-day processing of any Notice of Exercise.

v i i . Closing of Books. The Company will not close its shareholder books or records in any manner which prevents the timely exercise of this Warrant, pursuant to the terms hereof.

Section 3. Certain Adjustments.

a) Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding: (i) pays a stock dividend or otherwise make a distribution or distributions on shares of its Common Stock or any other equity or equity equivalent securities payable in shares of Common Stock (which, for avoidance of doubt, shall not include any Warrant Shares issued by the Company upon exercise of this Warrant), (ii) subdivides outstanding shares of Common Stock into a larger number of shares, (iii) combines (including by way of reverse stock split) outstanding shares of Common Stock into a smaller number of shares or (iv) issues by reclassification of shares of the Common Stock any shares of capital stock of the Company, then in each case the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding treasury shares, if any) outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event and the number of shares issuable upon exercise of this Warrant shall be proportionately adjusted such that the aggregate Exercise Price of this Warrant shall remain unchanged. Any adjustment made pursuant to this Section 3(a) shall become effective immediately after the record date for the determination of shareholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or re-classification.

b) Intentionally Omitted.

c) Fundamental Transaction. If, at any time while this Warrant is outstanding, (i) the Company effects any merger or consolidation of the Company with or into another Person, (ii) the Company effects any sale of all or substantially all of its assets in one or a series of related transactions, (iii) any tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which holders of Common Stock are permitted to tender or exchange their shares for other securities, cash or property or (iv) the Company effects any reclassification of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property (each "Fundamental Transaction"), then, upon any subsequent exercise of this Warrant, the Holder shall have the right to receive, for each Warrant Share that would have been issuable upon such exercise immediately prior to the occurrence of such Fundamental Transaction, the number of shares of Common Stock of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and any additional consideration (the "Alternate Consideration") receivable as a result of such merger, consolidation or disposition of assets by a holder of the number of shares of Common Stock for which this Warrant is exercisable immediately prior to such event. For purposes of any such exercise, the determination of the Exercise Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Company shall apportion the Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any exercise of this Warrant following such Fundamental Transaction. To the extent necessary to effectuate the foregoing provisions, any successor to the Company or surviving entity in such Fundamental Transaction shall issue to the Holder a new warrant consistent with the foregoing provisions and evidencing the Holder's right to exercise such warrant into Alternate Consideration. The terms of any agreement pursuant to which a Fundamental Transaction is effected shall include terms requiring any such successor or surviving entity to comply with the provisions of this Section 3(c) and insuring that this Warrant (or any such replacement security) will be similarly adjusted upon any subsequent transaction analogous to a Fundamental Transaction. For the avoidance of doubt, in connection with a Fundamental Transaction the Holder shall not be entitled to any antidilution rights if the exercise price of the new warrant or the price per warrant share received by the Holder upon exercise of the new warrant is below the Exercise Price.

d) Calculations. All calculations under this Section 3 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 3, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (excluding treasury shares, if any) issued and outstanding.

e) Notice to Holder.

i . Adjustment to Exercise Price. Whenever the Exercise Price is adjusted pursuant to any provision of this Section 3, the Company shall promptly mail to the Holder a notice setting forth the Exercise Price after such adjustment and setting forth a brief statement of the facts requiring such adjustment.

ii. Notice to Allow Exercise by Holder. If (A) the Company shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Company shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Company shall authorize the granting to all holders of the Common Stock rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any shareholders of the Company shall be required in connection with any reclassification of the Common Stock, any consolidation or merger to which the Company is a party, any sale or transfer of all or substantially all of the assets of the Company, of any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property, or (E) the Company shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Company, then, in each case, the Company shall cause to be mailed to the Holder at its last address as it shall appear upon the Warrant Register of the Company, at least 20 calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange; provided that the failure to mail such notice or any defect therein or in the mailing thereof shall not affect the validity of the corporate action required to be specified in such notice. The Holder is entitled to exercise this Warrant during the period commencing on the date of such notice to the effective date of the event triggering such notice.

Section 4. Transfer of Warrant.

a) Transferability. Subject to compliance with any applicable securities laws and the conditions set forth in Section 4(d) herein and to the provisions of the Subscription Agreement and Purchase Agreement, this Warrant and all rights hereunder (including, without limitation, any registration rights) are transferable, in whole or in part, upon surrender of this Warrant at the principal office of the Company or its designated agent, together with a written assignment of this Warrant substantially in the form attached hereto duly executed by the Holder or its agent or attorney and funds sufficient to pay any transfer taxes payable upon the making of such transfer. Upon such surrender and, if required, such payment, the Company shall execute and deliver a new Warrant or Warrants in the name of the assignee or assignees, as applicable, and in the denomination or denominations specified in such instrument of assignment, and shall issue to the assignor a new Warrant evidencing the portion of this Warrant not so assigned, and this Warrant shall promptly be cancelled. The Warrant, if properly assigned, may be exercised by a new holder for the purchase of Warrant Shares without having a new Warrant issued.

b) New Warrants. This Warrant may be divided or combined with other Warrants upon presentation hereof at the aforesaid office of the Company, together with a written notice specifying the names and denominations in which new Warrants are to be issued, signed by the Holder or its agent or attorney. Subject to compliance with Section 4(a), as to any transfer which may be involved in such division or combination, the Company shall execute and deliver a new Warrant or Warrants in exchange for the Warrant or Warrants to be divided or combined in accordance with such notice. All Warrants issued on transfers or exchanges shall be dated the Initial Exercise Date and shall be identical with this Warrant except as to the number of Warrant Shares issuable pursuant thereto.

c) Warrant Register. The Company shall register this Warrant, upon records to be maintained by the Company for that purpose (the "***Warrant Register***"), in the name of the record Holder hereof from time to time. The Company may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary.

d) Transfer Restrictions. If, at the time of the surrender of this Warrant in connection with any transfer of this Warrant, the transfer of this Warrant shall not be either (i) registered pursuant to an effective registration statement under the Securities Act and under applicable state securities or blue sky laws or (ii) eligible for resale without volume or manner-of-sale restrictions pursuant to Rule 144, the Company may require, as a condition of allowing such transfer, that the Holder or transferee of this Warrant, as the case may be, comply with the provisions of the Subscription Agreement and Purchase Agreement.

Section 5. Call Provision. Subject to the provisions of this Section 5, if during the period commencing upon effectiveness of the registration statement to be filed in accordance with that certain registration rights agreement, dated on even date herewith, between the Company and the Holder ("***Redemption Period***"), the closing price for the Company's Common Stock as reported on the Trading Market for each of fifteen (15) consecutive Trading Days (each such period, a "***Measurement Period***", the fifteenth consecutive Trading Day of which shall not fall on a date later than the last day of the Redemption Period), exceeds $15.00, subject to adjustment for reverse and forward stock splits, stock dividends, stock combinations and other similar transactions of the Common Stock, then the Company may upon sixty (60) days prior written notice (the "***Redemption Notice***"), call for redemption ("***Call***") of this Warrant solely with respect to Covered Shares (as defined below) at the then outstanding at a price of $0.001 per share; provided that such Redemption Notice is delivered to the Holder within five (5) business days after the end of the Measurement Period. This Warrant can only be called if a registration statement registering the shares underlying this Warrant is in effect at the time of the Call. If the conditions set forth herein for such Call are satisfied, then this Warrant (with respect to Covered Shares only) for which a Notice of Exercise shall not have been received by the Redemption Date (as defined below) will be cancelled at 6:00 p.m. (New York City time) on the 60th day after the date the Redemption Notice is delivered to the Holder (such date, the "***Redemption Date***"). In furtherance thereof, the Company covenants and agrees that it will honor all Notices of Exercise with respect to Warrant Shares subject to a Redemption Notice that are tendered prior to 6:00 p.m. (New York City time) on the Redemption Date. For the purposes hereof, "Covered Shares" means those Warrant Shares which, from the date of the delivery of the Redemption Notice through and including the Redemption Date, are covered by an effective registration statement under the Securities Act providing for the resale of such Warrant Shares and the prospectus of such registration statement is available for use by the Holder for the resale of such Warrant Shares. Notwithstanding anything to the contrary set forth in this Warrant, this Warrant shall not be cancelled (and any Redemption Notice will be void) with respect to any Warrant Shares which are not Covered Shares. Laidlaw and Co. (UK) Ltd. (the "***Placement Agent***") shall receive a warrant solicitation fee equal to 5% of the funds solicited by the Placement Agent upon exercise of this Warrant if the Company elects to call the warrant in accordance with this Section 5.

Section 6. Registration Rights. The shares of Common Stock issuable upon exercise of this Warrant shall have the registration rights set forth in the Registration Rights Agreement attached as an exhibit to the Purchase Agreement.

Section 7. Miscellaneous.

a) No Rights as Shareholder Until Exercise. This Warrant does not entitle the Holder to any voting rights or other rights as a shareholder of the Company prior to the exercise hereof.

b) Loss, Theft, Destruction or Mutilation of Warrant. The Company covenants that upon receipt by the Company of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Warrant or any stock certificate relating to the Warrant Shares, and in case of loss, theft or destruction, of indemnity or security reasonably satisfactory to it (which, in the case of the Warrant, shall not include the posting of any bond), and upon surrender and cancellation of such Warrant or stock certificate, if mutilated, the Company will make and deliver a new Warrant or stock certificate of like tenor and dated as of such cancellation, in lieu of such Warrant or stock certificate.

c) Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Business Day, then, such action may be taken or such right may be exercised on the next succeeding Business Day.

d) Authorized Shares.

The Company covenants that, during the period the Warrant is outstanding, it will reserve from its authorized and unissued Common Stock one hundred (100%) of the number of shares to provide for the issuance of the Warrant Shares upon the exercise of any purchase rights under this Warrant. In case such amount of Common Stock is insufficient at any time, the Company shall call and hold a special meeting to increase the number of authorized shares of common stock. Management of the Company shall recommend to shareholders to vote in favor of increasing the number of authorized shares of common stock.

The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of executing stock certificates to execute and issue the necessary certificates for the Warrant Shares upon the exercise of the purchase rights under this Warrant. The Company will take all such reasonable action as may be necessary to assure that such Warrant Shares may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of the Trading Market upon which the Common Stock may be listed. The Company covenants that all Warrant Shares which may be issued upon the exercise of the purchase rights represented by this Warrant will, upon exercise of the purchase rights represented by this Warrant, be duly authorized, validly issued, fully paid and nonassessable and free from all taxes, liens and charges created by the Company in respect of the issue thereof (other than taxes in respect of any transfer occurring contemporaneously with such issue).

Except and to the extent as waived or consented to by the Holder, the Company shall not by any action, including, without limitation, amending its amended and restated certificate of incorporation, as amended or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder as set forth in this Warrant against impairment. Without limiting the generality of the foregoing, the Company will (i) not increase the par value of any Warrant Shares above the amount payable therefor upon such exercise immediately prior to such increase in par value, (ii) take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable Warrant Shares upon the exercise of this Warrant and (iii) use commercially reasonable efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof, as may be, necessary to enable the Company to perform its obligations under this Warrant.

Before taking any action which would result in an adjustment in the number of Warrant Shares for which this Warrant is exercisable or in the Exercise Price, the Company shall obtain all such authorizations or exemptions thereof, or consents thereto, as may be necessary from any public regulatory body or bodies having jurisdiction thereof.

e) Jurisdiction. All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be determined in accordance with the provisions of the Purchase Agreement.

f) Restrictions. The Holder acknowledges that the Warrant Shares acquired upon the exercise of this Warrant, if not registered, will have restrictions upon resale imposed by state and federal securities laws.

g) Nonwaiver and Expenses. No course of dealing or any delay or failure to exercise any right hereunder on the part of Holder shall operate as a waiver of such right or otherwise prejudice Holder's rights, powers or remedies, notwithstanding the fact that all rights hereunder terminate on the Termination Date. If the Company willfully and knowingly fails to comply with any provision of this Warrant, which results in any material damages to the Holder, the Company shall pay to Holder such amounts as shall be sufficient to cover any costs and expenses including, but not limited to, reasonable attorneys' fees, including those of appellate proceedings, incurred by Holder in collecting any amounts due pursuant hereto or in otherwise enforcing any of its rights, powers or remedies hereunder.

h) Notices. Any notice, request or other document required or permitted to be given or delivered to the Holder by the Company shall be delivered in accordance with the notice provisions of the Purchase Agreement.

i) Limitation of Liability. No provision hereof, in the absence of any affirmative action by Holder to exercise this Warrant to purchase Warrant Shares, and no enumeration herein of the rights or privileges of Holder, shall give rise to any liability of Holder for the purchase price of any Common Stock or as a shareholder of the Company, whether such liability is asserted by the Company or by creditors of the Company.

j) Remedies. The Holder, in addition to being entitled to exercise all rights granted by law, including recovery of damages, will be entitled to specific performance of its rights under this Warrant. The Company agrees that monetary damages would not be adequate compensation for any loss incurred by reason of a breach by it of the provisions of this Warrant and hereby agrees to waive and not to assert the defense in any action for specific performance that a remedy at law would be adequate.

k) Successors and Assigns. Subject to applicable securities laws, this Warrant and the rights and obligations evidenced hereby shall inure to the benefit of and be binding upon the successors of the Company and the successors and permitted assigns of Holder. The provisions of this Warrant are intended to be for the benefit of all Holders from time to time of this Warrant and shall be enforceable by the Holder or holder of Warrant Shares.

l) Amendment. This Warrant may be modified or amended or the provisions hereof waived with the written consent of the Company and the Holder.

m) Severability. Wherever possible, each provision of this Warrant shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Warrant shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provisions or the remaining provisions of this Warrant.

n) Headings. The headings used in this Warrant are for the convenience of reference only and shall not, for any purpose, be deemed a part of this Warrant.

**********

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its officer thereunto duly authorized as of the date first above indicated.

**ACTINIUM PHARMACEUTICALS, INC.**

By: _____

Name:
Title:

**NOTICE OF EXERCISE**

TO: ACTINIUM PHARMACEUTICALS, INC.

(1) The undersigned hereby elects to purchase _____ Warrant Shares of the Company pursuant to the terms of the attached Warrant, and tenders herewith payment of the exercise price in full, together with all applicable transfer taxes, if any.

(2) Please issue a certificate or certificates representing said Warrant Shares in the name of the undersigned or in such other name as is specified below:

_____

The Warrant Shares shall be delivered to the following DWAC Account Number or by physical delivery of a certificate to:

_____

_____

_____

(3) Accredited Investor. The undersigned is an "accredited investor" as defined in Regulation D promulgated under the Securities Act of 1933, as amended.

[SIGNATURE OF HOLDER]

Name of Investing Entity: _____

*Signature of Authorized Signatory of Investing Entity*: _____

Name of Authorized Signatory: _____

Title of Authorized Signatory: _____

Date: _____

**ASSIGNMENT FORM**

(To assign the foregoing warrant, execute
this form and supply required information.
Do not use this form to exercise the warrant.)

FOR VALUE RECEIVED, [____] all of or [_____] shares of the foregoing Warrant and all rights evidenced thereby are hereby assigned to

_____ whose address is

_____.

_____

Dated: _____, _____

Holder's
Signature: _____

Holder's Address: _____

_____

Signature
Guaranteed: _____

NOTE: The signature to this Assignment Form must correspond with the name as it appears on the face of the Warrant, without alteration or enlargement or any change whatsoever, and must be guaranteed by a bank or trust company. Officers of corporations and those acting in a fiduciary or other representative capacity should file proper evidence of authority to assign the foregoing Warrant.

**Exhibit 4.9**

FORM OF LOCK-UP AGREEMENT

December __, 2013

Each Purchaser referenced below:

Re: Unit Purchase Agreement, dated as of _____, 2013 (the "Purchase Agreement"), between Actinium Pharmaceuticals, Inc., a Delaware corporation (the "Company") and the purchasers signatory thereto (each, a "Purchaser" and, collectively, the "Purchasers")

Ladies and Gentlemen:

Defined terms not otherwise defined in this letter agreement (the "Letter Agreement") shall have the meanings set forth in the Purchase Agreement. Pursuant to Section 5.1(k) of the Purchase Agreement and in satisfaction of a condition of the Company's obligations under the Purchase Agreement, the undersigned irrevocably agrees with the Company that, from the date hereof until the 6 month anniversary of the effective date of the registration statement to be filed in accordance with the terms of that certain registration rights agreement, dated on even date herewith, between the Company and the Purchasers (such period, the "Restriction Period"), the undersigned will not offer, sell, contract to sell, hypothecate, pledge or otherwise dispose of (or enter into any transaction which is designed to, or might reasonably be expected to, result in the disposition (whether by actual disposition or effective economic disposition due to cash settlement or otherwise) by the undersigned or any Affiliate of the undersigned or any person in privity with the undersigned or any Affiliate of the undersigned), directly or indirectly, including the filing (or participation in the filing) of a registration statement with the Commission in respect of, or establish or increase a put equivalent position or liquidate or decrease a call equivalent position within the meaning of Section 16 of the Exchange Act with respect to, any shares of Common Stock or Common Stock Equivalents beneficially owned, held or hereafter acquired by the undersigned (the "Securities"). Beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act. In order to enforce this covenant, the Company shall impose irrevocable stop-transfer instructions preventing the Transfer Agent from effecting any actions in violation of this Letter Agreement.

The undersigned acknowledges that the execution, delivery and performance of this Letter Agreement is a material inducement to each Purchaser to complete the transactions contemplated by the Purchase Agreement and that each Purchaser (which shall be a third party beneficiary of this Letter Agreement) and the Company shall be entitled to specific performance of the undersigned's obligations hereunder. The undersigned hereby represents that the undersigned has the power and authority to execute, deliver and perform this Letter Agreement, that the undersigned has received adequate consideration therefor and that the undersigned will indirectly benefit from the closing of the transactions contemplated by the Purchase Agreement.

This Letter Agreement may not be amended or otherwise modified in any respect without the written consent of each of the Company, each Purchaser and the undersigned. This Letter Agreement shall be construed and enforced in accordance with the laws of the State of New York without regard to the principles of conflict of laws. The undersigned hereby irrevocably submits to the exclusive jurisdiction of the United States District Court sitting in the Southern District of New York and the courts of the State of New York located in Manhattan, for the purposes of any suit, action or proceeding arising out of or relating to this Letter Agreement, and hereby waives, and agrees not to assert in any such suit, action or proceeding, any claim that (i) it is not personally subject to the jurisdiction of such court, (ii) the suit, action or proceeding is brought in an inconvenient forum, or (iii) the venue of the suit, action or proceeding is improper. The undersigned hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by receiving a copy thereof sent to the Company at the address in effect for notices to it under the Purchase Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. The undersigned hereby waives any right to a trial by jury. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law. The undersigned agrees and understands that this Letter Agreement does not intend to create any relationship between the undersigned and each Purchaser and that each Purchaser is not entitled to cast any votes on the matters herein contemplated and that no issuance or sale of the Securities is created or intended by virtue of this Letter Agreement.

By its signature below, the Transfer Agent hereby acknowledges and agrees that, reflecting this Letter Agreement, it has placed an irrevocable stop transfer instruction on all Securities beneficially owned by the undersigned until the end of the Restriction Period. This Letter Agreement shall be binding on successors and assigns of the undersigned with respect to the Securities and any such successor or assign shall enter into a similar agreement for the benefit of the Purchasers.

*** SIGNATURE PAGE FOLLOWS***

This Letter Agreement may be executed in two or more counterparts, all of which when taken together may be considered one and the same agreement.

_____
Signature

_____
Print Name

_____
Position in Company

Address for Notice:

_____

_____

_____

Number of shares of Common Stock

_____

Number of shares of Common Stock underlying subject to warrants, options, debentures or other convertible securities

By signing below, the Company agrees to enforce the restrictions on transfer set forth in this Letter Agreement.

**Actinium Pharmaceuticals, Inc.**

By: _____
Name:
Title:

Acknowledged and agreed to
as of the date set forth above:

**Action Stock Transfer Corp.**

By: _____
Name:
Title:

**Exhibit 10.33**

**ACTINIUM PHARMACEUTICALS, INC.**
**Amended and Restated 2013 STOCK PLAN**

1. **Purposes of the Plan.** The purposes of this 2013 Stock Plan are to attract and retain the best available personnel for positions of substantial responsibility, to provide additional incentive to Employees, Directors and Consultants and to promote the success of the Company's business. Options granted under the Plan may be Incentive Stock Options or Nonstatutory Stock Options, as determined by the Administrator at the time of grant of an option and subject to the applicable provisions of Section 422 of the Code and the regulations promulgated thereunder. Stock purchase rights may also be granted under the Plan.

2. **Definitions.** As used herein, the following definitions shall apply:

(a) **"Administrator"** means the Board or its Committee appointed pursuant to Section 4 of the Plan.

(b) **"Affiliate"** means an entity other than a Subsidiary (as defined below) which, together with the Company, is under common control of a third person or entity.

(c) **"Applicable Laws"** means the legal requirements relating to the administration of stock option and restricted stock purchase plans under applicable U.S. state corporate laws, U.S. federal laws and other applicable state laws, the Code and regulations thereunder, any Stock Exchange rules or regulations and the applicable laws of any other country or jurisdiction where Options or Stock Purchase Rights are granted under the Plan, as such laws, rules, regulations and requirements shall be in place from time to time.

(d) **"Board"** means the Board of Directors of the Company.

(e) **"Change of Control"** means a sale of all or substantially all of the Company's assets, or any merger, consolidation or other transaction of the Company with or into another corporation, entity or person, other than a transaction in which the holders of at least a majority of the shares of capital stock of the Company outstanding immediately prior to such transaction continue to hold (either by the voting securities remaining outstanding or by their being converted into voting securities of the surviving entity) a majority of the total voting power represented by the voting securities of the Company, or such surviving entity, outstanding immediately after such transaction.

(f) **"Code"** means the Internal Revenue Code of 1986, as amended.

(g) **"Committee"** means one or more committees or subcommittees of the Board appointed by the Board to administer the Plan in accordance with Section 4 below.

(h) **"Common Stock"** means the Common Stock of the Company.

(i) **"Company"** means Actinium Pharmaceuticals, Inc.., a Delaware corporation.

(j) **"Consultant"** means any person, including an advisor, who is engaged by the Company or any Parent, Subsidiary or Affiliate to render services and is compensated for such services, and any director of the Company whether compensated for such services or not.

(k) **"Continuous Service Status"** means the absence of any interruption or termination of service as an Employee or Consultant. Continuous Service Status as an Employee or Consultant shall not be considered interrupted in the case of: (i) sick leave; (ii) military leave; (iii) any other leave of absence approved by the Administrator, provided that such leave is for a period of not more than ninety (90) days, unless reemployment upon the expiration of such leave is guaranteed by contract or statute, or unless provided otherwise pursuant to Company policy adopted from time to time; or (iv) in the case of transfers between locations of the Company or between the Company, its Parents, Subsidiaries, Affiliates or their respective successors. A change in status from an Employee to a Consultant or from a Consultant to an Employee will not constitute an interruption of Continuous Service.

(l) **"Corporate Transaction"** means a sale of all or substantially all of the Company's assets, or a merger, consolidation or other capital reorganization or transaction of the Company with or into another corporation, entity or person, and includes a Change of Control.

(m) **"Director"** means a member of the Board.

(n) **"Employee"** means any person employed by the Company or any Parent, Subsidiary or Affiliate, with the status of employment determined based upon such factors as are deemed appropriate by the Administrator in its discretion, subject to any requirements of the Code or the Applicable Laws. The payment by the Company of a director's fee to a Director shall not be sufficient to constitute "employment" of such Director by the Company.

(o) **"Exchange Act"** means the Securities Exchange Act of 1934, as amended.

(p) **"Fair Market Value"** means, as of any date, the fair market value of the Common Stock, as determined by the Administrator in good faith on such basis as it deems appropriate and applied consistently with respect to Participants. Whenever possible, the determination of Fair Market Value shall be based upon the closing price for the Shares as reported in the Wall Street Journal for the applicable date.

(q) **"Incentive Stock Option"** means an Option intended to qualify as an incentive stock option within the meaning of Section 422 of the Code, as designated in the applicable Option Agreement.

(r) "**Listed Security**" means any security of the Company that is listed or approved for listing on a national securities exchange or designated or approved for designation as a national market system security on an interdealer quotation system by the National Association of Securities Dealers, Inc.

(s) **"Named Executive"** means any individual who, on the last day of the Company's fiscal year, is the chief executive officer of the Company (or is acting in such capacity) or among the four most highly compensated officers of the Company (other than the chief executive officer). Such officer status shall be determined pursuant to the executive compensation disclosure rules under the Exchange Act.

(t) **"Nonstatutory Stock Option"** means an Option not intended to qualify as an Incentive Stock Option, as designated in the applicable Option Agreement.

(u) **"Option"** means a stock option granted pursuant to the Plan.

(v) **"Option Agreement"** means a written document, the form(s) of which shall be approved from time to time by the Administrator, reflecting the terms of an Option granted under the Plan and includes any documents attached to or incorporated into such Option Agreement, including, but not limited to, a notice of stock option grant and a form of exercise notice.

(w) **"Option Exchange Program"** means a program approved by the Administrator whereby outstanding Options are exchanged for Options with a lower exercise price or are amended to decrease the exercise price as a result of a decline in the Fair Market Value of the Common Stock.

(x) **"Optioned Stock"** means the Common Stock subject to an Option.

(y) **"Optionee"** means an Employee, Director or Consultant who receives an Option.

(z) **"Parent"** means a "parent corporation,", whether now or hereafter existing, as defined in Section 424(e) of the Code, or any successor provision.

(aa) **"Participant"** means any holder of one or more Options or Stock Purchase Rights, or the Shares issuable or issued upon exercise of such awards, under the Plan.

(bb) **"Plan"** means this 2013 Stock Plan.

(cc) **"Reporting Person"** means an officer, Director, or greater than ten percent stockholder of the Company within the meaning of Rule 16a-2 under the Exchange Act, who is required to file reports pursuant to Rule 16a-3 under the Exchange Act.

(dd) **"Restricted Stock"** means Shares of Common Stock acquired pursuant to a grant of a Stock Purchase Right under Section 11 below.

(ee) **"Restricted Stock Purchase Agreement"** means a written document, the form(s) of which shall be approved from time to time by the Administrator, reflecting the terms of a Stock Purchase Right granted under the Plan and includes any documents attached to such agreement.

(ff) **"Rule 16b-3"** means Rule 16b-3 promulgated under the Exchange Act, as amended from time to time, or any successor provision.

(gg) **"Share"** means a share of the Common Stock, as adjusted in accordance with Section 14 of the Plan.

(hh) **"Stock Exchange"** means any stock exchange or consolidated stock price reporting system on which prices for the Common Stock are quoted at any given time.

(ii) **"Stock Purchase Right"** means the right to purchase Common Stock pursuant to Section 11 below.

(jj) **"Subsidiary"** means a "subsidiary corporation," whether now or hereafter existing, as defined in Section 424(f) of the Code, or any successor provision.

(kk) **"Ten Percent Holder"** means a person who owns stock representing more than ten percent (10%) of the voting power of all classes of stock of the Company or any Parent or Subsidiary.

3. **Stock Subject to the Plan.** Subject to the provisions of Section 14 of the Plan, the maximum aggregate number of Shares that may be sold under the Plan is 5,750,000 Shares of Common Stock. The Shares may be authorized, but unissued, or reacquired Common Stock. If an award should expire or become unexercisable for any reason without having been exercised in full, or is surrendered pursuant to an Option Exchange Program, the unpurchased Shares that were subject thereto shall, unless the Plan shall have been terminated, become available for future grant under the Plan. In addition, any Shares of Common Stock which are retained by the Company upon exercise of an award in order to satisfy the exercise or purchase price for such award or any withholding taxes due with respect to such exercise or purchase shall be treated as not issued and shall continue to be available under the Plan. Shares issued under the Plan and later repurchased by the Company pursuant to any repurchase right which the Company may have shall not be available for future grant under the Plan.

4. **Administration of the Plan.**

(a) **General.** The Plan shall be administered by the Board or a Committee, or a combination thereof, as determined by the Board. The Plan may be administered by different administrative bodies with respect to different classes of Participants and, if permitted by the Applicable Laws, the Board may authorize one or more officers to make awards under the Plan.

(b) **Committee Composition.** If a Committee has been appointed pursuant to this Section 4, such Committee shall continue to serve in its designated capacity until otherwise directed by the Board. From time to time the Board may increase the size of any Committee and appoint additional members thereof, remove members (with or without cause) and appoint new members in substitution therefor, fill vacancies (however caused) and remove all members of a Committee and thereafter directly administer the Plan, all to the extent permitted by the Applicable Laws and, in the case of a Committee administering the Plan in accordance with the requirements of Rule 16b-3 or Section 162(m) of the Code, to the extent permitted or required by such provisions.

(c) **Powers of the Administrator.** Subject to the provisions of the Plan and in the case of a Committee, the specific duties delegated by the Board to such Committee, the Administrator shall have the authority, in its discretion:

(i) to determine the Fair Market Value of the Common Stock, in accordance with Section 2(p) of the Plan, provided that such determination shall be applied consistently with respect to Participants under the Plan;

(ii) to select the Employees, Directors and Consultants to whom Plan awards may from time to time be granted;

(iii) to determine whether and to what extent Plan awards are granted;

(iv) to determine the number of Shares of Common Stock to be covered by each award granted;

(v) to approve the form(s) of agreement(s) used under the Plan;

(vi) to determine the terms and conditions, not inconsistent with the terms of the Plan, of any award granted hereunder, which terms and conditions include but are not limited to the exercise or purchase price, the time or times when awards may be exercised (which may be based on performance criteria), any vesting acceleration or waiver of forfeiture restrictions, any pro-rata adjustment to vesting as a result of a Participant's transitioning from full- to part-time services (or vice versa), and any restriction or limitation regarding any Option, Optioned Stock, Stock Purchase Right or Restricted Stock, based in each case on such factors as the Administrator, in its sole discretion, shall determine;

(vii) to determine whether and under what circumstances an Option may be settled in cash under Section 10(c) instead of Common Stock;

(viii) to implement an Option Exchange Program on such terms and conditions as the Administrator in its discretion deems appropriate, provided that no amendment or adjustment to an Option that would materially and adversely affect the rights of any Optionee shall be made without the prior written consent of the Optionee;

(ix) to adjust the vesting of an Option held by an Employee, Director or Consultant as a result of a change in the terms or conditions under which such person is providing services to the Company;

(x) to construe and interpret the terms of the Plan and awards granted under the Plan, which constructions, interpretations and decisions shall be final and binding on all Participants; and

(xi) in order to fulfill the purposes of the Plan and without amending the Plan, to modify grants of Options or Stock Purchase Rights to Participants who are foreign nationals or employed outside of the United States in order to recognize differences in local law, tax policies or customs.

5. **Eligibility.**

(a) **Recipients of Grants.** Nonstatutory Stock Options and Stock Purchase Rights may be granted to Employees, Directors and Consultants. Incentive Stock Options may be granted only to Employees, provided that Employees of Affiliates shall not be eligible to receive Incentive Stock Options.

(b) **Type of Option.** Each Option shall be designated in the Option Agreement as either an Incentive Stock Option or a Nonstatutory Stock Option.

(c) **ISO $100,000 Limitation.** Notwithstanding any designation under Section 5(b), to the extent that the aggregate Fair Market Value of Shares with respect to which Options designated as Incentive Stock Options are exercisable for the first time by any Optionee during any calendar year (under all plans of the Company or any Parent or Subsidiary) exceeds $100,000, such excess Options shall be treated as Nonstatutory Stock Options. For purposes of this Section 5(c), Incentive Stock Options shall be taken into account in the order in which they were granted, and the Fair Market Value of the Shares subject to an Incentive Stock Option shall be determined as of the date of the grant of such Option.

(d) **No Employment Rights.** The Plan shall not confer upon any Participant any right with respect to continuation of an employment or consulting relationship with the Company, nor shall it interfere in any way with such Participant's right or the Company's right to terminate his or her employment or consulting relationship at any time or any reason.

6. **Term of Plan.** The Plan shall become effective upon its adoption by the Board of Directors. It shall continue in effect for a term of ten (10) years unless sooner terminated under Section 16 of the Plan.

7. **Term of Option.** The term of each Option shall be the term stated in the Option Agreement; provided that the term shall be no more than ten years from the date of grant thereof or such shorter term as may be provided in the Option Agreement and provided further that, in the case of an Incentive Stock Option granted to a person who at the time of such grant is a Ten Percent Holder, the term of the Option shall be five years from the date of grant thereof or such shorter term as may be provided in the Option Agreement.

8. **[Reserved.]**

9. **Option Exercise Price and Consideration.**

(a) **Exercise Price.** The per Share exercise price for the Shares to be issued pursuant to exercise of an Option shall be such price as is determined by the Administrator and set forth in the Option Agreement, but shall be subject to the following:

(i) In the case of an Incentive Stock Option

(A) granted to an Employee who at the time of grant is a Ten Percent Holder, the per Share exercise price shall be no less than 110% of the Fair Market Value per Share on the date of grant; or

(B) granted to any other Employee, the per Share exercise price shall be no less than 100% of the Fair Market Value per Share on the date of grant.

(ii) In the case of a Nonstatutory Stock Option, the per share Exercise Price shall be such price as determined by the Administrator provided that for any Nonstatutory Stock Option granted on any date on which the Common Stock is a Listed Security to an eligible person who is, at the time of the grant of such Option, a Named Executive of the Company, the per share Exercise Price shall be no less than 100% of the Fair Market Value on the date of grant if such Option is intended to qualify as performance-based compensation under Section 162(m) of the Code.

(iii) Notwithstanding the foregoing, Options may be granted with a per Share exercise price other than as required above pursuant to a Corporate Transaction.

(b) **Permissible Consideration.** The consideration to be paid for the Shares to be issued upon exercise of an Option, including the method of payment, shall be determined by the Administrator (and, in the case of an Incentive Stock Option, shall be determined at the time of grant) and may consist entirely of (1) cash; (2) check; (3) delivery of Optionee's promissory note with such recourse, interest, security and redemption provisions as the Administrator determines to be appropriate (subject to applicable provisions of Delaware law); (4) cancellation of indebtedness; (5) other Shares that have a Fair Market Value on the date of surrender equal to the aggregate exercise price of the Shares as to which the Option is exercised, provided that in the case of Shares acquired, directly or indirectly, from the Company, such Shares must have been owned by the Optionee for more than six months on the date of surrender (or such other period as may be required to avoid the Company's incurring an adverse accounting charge); (6) delivery of a properly executed exercise notice together with such other documentation as the Administrator and a securities broker approved by the Company shall require to effect exercise of the Option and prompt delivery to the Company of the sale or loan proceeds required to pay the exercise price and any applicable withholding taxes; or (7) any combination of the foregoing methods of payment. In making its determination as to the type of consideration to accept, the Administrator shall consider if acceptance of such consideration may be reasonably expected to benefit the Company and the Administrator may, in its sole discretion, refuse to accept a particular form of consideration at the time of any Option exercise.

10. **Exercise of Option.**

(a) **General.**

(i) **Exercisability.** Any Option granted hereunder shall be exercisable at such times and under such conditions as determined by the Administrator, consistent with the term of the Plan and reflected in the Option Agreement, including vesting requirements and/or performance criteria with respect to the Company and/or the Optionee. The Administrator shall have the discretion to determine whether and to what extent the vesting of Options shall be tolled during any unpaid leave of absence; provided however that in the absence of such determination, vesting of Options shall be tolled during any such leave (unless otherwise required by the Applicable Laws. In the event of military leave, vesting shall toll during any unpaid portion of such leave, provided that upon a Participant's return from military leave he or she will be given vesting credit with respect to awards to the same extent as would have applied had the Participant continued to provide services to the Company throughout the leave on the same terms as he or she was providing services immediately prior to the leave.

(ii) **Minimum Exercise Requirements.** An Option may not be exercised for a fraction of a Share. The Administrator may require that an Option be exercised as to a minimum number of Shares, provided that such requirement shall not prevent an Optionee from exercising the full number of Shares as to which the Option is then exercisable.

(iii) **Procedures for and Results of Exercise.** An Option shall be deemed exercised when written notice of such exercise has been given to the Company in accordance with the terms of the Option by the person entitled to exercise the Option and the Company has received full payment for the Shares with respect to which the Option is exercised. Full payment may, as authorized by the Administrator, consist of any consideration and method of payment allowable under Section 9(b) of the Plan, provided that the Administrator may, in its sole discretion, refuse to accept any form of consideration at the time of any Option exercise.

Exercise of an Option in any manner shall result in a decrease in the number of Shares that thereafter may be available, both for purposes of the Plan and for sale under the Option, by the number of Shares as to which the Option is exercised.

(iv) **Rights as Stockholder.** Until the issuance of the Shares (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), no right to vote or receive dividends or any other rights as a stockholder shall exist with respect to the Optioned Stock, notwithstanding the exercise of the Option. No adjustment will be made for a dividend or other right for which the record date is prior to the date the stock certificate is issued, except as provided in Section 14 of the Plan.

(b) **Termination of Employment or Consulting Relationship.** Except as otherwise set forth in this Section 10(b), the Administrator shall establish and set forth in the applicable Option Agreement the terms and conditions upon which an Option shall remain exercisable, if at all, following termination of an Optionee's Continuous Service Status, which provisions may be waived or modified by the Administrator at any time in the Administrator's sole discretion. Unless otherwise provided in the Option Agreement, to the extent that the Optionee is not vested in the Optioned Stock on the date of termination of his or her Continuous Service Status, or if the Optionee (or other person entitled to exercise the Option) does not exercise the Option to the extent so entitled within the time specified in the Option Agreement or below (as applicable), the Option shall terminate and the Optioned Stock underlying the unexercised portion of the Option shall revert to the Plan. In no event may any Option be exercised after the expiration of the Option term as set forth in the Option Agreement (and subject to Section 7).

The following provisions (1) shall apply to the extent an Option Agreement does not specify the terms and conditions upon which an Option shall terminate upon termination of an Optionee's Continuous Service Status, and (2) establish the minimum post-termination exercise periods that may be set forth in an Option Agreement:

(i) **Termination other than Upon Disability or Death.** In the event of termination of an Optionee's Continuous Service Status, such Optionee may exercise an Option for 30 days following such termination to the extent the Optionee was vested in the Optioned Stock as of the date of such termination. No termination shall be deemed to occur and this Section 10(b)(i) shall not apply if (A) the Optionee is a Consultant who becomes an Employee, or (B) the Optionee is an Employee who becomes a Consultant.

(ii) **Disability of Optionee.** In the event of termination of an Optionee's Continuous Service Status as a result of his or her disability (including a disability within the meaning of Section 22(e)(3) of the Code), such Optionee may exercise an Option at any time within twelve months following such termination to the extent the Optionee was vested in the Optioned Stock as of the date of such termination.

(iii) **Death of Optionee.** In the event of the death of an Optionee during the period of Continuous Service Status since the date of grant of the Option, or within thirty days following termination of Optionee's Continuous Service, the Option may be exercised by Optionee's estate or by a person who acquired the right to exercise the Option by bequest or inheritance at any time within twelve months following the date of death, but only to the extent the Optionee was vested in the Optioned Stock as of the date of death or, if earlier, the date the Optionee's Continuous Service Status terminated.

(c) **Buyout Provisions.** The Administrator may at any time offer to buy out for a payment in cash or Shares an Option previously granted under the Plan based on such terms and conditions as the Administrator shall establish and communicate to the Optionee at the time that such offer is made.

11. **Stock Purchase Rights.**

(a) **Rights to Purchase.** When the Administrator determines that it will offer Stock Purchase Rights under the Plan, it shall advise the offeree in writing of the terms, conditions and restrictions related to the offer, including the number of Shares that such person shall be entitled to purchase, the price to be paid, and the time within which such person must accept such offer. The offer to purchase Shares subject to Stock Purchase Rights shall be accepted by execution of a Restricted Stock Purchase Agreement in the form determined by the Administrator.

(b) **Repurchase Option.**

(i) **General.** Unless the Administrator determines otherwise, the Restricted Stock Purchase Agreement shall grant the Company a repurchase option exercisable upon the voluntary or involuntary termination of the purchaser's employment with the Company for any reason (including death or disability). The purchase price for Shares repurchased pursuant to the Restricted Stock Purchase Agreement shall be the original purchase price paid by the purchaser and may be paid by cancellation of any indebtedness of the purchaser to the Company. The repurchase option shall lapse at such rate as the Administrator may determine.

(c) **Other Provisions.** The Restricted Stock Purchase Agreement shall contain such other terms, provisions and conditions not inconsistent with the Plan as may be determined by the Administrator in its sole discretion. In addition, the provisions of Restricted Stock Purchase Agreements need not be the same with respect to each purchaser.

(d) **Rights as a Stockholder.** Once the Stock Purchase Right is exercised, the purchaser shall have the rights equivalent to those of a stockholder, and shall be a stockholder when his or her purchase is entered upon the records of the duly authorized transfer agent of the Company. No adjustment will be made for a dividend or other right for which the record date is prior to the date the Stock Purchase Right is exercised, except as provided in Section 14 of the Plan.

12. **Taxes.**

(a) As a condition of the exercise of an Option or Stock Purchase Right granted under the Plan, the Participant (or in the case of the Participant's death, the person exercising the Option or Stock Purchase Right) shall make such arrangements as the Administrator may require for the satisfaction of any applicable federal, state, local or foreign withholding tax obligations that may arise in connection with the exercise of the Option or Stock Purchase Right and the issuance of Shares. The Company shall not be required to issue any Shares under the Plan until such obligations are satisfied. If the Administrator allows the withholding or surrender of Shares to satisfy a Participant's tax withholding obligations under this Section 12 (whether pursuant to Section 12(c), (d) or (e), or otherwise), the Administrator shall not allow Shares to be withheld in an amount that exceeds the minimum statutory withholding rates for federal and state tax purposes, including payroll taxes.

(b) In the case of an Employee and in the absence of any other arrangement, the Employee shall be deemed to have directed the Company to withhold or collect from his or her compensation an amount sufficient to satisfy such tax obligations from the next payroll payment otherwise payable after the date of an exercise of the Option or Stock Purchase Right.

(c) This Section 12(c) shall apply only after the date, if any, upon which the Common Stock becomes a Listed Security. In the case of Participant other than an Employee (or in the case of an Employee where the next payroll payment is not sufficient to satisfy such tax obligations, with respect to any remaining tax obligations), in the absence of any other arrangement and to the extent permitted under the Applicable Laws, the Participant shall be deemed to have elected to have the Company withhold from the Shares to be issued upon exercise of the Option or Stock Purchase Right that number of Shares having a Fair Market Value determined as of the applicable Tax Date (as defined below) equal to the amount required to be withheld. For purposes of this Section 12, the Fair Market Value of the Shares to be withheld shall be determined on the date that the amount of tax to be withheld is to be determined under the Applicable Laws (the "Tax Date").

(d) If permitted by the Administrator, in its discretion, a Participant may satisfy his or her tax withholding obligations upon exercise of an Option or Stock Purchase Right by surrendering to the Company Shares that have a Fair Market Value determined as of the applicable Tax Date equal to the amount required to be withheld. In the case of shares previously acquired from the Company that are surrendered under this Section 12(d), such Shares must have been owned by the Participant for more than six (6) months on the date of surrender (or such other period of time as is required for the Company to avoid adverse accounting charges).

(e) Any election or deemed election by a Participant to have Shares withheld to satisfy tax withholding obligations under Section 12(c) or (d) above shall be irrevocable as to the particular Shares as to which the election is made and shall be subject to the consent or disapproval of the Administrator. Any election by a Participant under Section 12(d) above must be made on or prior to the applicable Tax Date.

(f) In the event an election to have Shares withheld is made by a Participant and the Tax Date is deferred under Section 83 of the Code because no election is filed under Section 83(b) of the Code, the Participant shall receive the full number of Shares with respect to which the Option or Stock Purchase Right is exercised but such Participant shall be unconditionally obligated to tender back to the Company the proper number of Shares on the Tax Date.

13. **Non-Transferability of Options and Stock Purchase Rights.**

(a) **General.** Except as set forth in this Section 13, Options and Stock Purchase Rights may not be sold, pledged, assigned, hypothecated, transferred or disposed of in any manner other than by will or by the laws of descent or distribution. The designation of a beneficiary by an Optionee will not constitute a transfer. An Option or Stock Purchase Right may be exercised, during the lifetime of the holder of an Option or Stock Purchase Right, only by such holder or a transferee permitted by this Section 13.

(b) **Limited Transferability Rights.** Notwithstanding anything else in this Section 13, prior to the date, if any, on which the Common Stock becomes a Listed Security, the Administrator may in its discretion grant Nonstatutory Stock Options that may be transferred by instrument to an inter vivos or testamentary trust in which the Options are to be passed to beneficiaries upon the death of the trustor (settlor) or by gift to "Immediate Family" (as defined below), on such terms and conditions as the Administrator deems appropriate. Following the date, if any, on which the Common Stock becomes a Listed Security, the Administrator may in its discretion grant transferable Nonstatutory Stock Options pursuant to Option Agreements specifying the manner in which such Nonstatutory Stock Options are transferable. "Immediate Family" means any child, stepchild, grandchild, parent, stepparent, grandparent, spouse, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law, and shall include adoptive relationships.

14. **Adjustments Upon Changes in Capitalization, Merger or Certain Other Transactions.**

(a) **Changes in Capitalization.** Subject to any required action by the stockholders of the Company, the number of Shares of Common Stock covered by each outstanding Option or Stock Purchase Right, the number of Shares set forth in Sections 3 and 8 above and the number of Shares of Common Stock that have been authorized for issuance under the Plan but as to which no Options or Stock Purchase Rights have yet been granted or that have been returned to the Plan upon cancellation or expiration of an Option or Stock Purchase Right, as well as the price per Share of Common Stock covered by each such outstanding Option or Stock Purchase Right, shall be proportionately adjusted for any increase or decrease in the number of issued Shares of Common Stock resulting from a stock split, reverse stock split, stock dividend, combination, recapitalization or reclassification of the Common Stock, or any other increase or decrease in the number of issued Shares of Common Stock effected without receipt of consideration by the Company; provided, however, that conversion of any convertible securities of the Company shall not be deemed to have been "effected without receipt of consideration." Such adjustment shall be made by the Administrator, whose determination in that respect shall be final, binding and conclusive. Except as expressly provided herein, no issuance by the Company of shares of stock of any class, or securities convertible into shares of stock of any class, shall affect, and no adjustment by reason thereof shall be made with respect to, the number or price of Shares of Common Stock subject to an Option or Stock Purchase Right.

(b) **Dissolution or Liquidation.** In the event of the dissolution or liquidation of the Company, each Option and Stock Purchase Right will terminate immediately prior to the consummation of such action, unless otherwise determined by the Administrator.

(c) **Corporate Transaction.** In the event of a Corporate Transaction, each outstanding Option or Stock Purchase Right shall be assumed or an equivalent option or right shall be substituted by such successor corporation or a parent or subsidiary of such successor corporation (the "Successor Corporation"), unless the Successor Corporation does not agree to assume the award or to substitute an equivalent option or right, in which case such Option or Stock Purchase Right shall terminate upon the consummation of the transaction.

For purposes of this Section 14(c), an Option or a Stock Purchase Right shall be considered assumed, without limitation, if, at the time of issuance of the stock or other consideration upon a Corporate Transaction or a Change of Control, as the case may be, each holder of an Option or Stock Purchase Right would be entitled to receive upon exercise of the award the same number and kind of shares of stock or the same amount of property, cash or securities as such holder would have been entitled to receive upon the occurrence of the transaction if the holder had been, immediately prior to such transaction, the holder of the number of Shares of Common Stock covered by the award at such time (after giving effect to any adjustments in the number of Shares covered by the Option or Stock Purchase Right as provided for in this Section 14); provided that if such consideration received in the transaction is not solely common stock of the Successor Corporation, the Administrator may, with the consent of the Successor Corporation, provide for the consideration to be received upon exercise of the award to be solely common stock of the Successor Corporation equal to the Fair Market Value of the per Share consideration received by holders of Common Stock in the transaction.

(d) **Certain Distributions.** In the event of any distribution to the Company's stockholders of securities of any other entity or other assets (other than dividends payable in cash or stock of the Company) without receipt of consideration by the Company, the Administrator may, in its discretion, appropriately adjust the price per Share of Common Stock covered by each outstanding Option or Stock Purchase Right to reflect the effect of such distribution.

15. **Time of Granting Options and Stock Purchase Rights.** The date of grant of an Option or Stock Purchase Right shall, for all purposes, be the date on which the Administrator makes the determination granting such Option or Stock Purchase Right, or such other date as is determined by the Administrator, provided that in the case of any Incentive Stock Option, the grant date shall be the later of the date on which the Administrator makes the determination granting such Incentive Stock Option or the date of commencement of the Optionee's employment relationship with the Company. Notice of the determination shall be given to each Employee, Director or Consultant to whom an Option or Stock Purchase Right is so granted within a reasonable time after the date of such grant.

16. **Amendment and Termination of the Plan.**

(a) **Authority to Amend or Terminate.** The Board may at any time amend, alter, suspend or discontinue the Plan, but no amendment, alteration, suspension or discontinuation (other than an adjustment pursuant to Section 14 above) shall be made that would materially and adversely affect the rights of any Optionee or holder of Stock Purchase Rights under any outstanding grant, without his or her consent. In addition, to the extent necessary and desirable to comply with the Applicable Laws, the Company shall obtain stockholder approval of any Plan amendment in such a manner and to such a degree as required.

(b) **Effect of Amendment or Termination.** No amendment or termination of the Plan shall materially and adversely affect Options or Stock Purchase Rights already granted, unless mutually agreed otherwise between the Optionee or holder of the Stock Purchase Rights and the Administrator, which agreement must be in writing and signed by the Optionee or holder and the Company.

17. **Conditions Upon Issuance of Shares.** Notwithstanding any other provision of the Plan or any agreement entered into by the Company pursuant to the Plan, the Company shall not be obligated, and shall have no liability for failure, to issue or deliver any Shares under the Plan unless such issuance or delivery would comply with the Applicable Laws, with such compliance determined by the Company in consultation with its legal counsel. As a condition to the exercise of an Option or Stock Purchase Right, the Company may require the person exercising the award to represent and warrant at the time of any such exercise that the Shares are being purchased only for investment and without any present intention to sell or distribute such Shares if, in the opinion of counsel for the Company, such a representation is required by law.

18. **Reservation of Shares.** The Company, during the term of this Plan, will at all times reserve and keep available such number of Shares as shall be sufficient to satisfy the requirements of the Plan.

19. **Agreements.** Options and Stock Purchase Rights shall be evidenced by Option Agreements and Restricted Stock Purchase Agreements, respectively, in such form(s) as the Administrator shall from time to time approve.

20. **Stockholder Approval.** If required by the Applicable Laws, continuance of the Plan shall be subject to approval by the stockholders of the Company within twelve (12) months before or after the date the Plan is adopted. Such stockholder approval shall be obtained in the manner and to the degree required under the Applicable Laws.

21. **Information and Documents to Optionees and Purchasers.** Prior to the date, if any, upon which the Common Stock becomes a Listed Security and if required by the Applicable Laws, the Company shall provide financial statements at least annually to each Optionee and to each individual who acquired Shares pursuant to the Plan, during the period such Optionee or purchaser has one or more Options or Stock Purchase Rights outstanding, and in the case of an individual who acquired Shares pursuant to the Plan, during the period such individual owns such Shares. The Company shall not be required to provide such information if the issuance of Options or Stock Purchase Rights under the Plan is limited to key employees whose duties in connection with the Company assure their access to equivalent information.

22. **Awards Granted to California Residents.** Prior to the date, if any, upon which the Common Stock becomes a Listed Security, Options or Stock Purchase Rights granted under the Plan to persons resident in California shall be subject to the provisions set forth in Attachment A hereto. To the extent the provisions of the Plan conflict with the provisions set forth on Attachment A, the provisions on Attachment A shall govern the terms of such Options.

**Attachment A**
**Provisions Applicable to Award Recipients**
**Resident in California**

Until such time as any security of the Company becomes a Listed Security and if required by Applicable Laws, the following additional terms shall apply to Options and Stock Purchase Rights, and Shares issued upon exercise of such awards, granted under the 2002 Stock Plan (the "Plan") to persons resident in California as of the grant date of any such award (each such person, a "California Recipient"):

1. In the case of an Option, whether an Incentive Stock Option or a Nonqualified Stock Option, that is granted to a California Recipient who, at the time of the grant of such Option, owns stock representing more than 10% of the total combined voting power of all classes of stock of the Company or any Parent or Subsidiary, the per Share exercise price shall be no less than 110% of the Fair Market Value on the grant date.

2. In the case of a Nonqualified Stock Option that is granted to any other California Recipient, the per Share exercise price shall be no less than 85% of the Fair Market Value per Share on the grant date.

3. In the case of a Stock Purchase Right granted to a California Recipient, the purchase price applicable to stock purchased under such Stock Award shall not be less than 85% of the Fair Market Value of the Shares as of the Grant Date, or, in the case of a person owning stock representing more than 10% of the total combined voting power of all classes of stock of the Company or any Parent or Subsidiary, the price shall not be less than 100% of the Fair Market Value of the Shares as of the grant date.

4. With respect to an Option or Stock Purchase Right issued to any California Recipient who is not an Officer, Director or Consultant, such Option or Stock Purchase Right shall become exercisable, or any repurchase option in favor of the Company shall lapse, at the rate of at least 20% per year over five years from the grant date.

5. The following rules shall apply to an Option issued to any California Recipient or to stock issued to a California Recipient upon exercise of a Stock Purchase Right, in the event of termination of the California Recipient's employment or services with the Company:

(a) If such termination was for reasons other than death or disability, the California Recipient shall have at least 30 days after the Termination Date (but in no event later than the expiration of the term of such Option established by the Plan Administrator as of the grant date) to exercise such Option to the extent the California Recipient was vested in the Optioned Stock as of the Termination Date.

(b) If such termination was on account of the death or disability of the California Recipient, the holder of the Option may, but only within six months from the Termination Date (but in no event later than the expiration date of the term of such Option established by the Plan Administrator as of the grant date), exercise the Option to the extent the California Recipient was vested in the Optioned Stock as of the Termination Date. To the extent that the California Recipient was not vested in the Optioned Stock as of the Termination Date, or if the holder does not exercise such Option to the extent so entitled within six months from the Termination Date, the Option shall terminate and the Common Stock underlying the unexercised portion of the Option shall revert to the Plan.

5. The Company shall provide financial statements at least annually to each California Recipient during the period such person has one or more Options or Stock Awards outstanding, and in the case of an individual who acquired Shares pursuant to the Plan, during the period such individual owns such Shares. The Company shall not be required to provide such information if the issuance of awards under the Plan is limited to key employees whose duties in connection with the Company assure their access to equivalent information.

6. Unless defined below or otherwise in this Attachment, Capitalized terms shall have the meanings set forth in the Plan. For purposes of this Attachment, "Officer" means a person who is an officer of the Company within the meaning of Section 16(a) of the Exchange Act and the rules and regulations promulgated thereunder.

**Exhibit D to Minutes of API Board of Directors Meeting of _____, 2013**

**ACTINIUM PHARMACEUTICALS, INC.**

**2013 STOCK PLAN**

**NOTICE OF STOCK OPTION GRANT**

«Optionee»

You have been granted an option to purchase Common Stock of Actinium Pharmaceuticals, Inc. (the "Company") as follows:

| | |
|---|---|
| Board Approval Date: | «BoardApprovalDate» |
| Date of Grant (Later of Board Approval Date or Commencement of Employment/Consulting): | «GrantDate» |
| Exercise Price per Share: | $«ExercisePrice» |
| Total Number of Shares Granted: | «NoofShares» |
| Total Exercise Price: | $«TotalExercisePrice» |
| Type of Option: | «NoSharesISO» Shares Incentive Stock Option |
| | «NoSharesNSO» Shares Nonstatutory Stock Option |
| Expiration Date: | «Term»/«ExpirationDate» |
| Vesting Commencement Date: | «VestingCommencementDate» |
| Vesting/Exercise Schedule: | So long as your full time employment or consulting relationship with the Company continues, the Shares underlying this Option shall vest and become exercisable in accordance with the following schedule: _____ of the Shares subject to the Option shall vest and become exercisable on the _____ month anniversary of the Vesting Commencement Date and _____ of the total number of Shares subject to the Option shall vest and become exercisable each month thereafter. |
| Termination Period: | This Option may be exercised for ___ days after termination of employment or consulting relationship except as set out in Section 5 of the Stock Option Agreement (but in no event later than the Expiration Date). Optionee is responsible for keeping track of these exercise periods following termination for any reason of his or her service relationship with the Company. The Company will not provide further notice of such periods. |
| Transferability: | This Option may not be transferred. |

By your signature and the signature of the Company's representative below, you and the Company agree that this option is granted under and governed by the terms and conditions of the Actinium Pharmaceuticals, Inc. 2013 Stock Plan and the Stock Option Agreement, both of which are attached and made a part of this document.

In addition, you agree and acknowledge that your rights to any Shares underlying the Option will be earned only as you provide services to the Company over time, that the grant of the Option is not as consideration for services you rendered to the Company prior to your Vesting Commencement Date, and that nothing in this Notice or the attached documents confers upon you any right to continue your employment or consulting relationship with the Company for any period of time, nor does it interfere in any way with your right or the Company's right to terminate that relationship at any time, for any reason, with or without cause.

**ACTINIUM PHARMACEUTICALS, INC.**

«Optionee»

By: _____

Name: _____

Title: _____

**ACTINIUM PHARMACEUTICALS, INC.**

**2013 STOCK PLAN**

**STOCK OPTION AGREEMENT**

1. **Grant of Option.** Actinium Pharmaceuticals, Inc., a Delaware corporation (the "Company"), hereby grants to «Optionee» ("Optionee"), an option (the "Option") to purchase the total number of shares of Common Stock (the "Shares") set forth in the Notice of Stock Option Grant (the "Notice"), at the exercise price per Share set forth in the Notice (the "Exercise Price") subject to the terms, definitions and provisions of the Actinium Pharmaceuticals, Inc. 2013 Stock Plan (the "Plan") adopted by the Company, which is incorporated in this Agreement by reference. Unless otherwise defined in this Agreement, the terms used in this Agreement shall have the meanings defined in the Plan.

2. **Designation of Option.** This Option is intended to be an Incentive Stock Option as defined in Section 422 of the Code only to the extent so designated in the Notice, and to the extent it is not so designated or to the extent the Option does not qualify as an Incentive Stock Option, it is intended to be a Nonstatutory Stock Option.

Notwithstanding the above, if designated as an Incentive Stock Option, in the event that the Shares subject to this Option (and all other Incentive Stock Options granted to Optionee by the Company or any Parent or Subsidiary, including under other plans of the Company) that first become exercisable in any calendar year have an aggregate fair market value (determined for each Share as of the date of grant of the option covering such Share) in excess of $100,000, the Shares in excess of $100,000 shall be treated as subject to a Nonstatutory Stock Option, in accordance with Section 5(c) of the Plan.

3. **Exercise of Option.** This Option shall be exercisable during its term in accordance with the Vesting/Exercise Schedule set out in the Notice and with the provisions of Section 10 of the Plan as follows:

(a) **Right to Exercise.**

(i) This Option may not be exercised for a fraction of a share.

(ii) In the event of Optionee's death, disability or other termination of employment, the exercisability of the Option is governed by Section 5 below, subject to the limitations contained in this Section 3.

(iii) In no event may this Option be exercised after the Expiration Date of the Option as set forth in the Notice.

(b) **Method of Exercise.**

(i) This Option shall be exercisable by execution and delivery of the Exercise Notice and Restricted Stock Purchase Agreement attached hereto as Exhibit A (the "Exercise Agreement") or of any other form of written notice approved for such purpose by the Company which shall state Optionee's election to exercise the Option, the number of Shares in respect of which the Option is being exercised, and such other representations and agreements as to the holder's investment intent with respect to such Shares as may be required by the Company pursuant to the provisions of the Plan. Such written notice shall be signed by Optionee and shall be delivered to the Company by such means as are determined by the Plan Administrator in its discretion to constitute adequate delivery. The written notice shall be accompanied by payment of the Exercise Price. This Option shall be deemed to be exercised upon receipt by the Company of such written notice accompanied by the Exercise Price.

(ii) As a condition to the exercise of this Option and as further set forth in Section 12 of the Plan, Optionee agrees to make adequate provision for federal, state or other tax withholding obligations, if any, which arise upon the vesting or exercise of the Option, or disposition of Shares, whether by withholding, direct payment to the Company, or otherwise.

(iii) The Company is not obligated, and will have no liability for failure, to issue or deliver any Shares upon exercise of the Option unless such issuance or delivery would comply with the Applicable Laws, with such compliance determined by the Company in consultation with its legal counsel. This Option may not be exercised until such time as the Plan has been approved by the stockholders of the Company, or if the issuance of such Shares upon such exercise or the method of payment of consideration for such shares would constitute a violation of any applicable federal or state securities or other law or regulation, including any rule under Part 221 of Title 12 of the Code of Federal Regulations as promulgated by the Federal Reserve Board. As a condition to the exercise of this Option, the Company may require Optionee to make any representation and warranty to the Company as may be required by the Applicable Laws. Assuming such compliance, for income tax purposes the Shares shall be considered transferred to Optionee on the date on which the Option is exercised with respect to such Shares.

(c) **Voting Agreement.** Upon exercise of the Option, Optionee shall enter into a voting agreement providing that Otionee will grant a revocable proxy to management of the Company to vote the Otionee's Option Shares for all purposes, in form and substance satisfactory to the Company.

4. **Method of Payment.** Payment of the Exercise Price shall be by any of the following, or a combination of the following, at the election of Optionee:

(a) cash or check;

(b) prior to the date, if any, upon which the Common Stock becomes a Listed Security, by surrender of other shares of Common Stock of the Company that have an aggregate Fair Market Value on the date of surrender equal to the Exercise Price of the Shares as to which the Option is being exercised. In the case of shares acquired directly or indirectly from the Company, such shares must have been owned by Optionee for more than six (6) months on the date of surrender (or such other period of time as is necessary to avoid the Company's incurring adverse accounting charges); or

(c) following the date, if any, upon which the Common Stock is a Listed Security, delivery of a properly executed exercise notice together with irrevocable instructions to a broker approved by the Company to deliver promptly to the Company the amount of sale or loan proceeds required to pay the exercise price.

5. **Termination of Relationship.** Following the date of termination of Optionee's Continuous Service Status for any reason (the "Termination Date"), Optionee may exercise the Option only as set forth in the Notice and this Section 5. To the extent that Optionee is not vested in the Optioned Stock as of the Termination Date, or if Optionee (or other person entitled to exercise the Option) does not exercise this Option within the Termination Period set forth in the Notice or the termination periods set forth below, the Option shall terminate in its entirety. In no event, may any Option be exercised after the Expiration Date of the Option as set forth in the Notice.

(a) **Termination.** In the event of termination of Optionee's Continuous Service Status other than as a result of Optionee's disability or death, Optionee may, to the extent Optionee is vested in the Optioned Stock as of the Termination Date, exercise this Option during the Termination Period set forth in the Notice.

(b) **Other Terminations.** In connection with any termination other than a termination covered by Section 5(a), Optionee may exercise the Option only as described below:

(i) **Termination upon Disability of Optionee.** In the event of termination of Optionee's Continuous Service Status as a result of Optionee's disability, Optionee may, to the extent Optionee was vested in the Optioned Stock as of such Termination Date, exercise this Option at any time within six months from the Termination Date.

(ii) **Death of Optionee.** In the event of the death of Optionee (A) during the term of this Option and while an Employee or Consultant of the Company and having been in Continuous Service Status since the date of grant of the Option, or (B) within thirty (30) days after Optionee's Termination Date, to the extent Optionee was vested in the Optioned Stock as of the Termination Date, the Option may be exercised at any time within six months following the date of death by Optionee's estate or by a person who acquired the right to exercise the Option by bequest or inheritance.

6. **Non-Transferability of Option.** This Option may not be transferred in any manner otherwise than by will or by the laws of descent or distribution and may be exercised during the lifetime of Optionee only by him or her. The terms of this Option shall be binding upon the executors, administrators, heirs, successors and assigns of Optionee.

7. **Tax Consequences.** Below is a brief summary as of the date of this Option of certain of the federal tax consequences of exercise of this Option and disposition of the Shares under the laws in effect as of the Date of Grant. THIS SUMMARY IS INCOMPLETE, AND THE TAX LAWS AND REGULATIONS ARE SUBJECT TO CHANGE. OPTIONEE SHOULD CONSULT A TAX ADVISER BEFORE EXERCISING THIS OPTION OR DISPOSING OF THE SHARES.

(a) **Incentive Stock Option.**

(i) **Tax Treatment upon Exercise and Sale of Shares.** If this Option qualifies as an Incentive Stock Option, there will be no regular federal income tax liability upon the exercise of the Option, although the excess, if any, of the fair market value of the Shares on the date of exercise over the Exercise Price will be treated as an adjustment to the alternative minimum tax for federal tax purposes and may subject Optionee to the alternative minimum tax in the year of exercise. If Shares issued upon exercise of an Incentive Stock Option are held for at least one year after exercise and are disposed of at least two years after the Option grant date, any gain realized on disposition of the Shares will also be treated as long-term capital gain for federal income tax purposes. If Shares issued upon exercise of an Incentive Stock Option are disposed of within such one-year period or within two years after the Option grant date, any gain realized on such disposition will be treated as compensation income (taxable at ordinary income rates) to the extent of the difference between the Exercise Price and the lesser of (i) the fair market value of the Shares on the date of exercise, or (ii) the sale price of the Shares.

(ii) **Notice of Disqualifying Dispositions**. With respect to any Shares issued upon exercise of an Incentive Stock Option, if Optionee sells or otherwise disposes of such Shares on or before the later of (i) the date two years after the Option grant date, or (ii) the date one year after the date of exercise, Optionee shall immediately notify the Company in writing of such disposition. Optionee acknowledges and agrees that he or she may be subject to income tax withholding by the Company on the compensation income recognized by Optionee from the early disposition by payment in cash or out of the current earnings paid to Optionee.

(b) **Nonstatutory Stock Option.** If this Option does not qualify as an Incentive Stock Option, there may be a regular federal (and state) income tax liability upon the exercise of the Option. Optionee will be treated as having received compensation income (taxable at ordinary income tax rates) equal to the excess, if any, of the fair market value of the Shares on the date of exercise over the Exercise Price. If Optionee is an Employee, the Company will be required to withhold from Optionee's compensation or collect from Optionee and pay to the applicable taxing authorities an amount equal to a percentage of this compensation income at the time of exercise. If Shares issued upon exercise of a Nonstatutory Stock Option are held for at least one year, any gain realized on disposition of the Shares will be treated as long-term capital gain for federal income tax purposes.

8. **Lock-Up Agreement.** In connection with the initial public offering of the Company's securities and upon request of the Company or the underwriters managing any underwritten offering of the Company's securities, Optionee hereby agrees not to sell, make any short sale of, loan, grant any option for the purchase of, or otherwise dispose of any securities of the Company however and whenever acquired (other than those included in the registration) without the prior written consent of the Company or such underwriters, as the case may be, for such period of time (not to exceed 180 days) from the effective date of such registration as may be requested by the Company or such managing underwriters and to execute an agreement reflecting the foregoing as may be requested by the underwriters at the time of the public offering.

9. **Effect of Agreement**. Optionee acknowledges receipt of a copy of the Plan and represents that he or she is familiar with the terms and provisions thereof (and has had an opportunity to consult counsel regarding the Option terms), and hereby accepts this Option and agrees to be bound by its contractual terms as set forth herein and in the Plan. Optionee hereby agrees to accept as binding, conclusive and final all decisions and interpretations of the Plan Administrator regarding any questions relating to the Option. In the event of a conflict between the terms and provisions of the Plan and the terms and provisions of the Notice and this Agreement, the Plan terms and provisions shall prevail. The Option, including the Plan, constitutes the entire agreement between Optionee and the Company on the subject matter hereof and supersedes all proposals, written or oral, and all other communications between the parties relating to such subject matter.

**[Signature Page Follows]**

This Agreement may be executed in two or more counterparts, each of which shall be deemed an original and all of which together shall constitute one document.

«Optionee»

_____

Dated: _____

ACTINIUM PHARMACEUTICALS, INC.

By: _____

Name: _____

Title: _____

EXHIBIT A

**ACTINIUM PHARMACEUTICALS, INC.**

**2013 STOCK PLAN**

**EXERCISE NOTICE AND RESTRICTED STOCK PURCHASE AGREEMENT**

This Agreement ("Agreement") is made as of _____, by and between Actinium Pharmaceuticals, Inc., a Delaware corporation (the "Company"), and «Optionee» ("Purchaser"). To the extent any capitalized terms used in this Agreement are not defined, they shall have the meaning ascribed to them in the Company's 2013 Stock Plan.

1. **Exercise of Option.** Subject to the terms and conditions hereof, Purchaser hereby elects to exercise his or her option to purchase «NoofShares» shares of the Common Stock (the "Shares") of the Company under and pursuant to the Company's 2013 Stock Plan (the "Plan") and the Stock Option Agreement granted «GrantDate» (the "Option Agreement"). The purchase price for the Shares shall be $«ExercisePrice» per Share for a total purchase price of $_____. The term "Shares" refers to the purchased Shares and all securities received in replacement of the Shares or as stock dividends or splits, all securities received in replacement of the Shares in a recapitalization, merger, reorganization, exchange or the like, and all new, substituted or additional securities or other properties to which Purchaser is entitled by reason of Purchaser's ownership of the Shares.

2. **Time and Place of Exercise.** The purchase and sale of the Shares under this Agreement shall occur at the principal office of the Company simultaneously with the execution and delivery of this Agreement in accordance with the provisions of Section 3(b) of the Option Agreement. On such date, the Company will deliver to Purchaser a certificate representing the Shares to be purchased by Purchaser (which shall be issued in Purchaser's name) against payment of the exercise price therefor by Purchaser by (a) check made payable to the Company, (b) cancellation of indebtedness of the Company to Purchaser, (c) delivery of shares of the Common Stock of the Company in accordance with Section 4 of the Option Agreement, or (d) by a combination of the foregoing.

3. **Limitations on Transfer.** In addition to any other limitation on transfer created by applicable securities laws, Purchaser shall not assign, encumber or dispose of any interest in the Shares except in compliance with the provisions below and applicable securities laws.

(a) **Right of First Refusal.** Before any Shares held by Purchaser or any transferee of Purchaser (either being sometimes referred to herein as the "Holder") may be sold or otherwise transferred (including transfer by gift or operation of law), the Company or its assignee(s) shall have a right of first refusal to purchase the Shares on the terms and conditions set forth in this Section 3(a) (the "Right of First Refusal").

(i) **Notice of Proposed Transfer.** The Holder of the Shares shall deliver to the Company a written notice (the "Notice") stating: (i) the Holder's bona fide intention to sell or otherwise transfer such Shares; (ii) the name of each proposed purchaser or other transferee ("Proposed Transferee"); (iii) the number of Shares to be transferred to each Proposed Transferee; and (iv) the terms and conditions of each proposed sale or transfer. The Holder shall offer the Shares at the same price (the "Offered Price") and upon the same terms (or terms as similar as reasonably possible) to the Company or its assignee(s).

(ii) **Exercise of Right of First Refusal.** At any time within thirty (30) days after receipt of the Notice, the Company and/or its assignee(s) may, by giving written notice to the Holder, elect to purchase all, but not less than all, of the Shares proposed to be transferred to any one or more of the Proposed Transferees, at the purchase price determined in accordance with subsection (iii) below.

(iii) **Purchase Price.** The purchase price ("Purchase Price") for the Shares purchased by the Company or its assignee(s) under this Section 3(a) shall be the Offered Price. If the Offered Price includes consideration other than cash, the cash equivalent value of the non-cash consideration shall be determined by the Board of Directors of the Company in good faith.

(iv) **Payment.** Payment of the Purchase Price shall be made, at the option of the Company or its assignee(s), in cash (by check), by cancellation of all or a portion of any outstanding indebtedness, or by any combination thereof within 30 days after receipt of the Notice or in the manner and at the times set forth in the Notice.

(v) **Holder's Right to Transfer.** If all of the Shares proposed in the Notice to be transferred to a given Proposed Transferee are not purchased by the Company and/or its assignee(s) as provided in this Section 3(a), then the Holder may sell or otherwise transfer such Shares to that Proposed Transferee at the Offered Price or at a higher price, provided that such sale or other transfer is consummated within 60 days after the date of the Notice and provided further that any such sale or other transfer is effected in accordance with any applicable securities laws and the Proposed Transferee agrees in writing that the provisions of this Section 3 shall continue to apply to the Shares in the hands of such Proposed Transferee. If the Shares described in the Notice are not transferred to the Proposed Transferee within such period, or if the Holder proposes to change the price or other terms to make them more favorable to the Proposed Transferee, a new Notice shall be given to the Company, and the Company and/or its assignees shall again be offered the Right of First Refusal before any Shares held by the Holder may be sold or otherwise transferred.

(vi) **Exception for Certain Family Transfers.** Anything to the contrary contained in this Section 3(a) notwithstanding, the transfer of any or all of the Shares during Purchaser's lifetime or on Purchaser's death by will or intestacy to Purchaser's Immediate Family or a trust for the benefit of Purchaser's Immediate Family shall be exempt from the provisions of this Section 3(a). "Immediate Family" as used herein shall mean spouse, lineal descendant or antecedent, father, mother, brother or sister. In such case, the transferee or other recipient shall receive and hold the Shares so transferred subject to the provisions of this Section, and there shall be no further transfer of such Shares except in accordance with the terms of this Section 3.

(b) **Involuntary Transfer.**

(i) **Company's Right to Purchase upon Involuntary Transfer.** In the event, at any time after the date of this Agreement, of any transfer by operation of law or other involuntary transfer (including death or divorce, but excluding a transfer to Immediate Family as set forth in Section 3(a)(vi) above) of all or a portion of the Shares by the record holder thereof, the Company shall have an option to purchase all of the Shares transferred at the greater of the purchase price paid by Purchaser pursuant to this Agreement or the Fair Market Value of the Shares on the date of transfer. Upon such a transfer, the person acquiring the Shares shall promptly notify the Secretary of the Company of such transfer. The right to purchase such Shares shall be provided to the Company for a period of thirty (30) days following receipt by the Company of written notice by the person acquiring the Shares.

(ii) **Price for Involuntary Transfer.** With respect to any stock to be transferred pursuant to Section 3(b)(i), the price per Share shall be a price set by the Board of Directors of the Company that will reflect the current value of the stock in terms of present earnings and future prospects of the Company. The Company shall notify Purchaser or his or her executor of the price so determined within thirty (30) days after receipt by it of written notice of the transfer or proposed transfer of Shares. However, if the Purchaser does not agree with the valuation as determined by the Board of Directors of the Company, the Purchaser shall be entitled to have the valuation determined by an independent appraiser to be mutually agreed upon by the Company and the Purchaser and whose fees shall be borne equally by the Company and the Purchaser.

(c) **Assignment.** The right of the Company to purchase any part of the Shares may be assigned in whole or in part to any shareholder or shareholders of the Company or other persons or organizations.

(e) **Restrictions Binding on Transferees.** All transferees of Shares or any interest therein will receive and hold such Shares or interest subject to the provisions of this Agreement. Any sale or transfer of the Company's Shares shall be void unless the provisions of this Agreement are satisfied.

(f) **Termination of Rights.** The right of first refusal granted the Company by Section 3(a) above and the option to repurchase the Shares in the event of an involuntary transfer granted the Company by Section 3(b) above shall terminate upon the first sale of Common Stock of the Company to the general public pursuant to a registration statement filed with and declared effective by the Securities and Exchange Commission under the Securities Act of 1933, as amended (the "Securities Act"). Upon termination of the right of first refusal described in Section 3(a) above, a new certificate or certificates representing the Shares not repurchased shall be issued, on request, without the legend referred to in Section 5(a)(ii) herein and delivered to Purchaser.

4. **Investment and Taxation Representations.** In connection with the purchase of the Shares, Purchaser represents to the Company the following:

(a) Purchaser is aware of the Company's business affairs and financial condition and has acquired sufficient information about the Company to reach an informed and knowledgeable decision to acquire the Shares. Purchaser is purchasing these securities for investment for his or her own account only and not with a view to, or for resale in connection with, any "distribution" thereof within the meaning of the Securities Act or under any applicable provision of state law. Purchaser does not have any present intention to transfer the Shares to any person or entity.

(b) Purchaser understands that the Shares have not been registered under the Securities Act by reason of a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of Purchaser's investment intent as expressed herein.

(c) Purchaser further acknowledges and understands that the securities must be held indefinitely unless they are subsequently registered under the Securities Act or an exemption from such registration is available. Purchaser further acknowledges and understands that the Company is under no obligation to register the securities. Purchaser understands that the certificate(s) evidencing the securities will be imprinted with a legend which prohibits the transfer of the securities unless they are registered or such registration is not required in the opinion of counsel for the Company.

(d) Purchaser is familiar with the provisions of Rules 144 and 701, each promulgated under the Securities Act, which, in substance, permit limited public resale of "restricted securities" acquired, directly or indirectly, from the issuer of the securities (or from an affiliate of such issuer), in a non-public offering subject to the satisfaction of certain conditions. Purchaser understands that the Company provides no assurances as to whether he or she will be able to resell any or all of the Shares pursuant to Rule 144 or Rule 701, which rules require, among other things, that the Company be subject to the reporting requirements of the Securities Exchange Act of 1934, as amended, that resales of securities take place only after the holder of the Shares has held the Shares for certain specified time periods, and under certain circumstances, that resales of securities be limited in volume and take place only pursuant to brokered transactions. Notwithstanding this paragraph (d), Purchaser acknowledges and agrees to the restrictions set forth in paragraph (e) below.

(e) Purchaser further understands that in the event all of the applicable requirements of Rule 144 or 701 are not satisfied, registration under the Securities Act, compliance with Regulation A, or some other registration exemption will be required; and that, notwithstanding the fact that Rules 144 and 701 are not exclusive, the Staff of the Securities and Exchange Commission has expressed its opinion that persons proposing to sell private placement securities other than in a registered offering and otherwise than pursuant to Rule 144 or 701 will have a substantial burden of proof in establishing that an exemption from registration is available for such offers or sales, and that such persons and their respective brokers who participate in such transactions do so at their own risk.

(f) Purchaser understands that Purchaser may suffer adverse tax consequences as a result of Purchaser's purchase or disposition of the Shares. Purchaser represents that Purchaser has consulted any tax consultants Purchaser deems advisable in connection with the purchase or disposition of the Shares and that Purchaser is not relying on the Company for any tax advice.

5. **Restrictive Legends and Stop-Transfer Orders.**

(a) **Legends.** The certificate or certificates representing the Shares shall bear the following legends (as well as any legends required by applicable state and federal corporate and securities laws):

(i) THE SHARES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933 OR APPLICABLE STATE SECURITIES LAWS, AND HAVE BEEN ACQUIRED FOR INVESTMENT AND NOT WITH A VIEW TO, OR IN CONNECTION WITH, THE SALE OR DISTRIBUTION THEREOF. NO SUCH SALE OR DISTRIBUTION MAY BE EFFECTED WITHOUT AN EFFECTIVE REGISTRATION STATEMENT RELATED THERETO OR AN OPINION OF COUNSEL FOR THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED UNDER THE SECURITIES ACT OF 1933 OR APPLICABLE STATE SECURITIES LAWS.

(ii) THE SHARES REPRESENTED BY THIS CERTIFICATE MAY BE TRANSFERRED ONLY IN ACCORDANCE WITH THE TERMS OF AN AGREEMENT BETWEEN THE COMPANY AND THE STOCKHOLDER, A COPY OF WHICH IS ON FILE WITH THE SECRETARY OF THE COMPANY.

(b) **Stop-Transfer Notices.** Purchaser agrees that, in order to ensure compliance with the restrictions referred to herein, the Company may issue appropriate "stop transfer" instructions to its transfer agent, if any, and that, if the Company transfers its own securities, it may make appropriate notations to the same effect in its own records.

(c) **Refusal to Transfer.** The Company shall not be required (i) to transfer on its books any Shares that have been sold or otherwise transferred in violation of any of the provisions of this Agreement or (ii) to treat as owner of such Shares or to accord the right to vote or pay dividends to any purchaser or other transferee to whom such Shares shall have been so transferred.

6. **No Employment Rights.** Nothing in this Agreement shall affect in any manner whatsoever the right or power of the Company, or a parent or subsidiary of the Company, to terminate Purchaser's employment or consulting relationship, for any reason, with or without cause.

7. **Lock-Up Agreement.** In connection with the initial public offering of the Company's securities and upon request of the Company or the underwriters managing any underwritten offering of the Company's securities, Purchaser agrees not to sell, make any short sale of, loan, grant any option for the purchase of, or otherwise dispose of any securities of the Company however or whenever acquired (other than those included in the registration) without the prior written consent of the Company or such underwriters, as the case may be, for such period of time (not to exceed 180 days) from the effective date of such registration as may be requested by the Company or such managing underwriters and to execute an agreement reflecting the foregoing as may be requested by the underwriters at the time of the public offering.

8. **Miscellaneous.**

(a) **Governing Law.** This Agreement and all acts and transactions pursuant hereto and the rights and obligations of the parties hereto shall be governed, construed and interpreted in accordance with the laws of the State of Delaware, without giving effect to principles of conflicts of law.

(b) **Entire Agreement; Enforcement of Rights.** This Agreement sets forth the entire agreement and understanding of the parties relating to the subject matter herein and merges all prior discussions between them. No modification of or amendment to this Agreement, nor any waiver of any rights under this Agreement, shall be effective unless in writing signed by the parties to this Agreement. The failure by either party to enforce any rights under this Agreement shall not be construed as a waiver of any rights of such party.

(c) **Severability.** If one or more provisions of this Agreement are held to be unenforceable under applicable law, the parties agree to renegotiate such provision in good faith. In the event that the parties cannot reach a mutually agreeable and enforceable replacement for such provision, then (i) such provision shall be excluded from this Agreement, (ii) the balance of the Agreement shall be interpreted as if such provision were so excluded and (iii) the balance of the Agreement shall be enforceable in accordance with its terms.

(d) **Construction.** This Agreement is the result of negotiations between and has been reviewed by each of the parties hereto and their respective counsel, if any; accordingly, this Agreement shall be deemed to be the product of all of the parties hereto, and no ambiguity shall be construed in favor of or against any one of the parties hereto.

(e) **Notices.** Any notice required or permitted by this Agreement shall be in writing and shall be deemed sufficient when delivered personally or sent by telegram or fax or forty-eight (48) hours after being deposited in the U.S. mail, as certified or registered mail, with postage prepaid, and addressed to the party to be notified at such party's address as set forth below or as subsequently modified by written notice.

(f) **Counterparts.** This Agreement may be executed in two or more counterparts, each of which shall be deemed an original and all of which together shall constitute one instrument.

(g) **Successors and Assigns.** The rights and benefits of this Agreement shall inure to the benefit of, and be enforceable by the Company's successors and assigns. The rights and obligations of Purchaser under this Agreement may only be assigned with the prior written consent of the Company.

(h) **California Corporate Securities Law. THE SALE OF THE SECURITIES WHICH ARE THE SUBJECT OF THIS AGREEMENT HAS NOT BEEN QUALIFIED WITH THE COMMISSIONER OF CORPORATIONS OF THE STATE OF CALIFORNIA AND THE ISSUANCE OF THE SECURITIES OR THE PAYMENT OR RECEIPT OF ANY PART OF THE CONSIDERATION THEREFOR PRIOR TO THE QUALIFICATION IS UNLAWFUL, UNLESS THE SALE OF SECURITIES IS EXEMPT FROM QUALIFICATION BY SECTION 25100, 25102 OR 25105 OF THE CALIFORNIA CORPORATIONS CODE. THE RIGHTS OF ALL PARTIES TO THIS AGREEMENT ARE EXPRESSLY CONDITIONED UPON THE QUALIFICATION BEING OBTAINED, UNLESS THE SALE IS SO EXEMPT.**

**[Signature Page Follows]**

The parties have executed this Exercise Notice and Restricted Stock Purchase Agreement as of the date first set forth above.

**COMPANY:**

**ACTINIUM PHARMACEUTICALS, INC.**

By: _____
Name: _____
Title: _____

**PURCHASER:**

«Optionee»

_____
(Signature)

Address: _____

_____

I, _____, spouse of «Optionee», have read and hereby approve the foregoing Agreement. In consideration of the Company's granting my spouse the right to purchase the Shares as set forth in the Agreement, I hereby agree to be irrevocably bound by the Agreement and further agree that any community property or other such interest shall hereby by similarly bound by the Agreement. I hereby appoint my spouse as my attorney-in-fact with respect to any amendment or exercise of any rights under the Agreement.

_____
Spouse of «Optionee»

**RECEIPT**

The undersigned hereby acknowledges receipt of Certificate No. _____ for _____ shares of Common Stock of Actinium Pharmaceuticals, Inc.

Dated: _____ _____

«Optionee»

**RECEIPT**

Actinium Pharmaceuticals, Inc. (the "Company") hereby acknowledges receipt of (check as applicable):

_____ A check in the amount of $_____

_____ The cancellation of indebtedness in the amount of $_____

_____ Certificate No. _____ representing _____ shares of the Company's Common Stock with a fair market value of $_____

given by «Optionee» as consideration for Certificate No. _____ for _____ shares of Common Stock of the Company.

Dated: _____

**ACTINIUM PHARMACEUTICALS, INC.**

By: _____

Name: _____
(print)

Title: _____

**ACTINIUM PHARMACEUTICALS, INC. AMENDED AND RESTATED 2013 EQUITY INCENTIVE PLAN**

1. Purpose; Eligibility.

1.1 General Purpose. The name of this plan is the Actinium Pharmaceuticals, Inc. 2013 Equity Incentive Plan (the "**Plan**"). The purposes of the Plan are to (a) enable Actinium Pharmaceuticals, Inc., a Delaware corporation (the "**Company**"), and any Affiliate to attract and retain the types of Employees, Consultants and Directors who will contribute to the Company's long range success; (b) provide incentives that align the interests of Employees, Consultants and Directors with those of the shareholders of the Company; and (c) promote the success of the Company's business.

1.2 Eligible Award Recipients. The persons eligible to receive Awards are the Employees, Consultants and Directors of the Company and its Affiliates and such other individuals designated by the Committee who are reasonably expected to become Employees, Consultants and Directors after the receipt of Awards.

1.3 Available Awards. Awards that may be granted under the Plan include: (a) Restricted Awards, (b) Performance Share Awards, and (c) Performance Compensation Awards.

2. Definitions.

"**Affiliate**" means a corporation or other entity that, directly or through one or more intermediaries, controls, is controlled by or is under common control with, the Company.

"**Applicable Laws**" means the requirements related to or implicated by the administration of the Plan under applicable state corporate law, United States federal and state securities laws, the Code, any stock exchange or quotation system on which the shares of Common Stock are listed or quoted, and the applicable laws of any foreign country or jurisdiction where Awards are granted under the Plan.

"**Award**" means any right granted under the Plan, including a Restricted Award, a Performance Share Award or a Performance Compensation Award.

"**Award Agreement**" means a written agreement, contract, certificate or other instrument or document evidencing the terms and conditions of an individual Award granted under the Plan which may, in the discretion of the Company, be transmitted electronically to any Participant. Each Award Agreement shall be subject to the terms and conditions of the Plan.

"**Beneficial Owner**" has the meaning assigned to such term in Rule 13d-3 and Rule 13d-5 under the Exchange Act, except that in calculating the beneficial ownership of any particular "person" (as that term is used in Section 13(d)(3) of the Exchange Act), such "person" shall be deemed to have beneficial ownership of all securities that such "person" has the right to acquire by conversion or exercise of other securities, whether such right is currently exercisable or is exercisable only after the passage of time. The terms "Beneficially Owns" and "Beneficially Owned" have a corresponding meaning.

"**Board**" means the Board of Directors of the Company, as constituted at any time.

"**Cause**" means:

With respect to any Employee or Consultant: (a) If the Employee or Consultant is a party to an employment or service agreement with the Company or its Affiliates and such agreement provides for a definition of Cause, the definition contained therein; or (b) If no such agreement exists, or if such agreement does not define Cause: (i) the commission of, or plea of guilty or no contest to, a felony or a crime involving moral turpitude or the commission of any other act involving willful malfeasance or material fiduciary breach with respect to the Company or an Affiliate; (ii) conduct that results in or is reasonably likely to result in harm to the reputation or business of the Company or any of its Affiliates; (iii) gross negligence or willful misconduct with respect to the Company or an Affiliate; or (iv) material violation of state or federal securities laws.

With respect to any Director, a determination by a majority of the disinterested Board members that the Director has engaged in any of the following: (a) malfeasance in office; (b) gross misconduct or neglect; (c) false or fraudulent misrepresentation inducing the director's appointment; (d) wilful conversion of corporate funds; or (e) repeated failure to participate in Board meetings on a regular basis despite having received proper notice of the meetings in advance.

The Committee, in its absolute discretion, shall determine the effect of all matters and questions relating to whether a Participant has been discharged for Cause.

"**Change in Control**" (a) The direct or indirect sale, transfer, conveyance or other disposition (other than by way of merger or consolidation), in one or a series of related transactions, of all or substantially all of the properties or assets of the Company and its subsidiaries, taken as a whole, to any Person that is not a subsidiary of the Company; (b) The Incumbent Directors cease for any reason to constitute at least a majority of the Board; (c) The date which is 10 business days prior to the consummation of a complete liquidation or dissolution of the Company; (d) The acquisition by any Person of Beneficial Ownership of 50% or more (on a fully diluted basis) of either (i) the then outstanding shares of Common Stock of the Company, taking into account as outstanding for this purpose such Common Stock issuable upon the exercise of options or warrants, the conversion of convertible stock or debt, and the exercise of any similar right to acquire such Common Stock (the "Outstanding Company Common Stock") or (ii) the combined voting power of the then outstanding voting securities of the Company entitled to vote generally in the election of directors (the "Outstanding Company Voting Securities"); provided, however, that for purposes of this Plan, the following acquisitions shall not constitute a Change in Control: (A) any acquisition by the Company or any Affiliate, (B) any acquisition by any employee benefit plan sponsored or maintained by the Company or any subsidiary, (C) any acquisition which complies with clauses, (i), (ii) and (iii) of subsection (e) of this definition or (D) in respect of an Award held by a particular Participant, any acquisition by the Participant or any group of persons including the Participant (or any entity controlled by the Participant or any group of persons including the Participant); or (e) The consummation of a reorganization, merger, consolidation, statutory share exchange or similar form of corporate transaction involving the Company that requires the approval of the Company's shareholders, whether for such transaction or the issuance of securities in the transaction (a "Business Combination"), unless immediately following such Business Combination: (i) more than 50% of the total voting power of (A) the entity resulting from such Business Combination (the "Surviving Company"), or (B) if applicable, the ultimate parent entity that directly or indirectly has beneficial ownership of sufficient voting securities eligible to elect a majority of the members of the board of directors (or the analogous governing body) of the Surviving Company (the "Parent Company"), is represented by the Outstanding Company Voting Securities that were outstanding immediately prior to such Business Combination (or, if applicable, is represented by shares into which the Outstanding Company Voting Securities were converted pursuant to such Business Combination), and such voting power among the holders thereof is in substantially the same proportion as the voting power of the Outstanding Company Voting Securities among the holders thereof immediately prior to the Business Combination; (ii) no Person (other than any employee benefit plan sponsored or maintained by the Surviving Company or the Parent Company) is or becomes the Beneficial Owner, directly or indirectly, of 50% or more of the total voting power of the outstanding voting securities eligible to elect members of the board of directors of the Parent Company (or the analogous governing body) (or, if there is no Parent Company, the Surviving Company); and (iii) at least a majority of the members of the board of directors (or the analogous governing body) of the Parent Company (or, if there is no Parent Company, the Surviving Company) following the consummation of the Business Combination were Board members at the time of the Board's approval of the execution of the initial agreement providing for such Business Combination.

"**Code**" means the Internal Revenue Code of 1986, as it may be amended from time to time. Any reference to a section of the Code shall be deemed to include a reference to any regulations promulgated thereunder.

"**Committee**" means a committee of one or more members of the Board appointed by the Board to administer the Plan in accordance with ***Section* 3.3** and ***Section* 3.4**.

"**Common Stock**" means the common stock, $0.001 par value per share, of the Company, or such other securities of the Company as may be designated by the Committee from time to time in substitution thereof.

"**Company**" means Actinium Pharmaceuticals, Inc. a Delaware corporation, and any successor thereto.

"**Consultant**" means any individual who is engaged by the Company or any Affiliate to render consulting or advisory services.

"**Continuous Service**" means that the Participant's service with the Company or an Affiliate, whether as an Employee, Consultant or Director, is not interrupted or terminated. The Participant's Continuous Service shall not be deemed to have terminated merely because of a change in the capacity in which the Participant renders service to the Company or an Affiliate as an Employee, Consultant or Director or a change in the entity for which the Participant renders such service, *provided that* there is no interruption or termination of the Participant's Continuous Service; *provided further that* if any Award is subject to Section 409A of the Code, this sentence shall only be given effect to the extent consistent with Section 409A of the Code. For example, a change in status from an Employee of the Company to a Director of an Affiliate will not constitute an interruption of Continuous Service. The Committee or its delegate, in its sole discretion, may determine whether Continuous Service shall be considered interrupted in the case of any leave of absence approved by that party, including sick leave, military leave or any other personal or family leave of absence.

"**Covered Employee**" has the same meaning as set forth in Section 162(m)(3) of the Code, as interpreted by ***Internal Revenue Service (www.practicallaw.com/0-382-3556)*** Notice 2007-49.

"**Director**" means a member of the Board.

"**Effective Date**" shall mean the date as of which this Plan is adopted by the Board.

"**Employee**" means any person, including an Officer or Director, employed by the Company or an Affiliate. Mere service as a Director or payment of a director's fee by the Company or an Affiliate shall not be sufficient to constitute "employment" by the Company or an Affiliate.

"**Exchange Act**" means the Securities Exchange Act of 1934, as amended.

"**Fair Market Value**" means, as of any date, the value of the Common Stock as determined below. If the Common Stock is listed on any established stock exchange or a national market system, including without limitation, the OTCBB, the New York Stock Exchange or the NASDAQ Stock Market, the Fair Market Value shall be the closing price of a share of Common Stock (or if no sales were reported the closing price on the date immediately preceding such date) as quoted on such exchange or system on the day of determination, as reported in the *Wall Street Journal* or such other source as the Committee deems reliable. In the absence of an established market for the Common Stock, the Fair Market Value shall be determined in good faith by the Committee and such determination shall be conclusive and binding on all persons.

"**Grant Date**" means the date on which the Committee adopts a resolution, or takes other appropriate action, expressly granting an Award to a Participant that specifies the key terms and conditions of the Award or, if a later date is set forth in such resolution, then such date as is set forth in such resolution.

"**Incumbent Directors**" means individuals who, on the Effective Date, constitute the Board, *provided that* any individual becoming a Director subsequent to the Effective Date whose election or nomination for election to the Board was approved by a vote of at least two-thirds of the Incumbent Directors then on the Board (either by a specific vote or by approval of the proxy statement of the Company in which such person is named as a nominee for Director without objection to such nomination) shall be an Incumbent Director. No individual initially elected or nominated as a director of the Company as a result of an actual or threatened election contest with respect to Directors or as a result of any other actual or threatened solicitation of proxies by or on behalf of any person other than the Board shall be an Incumbent Director.

"**Negative Discretion**" means the discretion authorized by the Plan to be applied by the Committee to eliminate or reduce the size of a Performance Compensation Award in accordance with Section 7.4(d)(iv) of the Plan; *provided*, *that*, the exercise of such discretion would not cause the Performance Compensation Award to fail to qualify as "performance-based compensation" under Section 162(m) of the Code.

"**Non-Employee Director**" means a Director who is a "non-employee director" within the meaning of Rule 16b-3.

"**Officer**" means a person who is an officer of the Company within the meaning of Section 16 of the Exchange Act and the rules and regulations promulgated thereunder.

"**Outside Director**" means a Director who is an "outside director" within the meaning of Section 162(m) of the Code and Treasury Regulations Section 1.162-27(e)(3) or any successor to such statute and regulation.

"**Participant**" means an eligible person to whom an Award is granted pursuant to the Plan or, if applicable, such other person who holds an outstanding Award.

"**Performance Compensation Award**" means any Award designated by the Committee as a Performance Compensation Award pursuant to Section 7.4 of the Plan.

"**Performance Criteria**" means the criterion or criteria that the Committee shall select for purposes of establishing the Performance Goal(s) for a Performance Period with respect to any Performance Compensation Award under the Plan. The Performance Criteria that will be used to establish the Performance Goal(s) shall be based on the attainment of specific levels of performance of the Company (or Affiliate, division, business unit or operational unit of the Company) and shall be limited to the following: (a) net earnings or net income (before or after taxes); (b) basic or diluted earnings per share (before or after taxes); (c) net revenue or net revenue growth; (d) gross revenue; (e) gross profit or gross profit growth; (f) net operating profit (before or after taxes); (g) return on assets, capital, invested capital, equity, or sales; (h) cash flow (including, but not limited to, operating cash flow, free cash flow, and cash flow return on capital); (i) earnings before or after taxes, interest, depreciation and/or amortization; (j) gross or operating margins; (k) improvements in capital structure; (l) budget and expense management; (m) productivity ratios; (n) economic value added or other value added measurements; (o) share price (including, but not limited to, growth measures and total shareholder return); (p) expense targets; (q) margins; (r) operating efficiency; (s) working capital targets; (t) enterprise value; (u) safety record; and (v) completion of acquisitions or business expansion.

Any one or more of the Performance Criteria may be used on an absolute or relative basis to measure the performance of the Company and/or an Affiliate as a whole or any division, business unit or operational unit of the Company and/or an Affiliate or any combination thereof, as the Committee may deem appropriate, or as compared to the performance of a group of comparable companies, or published or special index that the Committee, in its sole discretion, deems appropriate, or the Committee may select Performance Criterion (o) above as compared to various stock market indices. The Committee also has the authority to provide for accelerated vesting of any Award based on the achievement of Performance Goals pursuant to the Performance Criteria specified in this paragraph. To the extent required under Section 162(m) of the Code, the Committee shall, within the first 90 days of a Performance Period (or, if longer or shorter, within the maximum period allowed under Section 162(m) of the Code), define in an objective fashion the manner of calculating the Performance Criteria it selects to use for such Performance Period. In the event that applicable tax and/or securities laws change to permit the Committee discretion to alter the governing Performance Criteria without obtaining shareholder approval of such changes, the Committee shall have sole discretion to make such changes without obtaining shareholder approval.

"**Performance Formula**" means, for a Performance Period, the one or more objective formulas applied against the relevant Performance Goal to determine, with regard to the Performance Compensation Award of a particular Participant, whether all, some portion but less than all, or none of the Performance Compensation Award has been earned for the Performance Period.

"**Performance Goals**" means, for a Performance Period, the one or more goals established by the Committee for the Performance Period based upon the Performance Criteria. The Committee is authorized at any time during the first 90 days of a Performance Period (or, if longer or shorter, within the maximum period allowed under Section 162(m) of the Code), or at any time thereafter (but only to the extent the exercise of such authority after such period would not cause the Performance Compensation Awards granted to any Participant for the Performance Period to fail to qualify as "performance-based compensation" under Section 162(m) of the Code), in its sole and absolute discretion, to adjust or modify the calculation of a Performance Goal for such Performance Period to the extent permitted under Section 162(m) of the Code in order to prevent the dilution or enlargement of the rights of Participants based on the following events: (a) asset write-downs; (b) litigation or claim judgments or settlements; (c) the effect of changes in tax laws, accounting principles, or other laws or regulatory rules affecting reported results; (d) any reorganization and restructuring programs; (e) extraordinary nonrecurring items as described in Accounting Principles Board Opinion No. 30 (or any successor or pronouncement thereto) and/or in management's discussion and analysis of financial condition and results of operations appearing in the Company's annual report to shareholders for the applicable year; (f) acquisitions or divestitures; (g) any other specific unusual or nonrecurring events, or objectively determinable category thereof; (h) foreign exchange gains and losses; and (i) a change in the Company's fiscal year.

"**Performance Period**" means the one or more periods of time not less than one fiscal quarter in duration, as the Committee may select, over which the attainment of one or more Performance Goals will be measured for the purpose of determining a Participant's right to and the payment of a Performance Compensation Award.

"**Performance Share Award**" means any Award granted pursuant to **Section 7.3** hereof.

"**Performance Share**" means the grant of a right to receive a number of actual shares of Common Stock or share units based upon the performance of the Company during a Performance Period, as determined by the Committee.

"**Plan**" means this Actinium Pharmaceuticals, Inc. 2013 Equity Incentive Plan, as amended and/or amended and restated from time to time.

"**Restricted Award**" means any Award granted pursuant to ***Section* 7.2(a)**.

"**Restricted Period**" has the meaning set forth in ***Section* 7.2(a)**.

"**Rule 16b-3**" means Rule 16b-3 promulgated under the Exchange Act or any successor to Rule 16b-3, as in effect from time to time.

"**Securities Act**" means the Securities Act of 1933, as amended.

3. Administration.

3.1 Authority of Committee. The Plan shall be administered by the Committee or, in the Board's sole discretion, by the Board. Subject to the terms of the Plan, the Committee's charter and Applicable Laws, and in addition to other express powers and authorization conferred by the Plan, the Committee shall have the authority:

(a) to construe and interpret the Plan and apply its provisions;

(b) to promulgate, amend, and rescind rules and regulations relating to the administration of the Plan;

(c) to authorize any person to execute, on behalf of the Company, any instrument required to carry out the purposes of the Plan;

(d) to delegate its authority to one or more Officers of the Company with respect to Awards that do not involve Covered Employees or "insiders" within the meaning of Section 16 of the Exchange Act;

(e) to determine when Awards are to be granted under the Plan and the applicable Grant Date;

(f) from time to time to select, subject to the limitations set forth in this Plan, those Participants to whom Awards shall be granted;

(g) to determine the number of shares of Common Stock to be made subject to each Award;

(h) to prescribe the terms and conditions of each Award, including, without limitation, the exercise price and medium of payment and vesting provisions, and to specify the provisions of the Award Agreement relating to such grant;

(i) to determine the target number of Performance Shares to be granted pursuant to a Performance Share Award, the performance measures that will be used to establish the performance goals, the performance period(s) and the number of Performance Shares earned by a Participant;

(j) to designate an Award (including a cash bonus) as a Performance Compensation Award and to select the Performance Criteria that will be used to establish the Performance Goals;

(k) to amend any outstanding Awards, including for the purpose of modifying the time or manner of vesting, or the term of any outstanding Award; *provided, however*, that if any such amendment impairs a Participant's rights or increases a Participant's obligations under his or her Award or creates or increases a Participant's federal income tax liability with respect to an Award, such amendment shall also be subject to the Participant's consent;

(l) to determine the duration and purpose of leaves of absences which may be granted to a Participant without constituting termination of their employment for purposes of the Plan, which periods shall be no shorter than the periods generally applicable to Employees under the Company's employment policies;

(m) to make decisions with respect to outstanding Awards that may become necessary upon a change in corporate control or an event that triggers anti-dilution adjustments;

(n) to interpret, administer, reconcile any inconsistency in, correct any defect in and/or supply any omission in the Plan and any instrument or agreement relating to, or Award granted under, the Plan; and

(o) to exercise discretion to make any and all other determinations which it determines to be necessary or advisable for the administration of the Plan.

The Committee also may modify the purchase price or the exercise price of any outstanding Award, *provided that* if the modification effects a repricing, shareholder approval shall be required before the repricing is effective.

3.2 Committee Decisions Final. All decisions made by the Committee pursuant to the provisions of the Plan shall be final and binding on the Company and the Participants, unless such decisions are determined by a court having jurisdiction to be arbitrary and capricious.

3.3 Delegation. The Committee, or if no Committee has been appointed, the Board, may delegate administration of the Plan to a committee or committees of one or more members of the Board, and the term "**Committee**" shall apply to any person or persons to whom such authority has been delegated. The Committee shall have the power to delegate to a subcommittee any of the administrative powers the Committee is authorized to exercise (and references in this Plan to the Board or the Committee shall thereafter be to the committee or subcommittee), subject, however, to such resolutions, not inconsistent with the provisions of the Plan, as may be adopted from time to time by the Board. The Board may abolish the Committee at any time and revest in the Board the administration of the Plan. The members of the Committee shall be appointed by and serve at the pleasure of the Board. From time to time, the Board may increase or decrease the size of the Committee, add additional members to, remove members (with or without cause) from, appoint new members in substitution therefor, and fill vacancies, however caused, in the Committee. The Committee shall act pursuant to a vote of the majority of its members or, in the case of a Committee comprised of only two members, the unanimous consent of its members, whether present or not, or by the written consent of the majority of its members and minutes shall be kept of all of its meetings and copies thereof shall be provided to the Board. Subject to the limitations prescribed by the Plan and the Board, the Committee may establish and follow such rules and regulations for the conduct of its business as it may determine to be advisable.

3.4 Committee Composition. Except as otherwise determined by the Board, the Committee shall consist solely of two or more Non-Employee Directors who are also Outside Directors. The Board shall have discretion to determine whether or not it intends to comply with the exemption requirements of Rule 16b-3 and/or Section 162(m) of the Code. However, if the Board intends to satisfy such exemption requirements, with respect to Awards to any Covered Employee and with respect to any insider subject to Section 16 of the Exchange Act, the Committee shall be a compensation committee of the Board that at all times consists solely of two or more Non-Employee Directors who are also Outside Directors. Within the scope of such authority, the Board or the Committee may (a) delegate to a committee of one or more members of the Board who are not Outside Directors the authority to grant Awards to eligible persons who are either (i) not then Covered Employees and are not expected to be Covered Employees at the time of recognition of income resulting from such Award or (ii) not persons with respect to whom the Company wishes to comply with Section 162(m) of the Code or (b) delegate to a committee of one or more members of the Board who are not Non-Employee Directors the authority to grant Awards to eligible persons who are not then subject to Section 16 of the Exchange Act. Nothing herein shall create an inference that an Award is not validly granted under the Plan in the event Awards are granted under the Plan by a compensation committee of the Board that does not at all times consist solely of two or more Non-Employee Directors who are also Outside Directors.

3.5 Indemnification. In addition to such other rights of indemnification as they may have as Directors or members of the Committee, and to the extent allowed by Applicable Laws, the Committee shall be indemnified by the Company against the reasonable expenses, including attorney's fees, actually incurred in connection with any action, suit or proceeding or in connection with any appeal therein, to which the Committee may be party by reason of any action taken or failure to act under or in connection with the Plan or any Award granted under the Plan, and against all amounts paid by the Committee in settlement thereof (*provided, however*, that the settlement has been approved by the Company, which approval shall not be unreasonably withheld) or paid by the Committee in satisfaction of a judgment in any such action, suit or proceeding, except in relation to matters as to which it shall be adjudged in such action, suit or proceeding that such Committee did not act in good faith and in a manner which such person reasonably believed to be in the best interests of the Company, or in the case of a criminal proceeding, had no reason to believe that the conduct complained of was unlawful; *provided, however*, that within 60 days after institution of any such action, suit or proceeding, such Committee shall, in writing, offer the Company the opportunity at its own expense to handle and defend such action, suit or proceeding.

4. Shares Subject to the Plan.

4.1 Subject to adjustment in accordance with ***Section* 11**, a total of 1,000,000 shares of Common Stock shall be available for the grant of Awards under the Plan. During the terms of the Awards, the Company shall keep available at all times the number of shares of Common Stock required to satisfy such Awards.

4.2 Shares of Common Stock available for distribution under the Plan may consist, in whole or in part, of authorized and unissued shares, treasury shares or shares reacquired by the Company in any manner.

4.3 Any shares of Common Stock subject to an Award that is canceled, forfeited or expires prior to exercise or realization, either in full or in part, shall again become available for issuance under the Plan. Notwithstanding anything to the contrary contained herein: shares subject to an Award under the Plan shall not again be made available for issuance or delivery under the Plan if such shares are delivered or withheld by the Company to satisfy any tax withholding obligation.

5. Eligibility.

5.1 Eligibility for Specific Awards. Awards may be granted to Employees, Consultants and Directors and those individuals whom the Committee determines are reasonably expected to become Employees, Consultants and Directors following the Grant Date.

6. Intentionally left blank.

7. Provisions of Awards.

7.1 Intentionally left blank.

7.2 Restricted Awards.

(a) **General**

A Restricted Award is an Award of actual shares of Common Stock ("**Restricted Stock**") or hypothetical Common Stock units ("**Restricted Stock Units**") having a value equal to the Fair Market Value of an identical number of shares of Common Stock, which may, but need not, provide that such Restricted Award may not be sold, assigned, transferred or otherwise disposed of, pledged or hypothecated as collateral for a loan or as security for the performance of any obligation or for any other purpose for such period (the "**Restricted Period**") as the Committee shall determine. Each Restricted Award granted under the Plan shall be evidenced by an Award Agreement. Each Restricted Award so granted shall be subject to the conditions set forth in this Section 7.2, and to such other conditions not inconsistent with the Plan as may be reflected in the applicable Award Agreement.

(b) **Restricted Stock and Restricted Stock Units**

(i) Each Participant granted Restricted Stock shall execute and deliver to the Company an Award Agreement with respect to the Restricted Stock setting forth the restrictions and other terms and conditions applicable to such Restricted Stock. If the Committee determines that the Restricted Stock shall be held by the Company or in escrow rather than delivered to the Participant pending the release of the applicable restrictions, the Committee may require the Participant to additionally execute and deliver to the Company (A) an escrow agreement satisfactory to the Committee, if applicable and (B) the appropriate blank stock power with respect to the Restricted Stock covered by such agreement. If a Participant fails to execute an agreement evidencing an Award of Restricted Stock and, if applicable, an escrow agreement and stock power, the Award shall be null and void. Subject to the restrictions set forth in the Award, the Participant generally shall have the rights and privileges of a shareholder as to such Restricted Stock, including the right to vote such Restricted Stock and the right to receive dividends; *provided that*, any cash dividends and stock dividends with respect to the Restricted Stock shall be withheld by the Company for the Participant's account, and interest may be credited on the amount of the cash dividends withheld at a rate and subject to such terms as determined by the Committee. The cash dividends or stock dividends so withheld by the Committee and attributable to any particular share of Restricted Stock (and earnings thereon, if applicable) shall be distributed to the Participant in cash or, at the discretion of the Committee, in shares of Common Stock having a Fair Market Value equal to the amount of such dividends, if applicable, upon the release of restrictions on such share and, if such share is forfeited, the Participant shall have no right to such dividends.

(ii) The terms and conditions of a grant of Restricted Stock Units shall be reflected in an Award Agreement. No shares of Common Stock shall be issued at the time a Restricted Stock Unit is granted, and the Company will not be required to set aside a fund for the payment of any such Award. A Participant shall have no voting rights with respect to any Restricted Stock Units granted hereunder. At the discretion of the Committee, each Restricted Stock Unit (representing one share of Common Stock) may be credited with cash and stock dividends paid by the Company in respect of one share of Common Stock ("**Dividend Equivalents**"). Dividend Equivalents shall be withheld by the Company for the Participant's account, and interest may be credited on the amount of cash Dividend Equivalents withheld at a rate and subject to such terms as determined by the Committee. Dividend Equivalents credited to a Participant's account and attributable to any particular Restricted Stock Unit (and earnings thereon, if applicable) shall be distributed in cash or, at the discretion of the Committee, in shares of Common Stock having a Fair Market Value equal to the amount of such Dividend Equivalents and earnings, if applicable, to the Participant upon settlement of such Restricted Stock Unit and, if such Restricted Stock Unit is forfeited, the Participant shall have no right to such Dividend Equivalents.

(c) **Restrictions**

(i) Restricted Stock awarded to a Participant shall be subject to the following restrictions until the expiration of the Restricted Period, and to such other terms and conditions as may be set forth in the applicable Award Agreement: (A) if an escrow arrangement is used, the Participant shall not be entitled to delivery of the stock certificate; (B) the shares shall be subject to the restrictions on transferability set forth in the Award Agreement; (C) the shares shall be subject to forfeiture to the extent provided in the applicable Award Agreement; and (D) to the extent such shares are forfeited, the stock certificates shall be returned to the Company, and all rights of the Participant to such shares and as a shareholder with respect to such shares shall terminate without further obligation on the part of the Company.

(ii) Restricted Stock Units awarded to any Participant shall be subject to (A) forfeiture until the expiration of the Restricted Period, and satisfaction of any applicable Performance Goals during such period, to the extent provided in the applicable Award Agreement, and to the extent such Restricted Stock Units are forfeited, all rights of the Participant to such Restricted Stock Units shall terminate without further obligation on the part of the Company and (B) such other terms and conditions as may be set forth in the applicable Award Agreement.

(iii) The Committee shall have the authority to remove any or all of the restrictions on the Restricted Stock and Restricted Stock Units whenever it may determine that, by reason of changes in Applicable Laws or other changes in circumstances arising after the date the Restricted Stock or Restricted Stock Units are granted, such action is appropriate.

(d) **Restricted Period**

With respect to Restricted Awards, the Restricted Period shall commence on the Grant Date and end at the time or times set forth on a schedule established by the Committee in the applicable Award Agreement.

No Restricted Award may be granted or settled for a fraction of a share of Common Stock. The Committee may, but shall not be required to, provide for an acceleration of vesting in the terms of any Award Agreement upon the occurrence of a specified event.

(e) **Delivery of Restricted Stock and Settlement of Restricted Stock Units**

Upon the expiration of the Restricted Period with respect to any shares of Restricted Stock, the restrictions set forth in ***Section* 7.2(c)** and the applicable Award Agreement shall be of no further force or effect with respect to such shares, except as set forth in the applicable Award Agreement. If an escrow arrangement is used, upon such expiration, the Company shall deliver to the Participant, or his or her beneficiary, without charge, the stock certificate evidencing the shares of Restricted Stock which have not then been forfeited and with respect to which the Restricted Period has expired (to the nearest full share) and any cash dividends or stock dividends credited to the Participant's account with respect to such Restricted Stock and the interest thereon, if any. Upon the expiration of the Restricted Period with respect to any outstanding Restricted Stock Units, the Company shall deliver to the Participant, or his or her beneficiary, without charge, one share of Common Stock for each such outstanding Restricted Stock Unit ("**Vested Unit**") and cash equal to any Dividend Equivalents credited with respect to each such Vested Unit in accordance with ***Section* 7.2(b)(ii)** hereof and the interest thereon or, at the discretion of the Committee, in shares of Common Stock having a Fair Market Value equal to such Dividend Equivalents and the interest thereon, if any; *provided, however*, that, if explicitly provided in the applicable Award Agreement, the Committee may, in its sole discretion, elect to pay cash or part cash and part Common Stock in lieu of delivering only shares of Common Stock for Vested Units. If a cash payment is made in lieu of delivering shares of Common Stock, the amount of such payment shall be equal to the Fair Market Value of the Common Stock as of the date on which the Restricted Period lapsed with respect to each Vested Unit.

(f) **Stock Restrictions**

Each certificate representing Restricted Stock awarded under the Plan shall bear a legend in such form as the Company deems appropriate.

7.3 Performance Share Awards.

(a) **Grant of Performance Share Awards**

Each Performance Share Award granted under the Plan shall be evidenced by an Award Agreement. Each Performance Share Award so granted shall be subject to the conditions set forth in this Section 7.3, and to such other conditions not inconsistent with the Plan as may be reflected in the applicable Award Agreement. The Committee shall have the discretion to determine: (i) the number of shares of Common Stock or stock-denominated units subject to a Performance Share Award granted to any Participant; (ii) the performance period applicable to any Award; (iii) the conditions that must be satisfied for a Participant to earn an Award; and (iv) the other terms, conditions and restrictions of the Award.

(b) **Earning Performance Share Awards**

The number of Performance Shares earned by a Participant will depend on the extent to which the performance goals established by the Committee are attained within the applicable Performance Period, as determined by the Committee. No payout shall be made with respect to any Performance Share Award except upon written certification by the Committee that the minimum threshold performance goal(s) have been achieved.

7.4 Performance Compensation Awards.

(a) **General**

The Committee shall have the authority, at the time of grant of any Award described in this Plan, to designate such Award as a Performance Compensation Award in order to qualify such Award as "performance-based compensation" under Section 162(m) of the Code. In addition, the Committee shall have the authority to make an Award of a cash bonus to any Participant and designate such Award as a Performance Compensation Award in order to qualify such Award as "performance-based compensation" under Section 162(m) of the Code.

(b) **Eligibility**

The Committee will, in its sole discretion, designate within the first 90 days of a Performance Period (or, if longer or shorter, within the maximum period allowed under Section 162(m) of the Code) which Participants will be eligible to receive Performance Compensation Awards in respect of such Performance Period. However, designation of a Participant eligible to receive an Award hereunder for a Performance Period shall not in any manner entitle the Participant to receive payment in respect of any Performance Compensation Award for such Performance Period. The determination as to whether or not such Participant becomes entitled to payment in respect of any Performance Compensation Award shall be decided solely in accordance with the provisions of this Section 7.4. Moreover, designation of a Participant eligible to receive an Award hereunder for a particular Performance Period shall not require designation of such Participant eligible to receive an Award hereunder in any subsequent Performance Period and designation of one person as a Participant eligible to receive an Award hereunder shall not require designation of any other person as a Participant eligible to receive an Award hereunder in such period or in any other period.

(c) **Discretion of Committee with Respect to Performance Compensation Awards**

With regard to a particular Performance Period, the Committee shall have full discretion to select the length of such Performance Period (provided any such Performance Period shall be not less than one fiscal quarter in duration), the type(s) of Performance Compensation Awards to be issued, the Performance Criteria that will be used to establish the Performance Goal(s), the kind(s) and/or level(s) of the Performance Goal(s) that is (are) to apply to the Company and the Performance Formula. Within the first 90 days of a Performance Period (or, if longer or shorter, within the maximum period allowed under Section 162(m) of the Code), the Committee shall, with regard to the Performance Compensation Awards to be issued for such Performance Period, exercise its discretion with respect to each of the matters enumerated in the immediately preceding sentence of this Section 7.4(c) and record the same in writing.

(d) **Payment of Performance Compensation Awards**

(i) Condition to Receipt of Payment

Unless otherwise provided in the applicable Award Agreement, a Participant must be employed by the Company on the last day of a Performance Period to be eligible for payment in respect of a Performance Compensation Award for such Performance Period.

(ii) Limitation

A Participant shall be eligible to receive payment in respect of a Performance Compensation Award only to the extent that: (A) the Performance Goals for such period are achieved; and (B) the Performance Formula as applied against such Performance Goals determines that all or some portion of such Participant's Performance Compensation Award has been earned for the Performance Period.

(iii) Certification

Following the completion of a Performance Period, the Committee shall review and certify in writing whether, and to what extent, the Performance Goals for the Performance Period have been achieved and, if so, calculate and certify in writing the amount of the Performance Compensation Awards earned for the period based upon the Performance Formula. The Committee shall then determine the actual size of each Participant's Performance Compensation Award for the Performance Period and, in so doing, may apply Negative Discretion in accordance with Section 7.4(d)(iv) hereof, if and when it deems appropriate.

(iv) Use of Discretion

In determining the actual size of an individual Performance Compensation Award for a Performance Period, the Committee may reduce or eliminate the amount of the Performance Compensation Award earned under the Performance Formula in the Performance Period through the use of Negative Discretion if, in its sole judgment, such reduction or elimination is appropriate. The Committee shall not have the discretion to (A) grant or provide payment in respect of Performance Compensation Awards for a Performance Period if the Performance Goals for such Performance Period have not been attained or (B) increase a Performance Compensation Award above the maximum amount payable under Section 7.4(d)(vi) of the Plan.

(v) Timing of Award Payments

Performance Compensation Awards granted for a Performance Period shall be paid to Participants as soon as administratively practicable following completion of the certifications required by this Section 7.4 but in no event later than 2 1/2 months following the end of the fiscal year during which the Performance Period is completed.

(vi) Maximum Award Payable

Notwithstanding any provision contained in this Plan to the contrary, the maximum Performance Compensation Award payable to any one Participant under the Plan for a Performance Period is 1,000,000 shares of Common Stock or, in the event such Performance Compensation Award is paid in cash, the equivalent cash value thereof on the first or last day of the Performance Period to which such Award relates, as determined by the Committee. The maximum amount that can be paid in any calendar year to any Participant pursuant to a cash bonus Award described in the last sentence of ***Section* 7.4(a)** shall be $150,000. Furthermore, any Performance Compensation Award that has been deferred shall not (between the date as of which the Award is deferred and the payment date) increase (A) with respect to a Performance Compensation Award that is payable in cash, by a measuring factor for each fiscal year greater than a reasonable rate of interest set by the Committee or (B) with respect to a Performance Compensation Award that is payable in shares of Common Stock, by an amount greater than the appreciation of a share of Common Stock from the date such Award is deferred to the payment date.

8. Securities Law Compliance. Each Award Agreement shall provide that no shares of Common Stock shall be purchased or sold thereunder unless and until (a) any then applicable requirements of state or federal laws and regulatory agencies have been fully complied with to the satisfaction of the Company and its counsel and (b) if required to do so by the Company, the Participant has executed and delivered to the Company a letter of investment intent in such form and containing such provisions as the Committee may require. The Company shall use reasonable efforts to seek to obtain from each regulatory commission or agency having jurisdiction over the Plan such authority as may be required to grant Awards and to issue and sell shares of Common Stock upon exercise of the Awards; *provided, however*, that this undertaking shall not require the Company to register under the Securities Act the Plan, any Award or any Common Stock issued or issuable pursuant to any such Award. If, after reasonable efforts, the Company is unable to obtain from any such regulatory commission or agency the authority which counsel for the Company deems necessary for the lawful issuance and sale of Common Stock under the Plan, the Company shall be relieved from any liability for failure to issue and sell Common Stock upon exercise of such Awards unless and until such authority is obtained.

9. Use of Proceeds from Stock. Proceeds from the sale of Common Stock pursuant to Awards, or upon exercise thereof, shall constitute general funds of the Company.

10. Miscellaneous.

10.1 Acceleration of Exercisability and Vesting. The Committee shall have the power to accelerate the time at which an Award may first be exercised or the time during which an Award or any part thereof will vest in accordance with the Plan, notwithstanding the provisions in the Award stating the time at which it may first be exercised or the time during which it will vest.

10.2 Shareholder Rights. Except as provided in the Plan or an Award Agreement, no Participant shall be deemed to be the holder of, or to have any of the rights of a holder with respect to, any shares of Common Stock subject to such Award unless and until such Participant has satisfied all requirements for exercise of the Award pursuant to its terms and no adjustment shall be made for dividends (ordinary or extraordinary, whether in cash, securities or other property) or distributions of other rights for which the record date is prior to the date such Common Stock certificate is issued, except as provided in ***Section* 11** hereof.

10.3 No Employment or Other Service Rights. Nothing in the Plan or any instrument executed or Award granted pursuant thereto shall confer upon any Participant any right to continue to serve the Company or an Affiliate in the capacity in effect at the time the Award was granted or shall affect the right of the Company or an Affiliate to terminate (a) the employment of an Employee with or without notice and with or without Cause or (b) the service of a Director pursuant to the By-laws of the Company or an Affiliate, and any applicable provisions of the corporate law of the state in which the Company or the Affiliate is incorporated, as the case may be.

10.4 Transfer; Approved Leave of Absence. For purposes of the Plan, no termination of employment by an Employee shall be deemed to result from either (a) a transfer to the employment of the Company from an Affiliate or from the Company to an Affiliate, or from one Affiliate to another, or (b) an approved leave of absence for military service or sickness, or for any other purpose approved by the Company, if the Employee's right to reemployment is guaranteed either by a statute or by contract or under the policy pursuant to which the leave of absence was granted or if the Committee otherwise so provides in writing, in either case, except to the extent inconsistent with Section 409A of the Code if the applicable Award is subject thereto.

10.5 Withholding Obligations. To the extent provided by the terms of an Award Agreement and subject to the discretion of the Committee, the Participant may satisfy any federal, state or local tax withholding obligation relating to the exercise or acquisition of Common Stock under an Award by any of the following means (in addition to the Company's right to withhold from any compensation paid to the Participant by the Company) or by a combination of such means: (a) tendering a cash payment; (b) authorizing the Company to withhold shares of Common Stock from the shares of Common Stock otherwise issuable to the Participant as a result of the exercise or acquisition of Common Stock under the Award, *provided, however*, that no shares of Common Stock are withheld with a value exceeding the minimum amount of tax required to be withheld by law; or (c) delivering to the Company previously owned and unencumbered shares of Common Stock of the Company.

11. Adjustments Upon Changes in Stock. In the event of changes in the outstanding Common Stock or in the capital structure of the Company by reason of any stock or extraordinary cash dividend, stock split, reverse stock split, an extraordinary corporate transaction such as any recapitalization, reorganization, merger, consolidation, combination, exchange, or other relevant change in capitalization occurring after the Grant Date of any Award, Awards granted under the Plan and any Award Agreements, the maximum number of shares of Common Stock subject to all Awards stated in ***Section* 4** and the maximum number of shares of Common Stock with respect to which any one person may be granted Awards during any period stated in ***Section* 4** and Section 7.4(d)(vi) will be equitably adjusted or substituted, as to the number, price or kind of a share of Common Stock or other consideration subject to such Awards to the extent necessary to preserve the economic intent of such Award. Any adjustments made under this Section 11 shall be made in a manner which does not adversely affect the exemption provided pursuant to Rule 16b-3 under the Exchange Act. Further, with respect to Awards intended to qualify as "performance-based compensation" under Section 162(m) of the Code, any adjustments or substitutions will not cause the Company to be denied a tax deduction on account of Section 162(m) of the Code. The Company shall give each Participant notice of an adjustment hereunder and, upon notice, such adjustment shall be conclusive and binding for all purposes.

12. Effect of Change in Control.

12.1 Unless otherwise provided in an Award Agreement, notwithstanding any provision of the Plan to the contrary:

(a) With respect to Performance Compensation Awards, in the event of a Change in Control, all incomplete Performance Periods in respect of such Award in effect on the date the Change in Control occurs shall end on the date of such change and the Committee shall (i) determine the extent to which Performance Goals with respect to each such Performance Period have been met based upon such audited or unaudited financial information then available as it deems relevant and (ii) cause to be paid to the applicable Participant partial or full Awards with respect to Performance Goals for each such Performance Period based upon the Committee's determination of the degree of attainment of Performance Goals or, if not determinable, assuming that the applicable "target" levels of performance have been attained, or on such other basis determined by the Committee.

To the extent practicable, any actions taken by the Committee under the immediately preceding clauses (a) shall occur in a manner and at a time which allows affected Participants the ability to participate in the Change in Control with respect to the shares of Common Stock subject to their Awards.

12.2 In addition, in the event of a Change in Control, the Committee may in its discretion and upon at least 10 days' advance notice to the affected persons, cancel any outstanding Awards and pay to the holders thereof, in cash or stock, or any combination thereof, the value of such Awards based upon the price per share of Common Stock received or to be received by other shareholders of the Company in the event.

12.3 The obligations of the Company under the Plan shall be binding upon any successor corporation or organization resulting from the merger, consolidation or other reorganization of the Company, or upon any successor corporation or organization succeeding to all or substantially all of the assets and business of the Company and its Affiliates, taken as a whole.

13. Amendment of the Plan and Awards.

13.1 Amendment of Plan. The Board at any time, and from time to time, may amend or terminate the Plan. However, except as provided in ***Section* 11** relating to adjustments upon changes in Common Stock and ***Section* 13.3**, no amendment shall be effective unless approved by the shareholders of the Company to the extent shareholder approval is necessary to satisfy any Applicable Laws. At the time of such amendment, the Board shall determine, upon advice from counsel, whether such amendment will be contingent on shareholder approval.

13.2 Shareholder Approval. The Board may, in its sole discretion, submit any other amendment to the Plan for shareholder approval, including, but not limited to, amendments to the Plan intended to satisfy the requirements of Section 162(m) of the Code and the regulations thereunder regarding the exclusion of performance-based compensation from the limit on corporate deductibility of compensation paid to certain executive officers.

13.3 Intentionally left blank.

13.4 No Impairment of Rights. Rights under any Award granted before amendment of the Plan shall not be impaired by any amendment of the Plan unless (a) the Company requests the consent of the Participant and (b) the Participant consents in writing.

13.5 Amendment of Awards. The Committee at any time, and from time to time, may amend the terms of any one or more Awards; *provided, however*, that the Committee may not affect any amendment which would otherwise constitute an impairment of the rights under any Award unless (a) the Company requests the consent of the Participant and (b) the Participant consents in writing.

14. General Provisions.

14.1 Forfeiture Events. The Committee may specify in an Award Agreement that the Participant's rights, payments and benefits with respect to an Award shall be subject to reduction, cancellation, forfeiture or recoupment upon the occurrence of certain events, in addition to applicable vesting conditions of an Award. Such events may include, without limitation, breach of non-competition, non-solicitation, confidentiality, or other restrictive covenants that are contained in the Award Agreement or otherwise applicable to the Participant, a termination of the Participant's Continuous Service for Cause, or other conduct by the Participant that is detrimental to the business or reputation of the Company and/or its Affiliates.

14.2 Other Compensation Arrangements. Nothing contained in this Plan shall prevent the Board from adopting other or additional compensation arrangements, subject to shareholder approval if such approval is required; and such arrangements may be either generally applicable or applicable only in specific cases.

14.3 Sub-plans. The Committee may from time to time establish sub-plans under the Plan for purposes of satisfying blue sky, securities, tax or other laws of various jurisdictions in which the Company intends to grant Awards. Any sub-plans shall contain such limitations and other terms and conditions as the Committee determines are necessary or desirable. All sub-plans shall be deemed a part of the Plan, but each sub-plan shall apply only to the Participants in the jurisdiction for which the sub-plan was designed.

14.4 Deferral of Awards. The Committee may establish one or more programs under the Plan to permit selected Participants the opportunity to elect to defer receipt of consideration upon exercise of an Award, satisfaction of performance criteria, or other event that absent the election would entitle the Participant to payment or receipt of shares of Common Stock or other consideration under an Award. The Committee may establish the election procedures, the timing of such elections, the mechanisms for payments of, and accrual of interest or other earnings, if any, on amounts, shares or other consideration so deferred, and such other terms, conditions, rules and procedures that the Committee deems advisable for the administration of any such deferral program.

14.5 Unfunded Plan. The Plan shall be unfunded. Neither the Company, the Board nor the Committee shall be required to establish any special or separate fund or to segregate any assets to assure the performance of its obligations under the Plan.

14.6 Recapitalizations. Each Award Agreement shall contain provisions required to reflect the provisions of ***Section* 11**.

14.7 Delivery. Upon exercise of a right granted under this Plan, the Company shall issue Common Stock or pay any amounts due within a reasonable period of time thereafter. Subject to any statutory or regulatory obligations the Company may otherwise have, for purposes of this Plan, 30 days shall be considered a reasonable period of time.

14.8 No Fractional Shares. No fractional shares of Common Stock shall be issued or delivered pursuant to the Plan. The Committee shall determine whether cash, additional Awards or other securities or property shall be issued or paid in lieu of fractional shares of Common Stock or whether any fractional shares should be rounded, forfeited or otherwise eliminated.

14.9 Other Provisions. The Award Agreements authorized under the Plan may contain such other provisions not inconsistent with this Plan, including, without limitation, restrictions upon the exercise of the Awards, as the Committee may deem advisable.

14.10 Section 409A. The Plan is intended to comply with Section 409A of the Code to the extent subject thereto, and, accordingly, to the maximum extent permitted, the Plan shall be interpreted and administered to be in compliance therewith. Any payments described in the Plan that are due within the "short-term deferral period" as defined in Section 409A of the Code shall not be treated as deferred compensation unless Applicable Laws require otherwise. Notwithstanding anything to the contrary in the Plan, to the extent required to avoid accelerated taxation and tax penalties under Section 409A of the Code, amounts that would otherwise be payable and benefits that would otherwise be provided pursuant to the Plan during the six (6) month period immediately following the Participant's termination of Continuous Service shall instead be paid on the first payroll date after the six-month anniversary of the Participant's separation from service (or the Participant's death, if earlier). Notwithstanding the foregoing, neither the Company nor the Committee shall have any obligation to take any action to prevent the assessment of any excise tax or penalty on any Participant under Section 409A of the Code and neither the Company nor the Committee will have any liability to any Participant for such tax or penalty.

14.11 Section 16. It is the intent of the Company that the Plan satisfy, and be interpreted in a manner that satisfies, the applicable requirements of Rule 16b-3 as promulgated under Section 16 of the Exchange Act so that Participants will be entitled to the benefit of Rule 16b-3, or any other rule promulgated under Section 16 of the Exchange Act, and will not be subject to short-swing liability under Section 16 of the Exchange Act. Accordingly, if the operation of any provision of the Plan would conflict with the intent expressed in this Section 14.11, such provision to the extent possible shall be interpreted and/or deemed amended so as to avoid such conflict.

14.12 Section 162(m). To the extent the Committee issues any Award that is intended to be exempt from the deduction limitation of Section 162(m) of the Code, the Committee may, without shareholder or grantee approval, amend the Plan or the relevant Award Agreement retroactively or prospectively to the extent it determines necessary in order to comply with any subsequent clarification of Section 162(m) of the Code required to preserve the Company's federal income tax deduction for compensation paid pursuant to any such Award.

14.13 Beneficiary Designation. Each Participant under the Plan may from time to time name any beneficiary or beneficiaries by whom any right under the Plan is to be exercised in case of such Participant's death. Each designation will revoke all prior designations by the same Participant, shall be in a form reasonably prescribed by the Committee and shall be effective only when filed by the Participant in writing with the Company during the Participant's lifetime.

14.14 Expenses. The costs of administering the Plan shall be paid by the Company.

14.15 Severability. If any of the provisions of the Plan or any Award Agreement is held to be invalid, illegal or unenforceable, whether in whole or in part, such provision shall be deemed modified to the extent, but only to the extent, of such invalidity, illegality or unenforceability and the remaining provisions shall not be affected thereby.

14.16 Plan Headings. The headings in the Plan are for purposes of convenience only and are not intended to define or limit the construction of the provisions hereof.

14.17 Non-Uniform Treatment. The Committee's determinations under the Plan need not be uniform and may be made by it selectively among persons who are eligible to receive, or actually receive, Awards. Without limiting the generality of the foregoing, the Committee shall be entitled to make non-uniform and selective determinations, amendments and adjustments, and to enter into non-uniform and selective Award Agreements.

15. Effective Date of Plan. The Plan shall become effective as of the Effective Date.

16. Termination or Suspension of the Plan. The Plan shall terminate automatically on September 9, 2023. No Award shall be granted pursuant to the Plan after such date, but Awards theretofore granted may extend beyond that date. The Board may suspend or terminate the Plan at any earlier date pursuant to ***Section* 13.1** hereof. No Awards may be granted under the Plan while the Plan is suspended or after it is terminated. Unless the Company determines to submit ***Section* 7.4** of the Plan and the definition of "Performance Goal" and "Performance Criteria" to the Company's shareholders at the first shareholder meeting that occurs in the fifth year following the year in which the Plan was last approved by shareholders (or any earlier meeting designated by the Board), in accordance with the requirements of Section 162(m) of the Code, and such shareholder approval is obtained, then no further Performance Compensation Awards shall be made to Covered Employees under ***Section* 7.4** after the date of such annual meeting, but the Plan may continue in effect for Awards to Participants not in accordance with Section 162(m) of the Code.

17. Choice of Law. The law of the State of Delaware shall govern all questions concerning the construction, validity and interpretation of this Plan, without regard to such state's conflict of law rules.

As adopted by the Board of Directors of Actinium Pharmaceuticals, Inc. on September 9, 2013.

**Exhibit 10.35**

**UNIT PURCHASE AGREEMENT**

UNIT PURCHASE AGREEMENT (this "Agreement") made as of the date set forth on the signature page hereof between Actinium Pharmaceuticals, Inc., a Delaware corporation (the "Company"), and the subscriber(s) identified on Exhibit A annexed hereto (the "Subscriber").

W I T N E S S E T H:

WHEREAS, the Company is conducting a private offering (the "Offering") consisting of up to a maximum of 50 units (the "Units"), each Unit consisting of (a) twenty thousand (20,000) shares of the Company's common stock par value $0.001 per share (the "Common Stock") at a purchase price of $6.00 per share and (b) a five-year warrant (collectively, the "Warrants" and together with the Units and Common Stock, the "Securities") to purchase five thousand (5,000) shares of Common Stock of the Company at an exercise price equal to $9.00 per share, subject to equitable adjustment thereunder (the "Exercise Price") at a negotiated price of $120,000 per Unit (the "Unit Purchase Price");

WHEREAS, the Company has retained Laidlaw & Company (UK) Ltd. to act as its placement agent in connection with the sale of the Units pursuant to this Agreement (the "Placement Agent");

WHEREAS, the Offering is on a "reasonable efforts, all-or-none" basis to attain the minimum offering amount of $2,000,000 purchase price for the Units (the "Minimum Offering"), and on a "reasonable efforts" basis as to the remaining Units to be sold up to the maximum offering amount of $6,000,000 purchase price for the Units (subject to the right of the Company to increase the maximum offering amount to $8,000,000 to cover over-allotments) (the "Maximum Offering"), to a limited number of "accredited investors" (as that term is defined by Rule 501(a) of Regulation D ("Regulation D") promulgated by the Securities and Exchange Commission (the "SEC") under the Securities Act of 1933, as amended (the "Securities Act");

WHEREAS, the Company and each Subscriber is executing and delivering this agreement in reliance upon the exemption from securities registration afforded by Section 4(2) of the Securities Act and Rule 506 of Regulation D promulgated by the SEC under the Securities Act;

WHEREAS the subscription for the Securities will be made in accordance with and subject to the terms and conditions of this Subscription Agreement and the Company's Confidential Private Placement Memorandum dated December 11, 2013, together with all amendments thereof and supplements and exhibits thereto and as such may be amended from time to time (the "Memorandum"); and

WHEREAS, the Subscriber desires to purchase such number of Units as set forth on the signature page hereof on the terms and conditions hereinafter set forth.

NOW, THEREFORE, in consideration of the premises and the mutual representations and covenants hereinafter set forth, the parties hereto do hereby agree as follows:

I. SUBSCRIPTION FOR SECURITIES

1.1 Subject to the terms and conditions hereinafter set forth and as set forth in the Memorandum, the Subscriber hereby subscribes for and agrees to purchase from the Company, and the Company subject to its rights to accept or reject this subscription, agrees to sell to the Subscriber, such number of Units for the aggregate purchase price as is set forth on the signature page hereof. The purchase price is payable by wire transfer, to be held in escrow until the conditions to closing are achieved, to Signature Bank, the escrow agent (the "Escrow Agent") as follows:

Bank: Signature Bank
ABA Number: 026013576
Account #: 1502171417
Account Name: Signature Bank, as Escrow Agent for Actinium Pharmaceuticals, Inc., Account No. 1502171417
Swift Code: SIGNUS33

1.2 The Subscriber understands acknowledges and agrees that, except as otherwise set forth herein or otherwise required by law, that once irrevocable, the Subscriber is not entitled to cancel, terminate or revoke this Agreement or any agreements of the Subscriber hereunder and that this Agreement and such other agreements shall survive the death or disability of the Subscriber and shall be binding upon and inure to the benefit of the parties and their heirs, executors, administrators, successors, legal representatives and permitted assigns. If the Subscriber is more than one person, the obligations of the Subscriber hereunder shall be joint and several and the agreements, representations, warranties and acknowledgments herein contained shall be deemed to be made by and be binding upon each such person and his/her heirs, executors, administrators, successors, legal representatives and permitted assigns.

II. REPRESENTATIONS BY SUBSCRIBER

Each Subscriber hereby severally, and not jointly, represents and warrants to the Company that each such Subscriber's representations in the Subscription Agreement, in the form attached as Exhibit A to the Memorandum, entered into in connection with this Agreement are true and correct as of the date hereof.

III. REPRESENTATIONS BY AND COVENANTS OF THE COMPANY

The Company hereby represents and warrants to the Subscriber that:

3.1 Organization, Good Standing and Qualification. The Company is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware and has full corporate power and authority to own and use its properties and its assets and conduct its business as currently conducted. Each of the Company's subsidiaries identified on Schedule 3.1 hereto (the "Subsidiaries") is an entity duly organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation with the requisite corporate power and authority to own and use its properties and assets and to conduct its business as currently conducted. Neither the Company, nor any of its Subsidiaries is in violation of any of the provisions of their respective articles of incorporation, by-laws or other organizational or charter documents, including, but not limited to the Charter Documents (as defined below). Each of the Company and its Subsidiaries is duly qualified to conduct business and is in good standing as a foreign corporation in each jurisdiction in which the nature of the business conducted or property owned by it makes such qualification necessary, except where the failure to be so qualified or in good standing, as the case may be, would not result in a direct and/or indirect (i) material adverse effect on the legality, validity or enforceability of any of the Securities and/or this Agreement, (ii) material adverse effect on the results of operations, assets, business, condition (financial and other) or prospects of the Company and its Subsidiaries, taken as a whole, or (iii) material adverse effect on the Company's ability to perform in any material respect on a timely basis its obligations under the Transaction Documents (any of (i), (ii) or (iii), a "Material Adverse Effect").

3.2 Capitalization and Voting Rights. The authorized, issued and outstanding capital stock of the Company is as set forth in Schedule 3.2 hereto and all issued and outstanding shares of capital stock of the Company are validly issued, fully paid and nonassessable. Except as set forth in Schedule 3.2 hereto, (i) there are no outstanding securities of the Company or any of its Subsidiaries which contain any preemptive, redemption or similar provisions, nor is any holder of securities of the Company or any Subsidiary entitled to preemptive or similar rights arising out of any agreement or understanding with the Company or any Subsidiary by virtue of any of the Transaction Documents, and there are no contracts, commitments, understandings or arrangements by which the Company or any of its Subsidiaries is or may become bound to redeem a security of the Company or any of its Subsidiaries; (ii) neither the Company nor any Subsidiary has any stock appreciation rights or "phantom stock" plans or agreements or any similar plan or agreement; and (iii) except as set forth in Schedule 3.2 there are no outstanding options, warrants, agreements, convertible securities, preemptive rights or other rights to subscribe for or to purchase or acquire, any shares of capital stock of the Company or any Subsidiary or contracts, commitments, understandings, or arrangements by which the Company or any Subsidiary is or may become bound to issue any shares of capital stock of the Company or any Subsidiary, or securities or rights convertible or exchangeable into shares of capital stock of the Company or any Subsidiary. Except as set forth in Schedule 3.2 and as otherwise required by law, there are no restrictions upon the voting or transfer of any of the shares of capital stock of the Company pursuant to the Company's Charter Documents (as defined below) or other governing documents or any agreement or other instruments to which the Company is a party or by which the Company is bound. All of the issued and outstanding shares of capital stock of the Company are validly issued, fully paid and nonassessable and the shares of capital stock of the Subsidiaries are owned by the Company, free and clear of any mortgages, pledges, liens, claims, charges, encumbrances or other restrictions (collectively, "Encumbrances"). All of such outstanding capital stock has been issued in compliance with applicable federal and state securities laws. The issuance and sale of the Securities and, upon issuance, the Shares, as contemplated hereby will not obligate the Company to issue shares of Common Stock or other securities to any other person (other than the Subscriber) and except as set forth in Schedule 3.2 will not result in the adjustment of the exercise, conversion, exchange or reset price of any outstanding security. The Company does not have outstanding stockholder purchase rights or "poison pill" or any similar arrangement in effect giving any person the right to purchase any equity interest in the Company upon the occurrence of certain events.

3 . 3 Authorization; Enforceability. The Company has all corporate right, power and authority to enter into, execute and deliver this Agreement and each other agreement, document, instrument and certificate to be executed by the Company in connection with the consummation of the transactions contemplated hereby, including, but not limited to Transaction Documents and to perform fully its obligations hereunder and thereunder. All corporate action on the part of the Company, its directors and stockholders necessary for the (a) authorization execution, delivery and performance of this Agreement and the Transaction Documents by the Company; and (b) authorization, sale, issuance and delivery of the Securities and upon issuance, the Shares contemplated hereby and the performance of the Company's obligations under this Agreement and the Transaction Documents has been taken. This Agreement and the Transaction Documents have been duly executed and delivered by the Company and each constitutes a legal, valid and binding obligation of the Company, enforceable against the Company in accordance with its respective terms, subject to laws of general application relating to bankruptcy, insolvency and the relief of debtors and rules of law governing specific performance, injunctive relief or other equitable remedies, and to limitations of public policy. The Securities are duly authorized and, when issued and paid for in accordance with the applicable Transaction Documents, will be duly and validly issued, fully paid and nonassessable, free and clear of all Encumbrances other than restrictions on transfer provided for in the Transaction Documents. The Shares, when issued and paid for in accordance with the terms of the Transaction Documents, will be validly issued, fully paid and nonassessable, free and clear of all Encumbrances imposed by the Company other than restrictions on transfer provided for in the Transaction Documents. The Company has reserved a sufficient number of Warrant Shares for issuance upon the exercise of the Warrants, free and clear of all Encumbrances, except for restrictions on transfer set forth in the Transaction Documents or imposed by applicable securities laws. Except as set forth on Schedule 3.3 hereto, the issuance and sale of the Securities contemplated hereby will not give rise to any preemptive rights or rights of first refusal on behalf of any person other than the Subscribers.

3.4 No Conflict; Governmental Consents.

(a) The execution and delivery by the Company of this Agreement and the Transaction Documents, the issuance and sale of the Securities (including, when issued, the Shares) and the consummation of the other transactions contemplated hereby or thereby do not and will not (i) result in the violation of any law, statute, rule, regulation, order, writ, injunction, judgment or decree of any court or governmental authority to or by which the Company is bound including without limitation all foreign, federal, state and local laws applicable to its business and all such laws that affect the environment, except in each case as could not have or reasonably be expected to result in a Material Adverse Effect, (ii) conflict with or violate any provision of the Company's Articles of Incorporation (the "Articles"), as amended or the Bylaws, (and collectively with the Articles, the "Charter Documents") of the Company, and (iii) conflict with, or result in a material breach or violation of, any of the terms or provisions of, or constitute (with or without due notice or lapse of time or both) a default or give to others any rights of termination, amendment, acceleration or cancellation (with or without due notice, lapse of time or both) under any agreement, credit facility, lease, loan agreement, mortgage, security agreement, trust indenture or other agreement or instrument to which the Company or any Subsidiary is a party or by which any of them is bound or to which any of their respective properties or assets is subject, nor result in the creation or imposition of any Encumbrances upon any of the properties or assets of the Company or any Subsidiary.

(b) No approval by the holders of Common Stock, or other equity securities of the Company is required to be obtained by the Company in connection with the authorization, execution, delivery and performance of this Agreement and the other Transaction Documents or in connection with the authorization, issue and sale of the Securities and, upon issuance, the Shares, except as has been previously obtained.

(c) No consent, approval, authorization or other order of any governmental authority or any other person is required to be obtained by the Company in connection with the authorization, execution, delivery and performance of this Agreement and the other Transaction Documents or in connection with the authorization, issue and sale of the Securities and, upon issuance, the Shares, except such post-sale filings as may be required to be made with the SEC, FINRA and with any state or foreign blue sky or securities regulatory authority, all of which shall be made when required.

3.5 Consents of Third Parties. No vote, approval or consent of any holder of capital stock of the Company or any other third parties is required or necessary to be obtained by the Company in connection with the authorization, execution, deliver and performance of this Agreement and the other Transaction Documents or in connection with the authorization, issue and sale of the Securities and, upon issuance, the Shares, except as previously obtained, each of which is in full force and effect.

3.6 Shell Company Status; SEC Reports; Financial Statements. Except as set forth on Schedule 3.6, the Company has never been an issuer subject to Rule 144(i) under the Securities Act. The Company has filed all reports, schedules, forms, statements and other documents required to be filed by the Company under the Securities Act and the Exchange Act, including pursuant to Section 13(a) or 15(d) thereof, for the two years preceding the date hereof (or such shorter period as the Company was required by law or regulation to file such material) (the foregoing materials, including the exhibits thereto and documents incorporated by reference therein, being collectively referred to herein as the "SEC Reports") on a timely basis or has received a valid extension of such time of filing and has filed any such SEC Reports prior to the expiration of any such extension. As of their respective dates, the SEC Reports complied in all material respects with the requirements of the Securities Act and the Exchange Act, as applicable, and none of the SEC Reports, when filed, contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading. The Company has never been an issuer subject to Rule 144(i) under the Securities Act. The financial statements of the Company included in the SEC Reports comply in all material respects with applicable accounting requirements and the rules and regulations of the Commission with respect thereto as in effect at the time of filing. Such financial statements have been prepared in accordance with United States generally accepted accounting principles applied on a consistent basis during the periods involved ("GAAP"), except as may be otherwise specified in such financial statements or the notes thereto and except that unaudited financial statements may not contain all footnotes required by GAAP, and fairly present in all material respects the financial position of the Company and its consolidated Subsidiaries as of and for the dates thereof and the results of operations and cash flows for the periods then ended, subject, in the case of unaudited statements, to normal, immaterial, year-end audit adjustments.

3.7 Licenses. Except as otherwise set forth in the SEC Reports, the Company and its Subsidiaries have sufficient licenses, permits and other governmental authorizations currently required for the conduct of their respective businesses or ownership of properties and is in all material respects in compliance therewith.

3.8 Litigation. Except as set forth in the SEC Reports, the Company knows of no pending or threatened legal or governmental proceedings against the Company or any Subsidiary which could materially adversely affect the business, property, financial condition or operations of the Company and its Subsidiaries, taken as a whole, or which materially and adversely questions the validity of this Agreement or the other Transaction Documents or the right of the Company to enter into this Agreement and the other Transaction Documents, or to perform its obligations hereunder and thereunder. Neither the Company nor any Subsidiary is a party or subject to the provisions of any order, writ, injunction, judgment or decree of any court or government agency or instrumentality which could materially adversely affect the business, property, financial condition or operations of the Company and its Subsidiaries taken as a whole. Except as set forth in the SEC Reports, there is no action, suit, proceeding or investigation by the Company or any Subsidiary currently pending in any court or before any arbitrator or that the Company or any Subsidiary intends to initiate. Neither the Company nor any Subsidiary, nor any director or officer thereof, is nor since the Form 10-K has been the subject of any action involving a claim of violation of or liability under federal or state securities laws or a claim of breach of fiduciary duty. There has not been, and to the Company's knowledge, there is not pending or contemplated, any investigation by the SEC involving the Company or any current or former director or officer of the Company.

3.9 Compliance. Except as set forth in the SEC Reports or on Schedule 3.9, neither the Company nor any Subsidiary: (i) is in default under or in violation of (and no event has occurred that has not been waived that, with notice or lapse of time or both, would result in a default by the Company or any Subsidiary under), nor has the Company or any Subsidiary received notice of a claim that it is in default under or that it is in violation of, any indenture, loan or credit agreement or any other agreement or instrument to which it is a party or by which it or any of its properties is bound (whether or not such default or violation has been waived), (ii) is in violation of any judgment, decree or order of any court, arbitrator or other governmental authority or (iii) is or has been in violation of any statute, rule, ordinance or regulation of any governmental authority, including without limitation all foreign, federal, state and local laws relating to taxes, environmental protection, occupational health and safety, product quality and safety and employment and labor matters, except in each case as could not have or reasonably be expected to result in a Material Adverse Effect.

3.10 Regulatory Permits. The Company and the Subsidiaries possess all certificates, authorizations and permits issued by the appropriate federal, state, local or foreign regulatory authorities necessary to conduct their respective businesses as currently conducted, except where the failure to possess such permits could not reasonably be expected to result in a Material Adverse Effect ("Material Permits"), and neither the Company nor any Subsidiary has received any notice of proceedings relating to the revocation or modification of any Material Permit.

3.11 FDA. As to each of the Company's product candidates subject to the jurisdiction of the U.S. Food and Drug Administration ("FDA") under the Federal Food, Drug and Cosmetic Act, as amended, and the regulations thereunder ("FDCA") that is manufactured, packaged, labeled, tested, distributed, sold, and/or marketed by the Company or any of its Subsidiaries (each such product candidate, a "Pharmaceutical Product"), such Pharmaceutical Product is being manufactured, packaged, labeled, tested, distributed, sold and/or marketed by the Company in compliance with all applicable requirements under FDCA and other federal or state laws, rules and regulations relating to registration, investigational use, premarket clearance, licensure, or application approval, good manufacturing practices, good laboratory practices, good clinical practices, product listing, quotas, labeling, advertising, record keeping and filing of reports, except where the failure to be in compliance would not reasonably be expected to have a Material Adverse Effect. There is no pending, completed or, to the Company's knowledge, threatened, action (including any lawsuit, arbitration, or legal or administrative or regulatory proceeding, charge, complaint, or investigation) against the Company or any of its Subsidiaries, and none of the Company or any of its Subsidiaries has received any notice, warning letter or other communication from the FDA or any other governmental entity, which (i) contests the premarket clearance, licensure, registration, or approval of, the uses of, the distribution of, the manufacturing or packaging of, the testing of, the sale of, or the labeling and promotion of any Pharmaceutical Product, (ii) withdraws its approval of, requests the recall, suspension, or seizure of, or withdraws or orders the withdrawal of advertising or sales promotional materials relating to, any Pharmaceutical Product, (iii) imposes a clinical hold on any clinical investigation by the Company or any of its Subsidiaries, (iv) enjoins production at any facility of the Company or any of its Subsidiaries, (v) enters or proposes to enter into a consent decree of permanent injunction with the Company or any of its Subsidiaries, or (vi) otherwise alleges any violation of any laws, rules or regulations by the Company or any of its Subsidiaries, and which, either individually or in the aggregate, would have or reasonably be expected to have a Material Adverse Effect. The properties, business and operations of the Company have been and are being conducted in all material respects in accordance with all applicable laws, rules and regulations of the FDA. The Company has not been informed by the FDA that the FDA will prohibit the marketing, sale, license or use in the United States of any product proposed to be developed, produced or marketed by the Company nor has the FDA expressed any concern as to approving or clearing for marketing any product being developed or proposed to be developed by the Company.

3.12 Investment Company. The Company is not an "investment company" within the meaning of such term under the Investment Company Act of 1940, as amended, and the rules and regulations of the SEC thereunder.

3.13 Brokers. Except for the fees payable to the Placement Agent as set forth on Schedule 3.13, neither the Company nor any of the Company's officers, directors, employees or stockholders has employed or engaged any broker or finder in connection with the transactions contemplated by this Agreement and no fee or other compensation is or will be due and owing to any broker, finder, underwriter, placement agent or similar person in connection with the transactions contemplated by this Agreement. The Company is not party to any agreement, arrangement or understanding whereby any person has an exclusive right to raise funds and/or place or purchase any debt or equity securities for or on behalf of the Company.

3.14 Intellectual Property; Employees.

(a) The Company owns or possesses sufficient legal rights to all patents, trademarks, service marks, trade names, copyrights, trade secrets, licenses, information and other proprietary rights and processes necessary for its business as now conducted and as presently proposed to be conducted, without any known infringement of the rights of others as described in the SEC Reports and which the failure to so have could have a Material Adverse Effect (collectively, the " Intellectual Property Rights"). Except as disclosed on Schedule 3.14 or the SEC Reports, there are no material outstanding options, licenses or agreements of any kind relating to the Intellectual Property Rights, nor is the Company bound by or a party to any material options, licenses or agreements of any kind with respect to the patents, trademarks, service marks, trade names, copyrights, trade secrets, licenses, information and other proprietary rights and processes of any other person or entity other than such licenses or agreements arising from the purchase of "off the shelf" or standard products. The Company has not received any written communications alleging that the Company has violated or, by conducting its business as presently proposed to be conducted, would violate any Intellectual Property Rights of any other person or entity. The Company and its Subsidiaries have taken reasonable security measures to protect the secrecy, confidentiality and value of all of their intellectual properties, except where failure to do so could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect

(b) Except as disclosed in the SEC Reports, the Company is not aware that any of its employees is obligated under any contract (including licenses, covenants or commitments of any nature) or other agreement, or subject to any judgment, decree or order of any court or administrative agency, that would interfere with their duties to the Company or that would conflict with the Company's business as presently conducted.

(c) Neither the execution nor delivery of this Agreement, nor the carrying on of the Company's business by the employees of the Company, nor the conduct of the Company's business as presently conducted, will, to the Company's knowledge, conflict with or result in a breach of the terms, conditions or provisions of, or constitute a default under, any contract, covenant or instrument under which any employee is now obligated.

(d) To the Company's knowledge, no employee of the Company, nor any consultant with whom the Company has contracted, is in violation of any term of any employment contract, proprietary information agreement or any other agreement relating to the right of any such individual to be employed by, or to contract with, the Company because of the nature of the business conducted by the Company; and to the Company's knowledge the continued employment by the Company of its present employees, and the performance of the Company's contracts with its independent contractors, will not result in any such violation. The Company has not received any written notice alleging that any such violation has occurred. Except as described in SEC Reports, no employee of the Company has been granted the right to continued employment by the Company or to any compensation following termination of employment with the Company except for any of the same which would not have a Material Adverse Effect on the business of the Company. The Company is not aware that any officer, key employee or group of employees intends to terminate his, her or their employment with the Company, nor does the Company have a present intention to terminate the employment of any officer, key employee or group of employees.

3.15 Title to Properties and Assets; Liens, Etc. Except as described in the SEC Reports, the Company has good and marketable title to its properties and assets, including the properties and assets reflected in the most recent balance sheet included in the Company's financial statements, and good title to its leasehold estates, in each case subject to no Encumbrances, other than (a) those resulting from taxes which have not yet become delinquent; and (b) Encumbrances which do not materially detract from the value of the property subject thereto or materially impair the operations of the Company; and (c) those that have otherwise arisen in the ordinary course of business, none of which are material. Except as set forth in Schedule 3.15, the Company is in compliance with all material terms of each lease to which it is a party or is otherwise bound.

3.16 Obligations to Related Parties. Except as described in the SEC Reports and in Schedule 3.16, there are no obligations of the Company to officers, directors, stockholders, or employees of the Company other than (a) for payment of salary or other compensation for services rendered, (b) reimbursement for reasonable expenses incurred on behalf of the Company and (c) for other standard employee benefits made generally available to all employees (including stock option agreements outstanding under any stock option plan approved by the Board of Directors of the Company). Except as disclosed in the SEC Reports, none of the officers or directors of the Company and, to the Company's knowledge, none of the employees of the Company is presently a party to any transaction with the Company or any Subsidiary (other than as holders of stock options and/or warrants, and for services as employees, officers and directors), including any contract, agreement or other arrangement providing for the furnishing of services to or by, providing for rental of real or personal property to or from, or otherwise requiring payments to or from any officer, director or such employee or, to the Company's knowledge, any entity in which any officer, director, or any such employee has a substantial interest or is an officer, director, trustee or partner.

3.17 Material Changes. Since the date of the latest audited financial statements included within the SEC Reports, except as specifically disclosed in a subsequent SEC Report filed prior to the date hereof: (i) there has been no event, occurrence or development that has had or that could reasonably be expected to result in a Material Adverse Effect, (ii) the Company has not incurred any liabilities (contingent or otherwise) other than (A) trade payables and accrued expenses incurred in the ordinary course of business consistent with past practice and (B) liabilities not required to be reflected in the Company's financial statements pursuant to GAAP or disclosed in filings made with the Commission, (iii) the Company has not altered its method of accounting, (iv) the Company has not declared or made any dividend or distribution of cash or other property to its stockholders or purchased, redeemed or made any agreements to purchase or redeem any shares of its capital stock, (v) the Company has not issued any equity securities to any officer, director or Affiliate, except pursuant to existing Company stock option plans and (vi) the Company has not increased any salary paid to any officer, director or employee. The Company does not have pending before the Commission any request for confidential treatment of information. Except for the issuance of the Securities contemplated by this Agreement or as set forth on Schedule 3.17, no event, liability, fact, circumstance, occurrence or development has occurred or exists or is reasonably expected to occur or exist with respect to the Company or its Subsidiaries or their respective businesses, properties, operations, assets or financial condition, that would be required to be disclosed by the Company under applicable securities laws at the time this representation is made or deemed made that has not been publicly disclosed at least 1 trading day prior to the date that this representation is made.

3.18 Sarbanes-Oxley; Internal Accounting Controls. Except as described in the SEC Reports the Company and the Subsidiaries are in compliance with any and all applicable requirements of the Sarbanes-Oxley Act of 2002 that are effective as of the date hereof, and any and all applicable rules and regulations promulgated by the Commission thereunder that are effective as of the date hereof and as of the Closing Date. Except as described in the SEC Reports the Company and the Subsidiaries maintain a system of internal accounting controls sufficient to provide reasonable assurance that: (i) transactions are executed in accordance with management's general or specific authorizations, (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain asset accountability, (iii) access to assets is permitted only in accordance with management's general or specific authorization, and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. Except as described in the SEC Reports the Company and the Subsidiaries have established disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the Company and the Subsidiaries and designed such disclosure controls and procedures to ensure that information required to be disclosed by the Company in the reports it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms. The Company's certifying officers have evaluated the effectiveness of the disclosure controls and procedures of the Company and the Subsidiaries as of the end of the period covered by the most recently filed periodic report under the Exchange Act (such date, the "Evaluation Date"). The Company presented in its most recently filed periodic report under the Exchange Act the conclusions of the certifying officers about the effectiveness of the disclosure controls and procedures based on their evaluations as of the Evaluation Date. Since the Evaluation Date, there have been no changes in the internal control over financial reporting (as such term is defined in the Exchange Act) that have materially affected, or is reasonably likely to materially affect, the internal control over financial reporting of the Company and its Subsidiaries.

3.19 No General Solicitation**.** None of the Company, its Subsidiaries, any of their affiliates, and any person acting on their behalf, has engaged in any form of general solicitation or general advertising (within the meaning of Regulation D under the Securities Act) in connection with the offer or sale of the Securities.

3.20 No Integrated Offering**.** Assuming the accuracy of the Subscriber representations and warranties set forth in Article I hereunder, none of the Company, its Subsidiaries, any of their affiliates, and any person acting on their behalf has, directly or indirectly, made any offers or sales of any security or solicited any offers to buy any security, under circumstances that would require registration of any of the Securities under the Securities Act or that is likely to cause this offering of the Securities to be integrated with prior offerings by the Company for purposes of the Securities Act or any applicable stockholder approval provisions, including without limitation, under the rules and regulations of any exchange or automated quotation system on which any of the securities of the Company are listed or designated. Except as disclosed in the SEC Reports, none of the Company, its Subsidiaries, their affiliates and any person acting on their behalf, have taken any action or steps referred to in the preceding sentence that would require registration of any of the Securities under the Securities Act or cause the offering of the Securities to be integrated with other offerings.

3.21 Application of Takeover Protections. The Company has taken all necessary action, if any, in order to render inapplicable any control share acquisition, business combination, poison pill (including any distribution under a rights agreement) or other similar anti-takeover provision under the Company's Charter Documents or the laws of its state of incorporation that is or could become applicable to the Subscriber as a result of the Subscriber and the Company fulfilling their obligations or exercising their rights under this Agreement, including, without limitation, the Company's issuance of the Securities and the Subscriber' ownership of the Securities.

3.22 Taxes. Each of the Company and its Subsidiaries has filed all U.S. federal, state, local and foreign tax returns which are required to be filed by each of them and all such returns are true and correct in all material respects, except for such failures to file which could not reasonably be expected to have a Material Adverse Effect. The Company and each Subsidiary has paid all taxes pursuant to such returns or pursuant to any assessments received by any of them or by which any of them are obligated to withhold from amounts owing to any employee, creditor or third party. The Company and each Subsidiary has properly accrued all taxes required to be accrued and/or paid, except where the failure to accrue would not have a Material Adverse Effect. To the knowledge of the Company, the tax returns of the Company and its Subsidiaries are not currently being audited by any state, local or federal authorities. Neither the Company nor any Subsidiary has waived any statute of limitations with respect to taxes or agreed to any extension of time with respect to any tax assessment or deficiency. The Company has set aside on its books adequate provision for the payment of any unpaid taxes.

3.23 Registration Rights. Except as set forth on Schedule 3.23, no person has any right to cause the Company to effect the registration under the Securities Act of any securities of the Company.

3.24 Listing and Maintenance Requirements. The Common Stock is registered pursuant to Section 12(b) or 12(g) of the Exchange Act, and the Company has taken no action designed to, or which to its knowledge is likely to have the effect of, terminating the registration of the Common Stock under the Exchange Act nor has the Company received any notification that the SEC is contemplating terminating such registration. The Company has not, in the 12 months preceding the date hereof, received notice from any trading market on which the Common Stock is or has been listed or quoted to the effect that the Company is not in compliance with the listing or maintenance requirements of such trading market. The Company is, and has no reason to believe that it will not in the foreseeable future continue to be, in compliance with all such listing and maintenance requirements

3.25 Disclosure. Except with respect to the material terms and conditions of the transactions contemplated by this Agreement, the Memorandum, the Warrant, the Registration Rights Agreement and all other exhibits, annexes and appendices thereto (collectively referred to as the "Offering Materials"), the Company confirms that neither it nor any other person acting on its behalf has provided the Subscriber or its agents or counsel with any information that it believes constitutes or might constitute material, non-public information. The Company understands and confirms that the Subscriber will rely on the foregoing representation in effecting transactions in securities of the Company. All disclosure furnished by or on behalf of the Company to the Subscriber regarding the Company, its business and the transactions contemplated hereby, including the Disclosure Schedules to this Agreement, is true and correct and does not contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements made therein, in light of the circumstances under which they were made, not misleading. The press releases disseminated by the Company during the twelve months preceding the date of this Agreement taken as a whole together the SEC Reports do not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements, in light of the circumstances under which they were made and when made, not misleading.

3.26 Private Placement. Assuming the accuracy of the Subscribers' representations and warranties set forth in Section 1, no registration under the Securities Act is required for the offer and sale of the Securities by the Company to the Subscriber as contemplated hereby.

3.27 Intentionally Omitted.

3.28 OFAC. Neither the Company nor, to the Company's knowledge, any director, officer, agent, employee, affiliate or person acting on its behalf, is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department ("OFAC"); and the Company will not directly or indirectly use the proceeds of the sale of the Units, or lend, contribute or otherwise make available such proceeds to any joint venture partner or other person or entity, towards any sales or operations in Cuba, Iran, Syria, Sudan, Myanmar or any other country sanctioned by OFAC or for the purpose of financing the activities of any person currently subject to any U.S. sanctions.

3.29 Regulation M Compliance. The Company has not, and to its knowledge no one acting on its behalf has, (i) taken, directly or indirectly, any action designed to cause or to result in the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of any of the Securities, (ii) sold, bid for, purchased, or paid any compensation for soliciting purchases of, any of the Securities, or (iii) paid or agreed to pay to any Person any compensation for soliciting another to purchase any other securities of the Company, other than, in the case of clauses (ii) and (iii), compensation paid to the Company's placement agent in connection with the placement of the Securities

3.30 Foreign Corrupt Practices. Neither the Company nor any Subsidiary, nor to the knowledge of the Company or any Subsidiary, any agent or other person acting on behalf of the Company or any Subsidiary, has: (i) directly or indirectly, used any funds for unlawful contributions, gifts, entertainment or other unlawful expenses related to foreign or domestic political activity, (ii) made any unlawful payment to foreign or domestic government officials or employees or to any foreign or domestic political parties or campaigns from corporate funds, (iii) failed to disclose fully any contribution made by the Company or any Subsidiary (or made by any person acting on its behalf of which the Company is aware) which is in violation of law or (iv) violated in any material respect any provision of FCPA

3.31 Investment Company. The Company is not, and is not an Affiliate of, and immediately after receipt of payment for the Securities, will not be or be an Affiliate of, an "investment company" within the meaning of the Investment Company Act of 1940, as amended. The Company shall conduct its business in a manner so that it will not become an "investment company" subject to registration under the Investment Company Act of 1940, as amended

3.32 Bad Actor Disqualification

(a) No Disqualification Events. With respect to Securities to be offered and sold hereunder in reliance on Rule 506 under the Securities Act ("Regulation D Securities"), none of the Company, any of its predecessors, any affiliated issuer, any director, executive officer, other officer of the Company participating in the offering, any beneficial owner of 20% or more of the Company's outstanding voting equity securities, calculated on the basis of voting power, nor any promoter (as that term is defined in Rule 405 under the Securities Act) connected with the Company in any capacity at the time of sale (each, an "Issuer Covered Person" and, together, "Issuer Covered Persons") is subject to any of the "Bad Actor" disqualifications described in Rule 506(d)(1)(i) to (viii) under the Securities Act (a "Disqualification Event"), except for a Disqualification Event covered by Rule 506(d)(2) or (d)(3). The Company has exercised reasonable care to determine whether any Issuer Covered Person is subject to a Disqualification Event. The Company has complied, to the extent applicable, with its disclosure obligations under Rule 506(e), and has furnished to the Placement Agent and the Subscriber a copy of any disclosures provided thereunder.

(b) Other Covered Persons. The Company is not aware of any person that (i) has been or will be paid (directly or indirectly) remuneration for solicitation of purchasers in connection with the sale of the Securities and (ii) who is subject to a Disqualification Event.

(c) Notice of Disqualification Events. The Company will notify the Placement Agent in writing of (i) any Disqualification Event relating to any Issuer Covered Person and (ii) any event that would, with the passage of time, become a Disqualification Event relating to any Issuer Covered Person, prior to any Closing of this Offering.

IV. TERMS OF SUBSCRIPTION

4.1 The Securities will be offered for sale until the earlier of (i) the date upon which subscriptions for the Maximum Offering offered hereunder have been accepted, (ii) January 31, 2014 (subject to the right of the Company and the Placement Agent to extend the offering until February 28, 2014 without further notice to investors), or (iii) the date upon which the Company and the Placement Agent elect to terminate the Offering (the "Termination Date"). The Offering is being conducted on a "*reasonable efforts, all or none*" basis with respect to the Minimum Offering and thereafter on a "*reasonable efforts*" basis for up to the Maximum Offering.

4.2 The Company may hold an initial closing ("Initial Closing") at any time after the receipt of accepted subscriptions for the Minimum Offering. After the Initial Closing, subsequent closings with respect to additional Securities may take place at any time prior to the Termination Date as determined by the Company, with respect to subscriptions accepted prior to the Termination Date (each such closing, together with the Initial Closing, being referred to as a "Closing"). The last Closing of the Offering, occurring on or prior to the Termination Date, shall be referred to as the "Final Closing". Any subscription documents or funds received after the Final Closing will be returned, without interest or deduction. In the event that the any Closing does not occur prior to the Termination Date, all amounts paid by the Subscriber shall be returned to the Subscriber, without interest or deduction. The Subscriber may revoke its subscription and obtain a return of the subscription amount paid to the Escrow Account at any time before the date of the Initial Closing by providing written notice to the Placement Agent, the Company and the Escrow Agent as provided in Section 6.1 below. Upon receipt of a revocation notice from the Subscriber prior to the date of the Initial Closing, all amounts paid by the Subscriber shall be returned to the Subscriber, without interest or deduction. The Subscriber may not revoke this subscription or obtain a return of the subscription amount paid to the Escrow Agent on or after the date of the Initial Closing. Any subscription received after the Initial Closing but prior to the Termination Date shall be irrevocable.

4.3 The minimum purchase that may be made by any prospective investor shall be $120,000. Subscriptions for investment below the minimum investment may be accepted at the discretion of the Placement Agent and the Company. The Company and the Placement Agent reserve the right to reject any subscription made hereby, in whole or in part, in their sole discretion. The Company's agreement with each Subscriber is a separate agreement and the sale of the Securities to each Subscriber is a separate sale.

4.4 All funds shall be deposited in the account identified in Section 1.1 hereof.

4.5 Certificates representing the Securities purchased by the Subscriber pursuant to this Agreement will be prepared for delivery to the Subscriber as soon as practicable following the Closing (but in no event later than five (5) days after a Closing) at which such purchase takes place. The Subscriber hereby authorizes and directs the Company to deliver the certificates representing the Securities purchased by the Subscriber pursuant to this Agreement directly to the Subscriber's residential or business or brokerage house address indicated on the signature page hereto.

4.6 The Company's agreement with each Subscriber is a separate agreement and the sale of Securities to each Subscriber is a separate sale.

V. CONDITIONS TO OBLIGATIONS OF THE SUBSCRIBER

5.1 The Subscriber's obligation to purchase the Securities at the Closing at which such purchase is to be consummated is subject to the fulfillment on or prior to such Closing of the following conditions, which conditions may be waived at the option of each Subscriber to the extent permitted by law:

(a) Representations and Warranties; Covenants. The representations and warranties made by the Company in Section 3 hereof qualified as to materiality shall be true and correct as of the Initial Closing and on each Closing Date, except (i) to the extent any such representation or warranty expressly speaks as of an earlier date, in which case such representation or warranty shall be true and correct as of such earlier date, and, (ii) the representations and warranties made by the Company in Section 3 hereof not qualified as to materiality shall be true and correct in all material respects at all times prior to and on the Closing Date, except to the extent any such representation or warranty expressly speaks as of an earlier date, in which case such representation or warranty shall be true and correct in all material respects as of such earlier date; *provided however*, that notwithstanding the foregoing, the Company shall only be required to update the Disclosure Schedules by the delivery to the Subscribers by the Company of an amended Disclosure Schedule with respect to any information that is of a material nature as of such proposed Closing Date. All covenants, agreements and conditions contained in this Agreement to be performed by the Company on or prior to the date of such Closing shall have been performed or complied with in all material respects.

(b) No Legal Order Pending. There shall not then be in effect any legal or other order enjoining or restraining the transactions contemplated by this Agreement.

(c) No Law Prohibiting or Restricting Such Sale. There shall not be in effect any law, rule or regulation prohibiting or restricting such sale or requiring any consent or approval of any person, which shall not have been obtained, to issue the Securities (except as otherwise provided in this Agreement).

(d) Required Consents. The Company shall have obtained any and all consents, permits, approvals, registrations and waivers necessary or appropriate for consummation of the purchase and sale of the Securities and the consummation of the other transactions contemplated by the Transaction Documents, all of which shall be in full force and effect.

(e) Adverse Changes. Since the date of execution of this Agreement, no event or series of events shall have occurred that reasonably could have or result in a Material Adverse Effect.

(f) No Suspensions of Trading in Common Stock; Listing. Trading in the Common Stock shall not have been suspended by the SEC or any trading market (except for any suspensions of trading of not more than one trading day solely to permit dissemination of material information regarding the Company) at any time since the date of execution of this Agreement, and the Common Stock shall have been at all times since such date listed for trading on a trading market.

(g) Blue Sky. The Company shall have completed qualification for the Securities and the Shares under applicable Blue Sky laws.

(h) Legal Opinion. The Company's corporate counsel shall have delivered a legal opinion addressed to the Subscribers in a form reasonably acceptable to the Placement Agent.

(i) Proceedings and Litigation. No action, suit or proceeding shall have been commenced by any Person against any party hereto seeking to restrain or delay the purchase and sale of the Units or the other transactions contemplated by this Agreement or any of the other Offering Documents.

(j) Disclosure Schedules. The Company shall have delivered a copy of its Disclosure Schedules (or amended Disclosure Schedules) qualifying any of the representations and warranties contained in Section 3 which original Disclosure Schedules will speak only as Initial Closing.

(k) Lock-Up Agreement. The directors, officers, and the Placement Agent shall execute a lock-up agreement, substantially in the form of Exhibit B attached hereto. The Company shall use its reasonable best efforts to have the 5% or greater shareholders enter into lock-up agreements.

## VI. COVENANTS OF THE COMPANY

### 6.1 Transfer Restrictions.

(a) The Securities may only be disposed of in compliance with state and federal securities laws. In connection with any transfer of Securities other than pursuant to an effective registration statement or Rule 144 promulgated under the Securities Act, to the Company or to an affiliate of a Subscriber or in connection with, the Company may require the transferor thereof to provide to the Company an opinion of counsel selected by the transferor and reasonably acceptable to the Company, the form and substance of which opinion shall be reasonably satisfactory to the Company, to the effect that such transfer does not require registration of such transferred Securities under the Securities Act. As a condition of transfer, any such transferee shall agree in writing to be bound by the terms of this Agreement, and shall have the rights of a Subscriber under this Agreement.

(b) The Subscriber agrees to the imprinting, so long as is required by this Section 5.1, of a legend on any of the Securities, including the Shares, in the following form:

[NEITHER] THIS SECURITY [NOR THE SECURITIES INTO WHICH THIS SECURITY IS [EXERCISABLE] [CONVERTIBLE]] HAS [NOT] BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION OR THE SECURITIES COMMISSION OF ANY STATE IN RELIANCE UPON AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT OR PURSUANT TO AN AVAILABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN ACCORDANCE WITH APPLICABLE STATE SECURITIES LAWS AS EVIDENCED BY A LEGAL OPINION OF COUNSEL TO THE TRANSFEROR TO SUCH EFFECT, THE SUBSTANCE OF WHICH SHALL BE REASONABLY ACCEPTABLE TO THE COMPANY. THIS SECURITY [AND THE SECURITIES ISSUABLE UPON [EXERCISE] [CONVERSION] OF THIS SECURITY] MAY BE PLEDGED IN CONNECTION WITH A BONA FIDE MARGIN ACCOUNT OR OTHER LOAN SECURED BY SUCH SECURITIES.

(c) Certificates evidencing the Shares shall not contain any legend (including the legend set forth in Section 4.1(b) hereof): (i) while a registration statement covering the resale of such security is effective under the Securities Act, or (ii) following any sale of such Shares pursuant to Rule 144, or (iii) if such Shares are eligible for sale under Rule 144, without the requirement for the Company to be in compliance with the current public information required under Rule 144 as to such Shares and without volume or manner-of-sale restrictions or (iv) if such legend is not required under applicable requirements of the Securities Act (including judicial interpretations and pronouncements issued by the staff of the SEC). The Company shall cause its counsel, at the Company's expense, to issue a legal opinion to the Company's transfer agent promptly (but in no event later than the requisite share delivery date set forth in the Warrants) if required by the Company's transfer to effect the removal of the legend hereunder.

6.2 Listing of Securities. The Company agrees, (i) if the Company applies to have the Common Stock traded on any other trading market, it will include in such application the shares of Common Stock and Shares, and will take such other action as is necessary or desirable to cause the shares of Common Stock and Shares to be listed on such other trading market as promptly as possible, and (ii) it will take all action reasonably necessary to continue the listing and trading of its Common Stock on a trading market and will comply in all material respects with the Company's reporting, filing and other obligations under the bylaws or rules of the trading market.

6.3 Reservation of Shares. The Company shall at all times while the Warrants are outstanding maintain a reserve from its duly authorized shares of Common Stock of a number of shares of Common Stock sufficient to allow for the issuance of the Warrant Shares.

6.4 Replacement of Securities. If any certificate or instrument evidencing any Securities or the Shares is mutilated, lost, stolen or destroyed, the Company shall issue or cause to be issued in exchange and substitution for and upon cancellation thereof, or in lieu of and substitution therefor, a new certificate or instrument, but only upon receipt of evidence reasonably satisfactory to the Company of such loss, theft or destruction and customary and reasonable indemnity, if requested. The applicants for a new certificate or instrument under such circumstances shall also pay any reasonable third-party costs associated with the issuance of such replacement securities. If a replacement certificate or instrument evidencing any securities is requested due to a mutilation thereof, the Company may require delivery of such mutilated certificate or instrument as a condition precedent to any issuance of a replacement.

6.5 Furnishing of Information. Until the time that no Subscriber owns Securities, the Company covenants to maintain the registration of the Common Stock under Section 12(b) or 12(g) of the Exchange Act and to timely file (or obtain extensions in respect thereof and file within the applicable grace period) all reports required to be filed by the Company after the date hereof pursuant to the Exchange Act. As long as Subscriber owns Securities, if the Company is not required to file reports pursuant to the Exchange Act, it will prepare and furnish to Subscriber and make publicly available in accordance with Rule 144(c) such information as is required for the Subscribers to sell the Securities under Rule 144. The Company further covenants that it will take such further action as any holder of Securities may reasonably request, to the extent required from time to time to enable such person to sell such Securities without registration under the Securities Act within the requirements of the exemption provided by Rule 144.

6.6 Securities Laws; Publicity. The Company shall, by 8:30 a.m. (New York City time) on the second trading day immediately following a Closing hereunder, issue a Current Report on Form 8-K disclosing the material terms of the transactions contemplated hereby and including the Transaction Documents as exhibits thereto to the extent required by law. The Company shall not publicly disclose the name of Subscriber, or include the name of any Subscriber in any filing with the SEC or any regulatory agency or trading market, without the prior written consent of Subscriber, except: (a) as required by federal securities law in connection with the filing of final Transaction Documents (including signature pages thereto) with the SEC and (b) to the extent such disclosure is required by law, in which case the Company shall provide the Subscriber with prior notice of such disclosure permitted under this clause (b).

6.7 Form D; Blue Sky Filings. The Company agrees to timely file a Form D with respect to the Securities as required under Regulation D promulgated under the Securities Act and to provide a copy thereof, promptly upon request of the Subscriber. The Company shall take such action as the Company shall reasonably determine is necessary in order to obtain an exemption for, or to qualify the Securities for, sale to the Subscriber at the Closing under applicable securities or "Blue Sky" laws of the states of the United States, and shall provide evidence of such actions promptly upon request of any Subscriber.

6.8 Equal Treatment of Subscribers. No consideration (including any modification of any Transaction Document) shall be offered or paid to any person to amend or consent to a waiver or modification of any provision of any of the Transaction Documents unless the same consideration is also offered to all of the parties to the Transaction Documents.

6.9 Indemnification.

(a) The Company agrees to indemnify and hold harmless the Subscriber, its affiliates and their respective officers, directors, employees, agents and controlling persons (collectively, the "Indemnified Parties") from and against , any and all loss, liability, damage or deficiency suffered or incurred by any Indemnified Party by reason of any misrepresentation or breach of warranty by the Company or,after any applicable notice and/or cure periods, nonfulfillment of any covenant or agreement to be performed or complied with by the Company under this Agreement, the Transaction Documents; and will promptly reimburse the Indemnified Parties for all expenses (including reasonable fees and expenses of legal counsel) as incurred in connection with the investigation of, preparation for or defense of any pending or threatened claim related to or arising in any manner out of any of the foregoing, or any action or proceeding arising therefrom (collectively, "Proceedings"), whether or not such Indemnified Party is a formal party to any such Proceeding.

(b) If for any reason (other than a final non-appealable judgment finding any Indemnified Party liable for losses, claims, damages, liabilities or expenses for its gross negligence or willful misconduct) the foregoing indemnity is unavailable to an Indemnified Party or insufficient to hold an Indemnified Party harmless, then the Company shall contribute to the amount paid or payable by an Indemnified Party as a result of such loss, claim, damage, liability or expense in such proportion as is appropriate to reflect not only the relative benefits received by the Company on the one hand and the Advisor on the other, but also the relative fault by the Company and the Indemnified Party, as well as any relevant equitable considerations.

6.10 Non-Public Information. Except with respect to the material terms and conditions of the transactions contemplated by the Transaction Documents, the Company covenants and agrees that neither it, nor any other person acting on its behalf, will provide Subscriber or its agents or counsel with any information that the Company believes constitutes material non-public information, unless prior thereto Subscriber shall have executed a written agreement regarding the confidentiality and use of such information. The Company understands and confirms that Subscriber shall be relying on the foregoing covenant in effecting transactions in securities of the Company.

6.11 Use of Proceeds. Except as set forth on Schedule 6.11 attached hereto, the Company shall use the net proceeds from the sale of the Securities hereunder for working capital purposes and shall not use such proceeds for: (a) the satisfaction of any portion of the Company's debt (other than payment of trade payables in the ordinary course of the Company's business and prior practices), (b) the redemption of any Common Stock or Common Stock equivalents or (c) the settlement of any outstanding litigation.

6.12 DTC Eligibility. Within sixty (60) days of the Final Closing, the Company's will take all necessary steps to have its common stock eligible for deposit with the Depositary Trust Company.

VII. MISCELLANEOUS

7.1 Any and all notices or other communications or deliveries required or permitted to be provided hereunder shall be in writing and shall be deemed given and effective on the earliest of: (a) the date of transmission, if such notice or communication is delivered via facsimile or by electronic communication at or prior to 5:30 p.m. (New York City time) on a day in which the New York Stock Exchange is open for trading (a "Trading Day"), (b) the next Trading Day after the date of transmission, if such notice or communication is delivered via facsimile or electronic communication on a day that is not a Trading Day or later than 5:30 p.m. (New York City time) on any Trading Day, (c) the second (2nd) Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service or (d) upon actual receipt by the party to whom such notice is required to be given. The address for such notices and communications shall be addressed as follows:

if to the Company, to it at:

Actinium Pharmaceuticals, Inc.
501 Fifth Avenue, 3rd Floor
New York, New York 10017
Attn: Kaushik J. Dave, CEO

With a copy to (which shall not constitute notice):

Thomas Slusarczyk, Esq.
Hiscock & Barclay LLP
One Park Place
300 South State Street
Syracuse, New York 13202
Tel No.: (315) 235-2299
Fax No.: (315) 624-7359

if to the Subscriber, to the Subscriber's address indicated on the signature page of this Agreement.

With a copy to (which shall not constitute notice):

Sichenzia Ross Friedman Ference LLP
61 Broadway, 32nd Floor
New York, NY 10006
Attn: Richard A. Friedman, Esq.

if to the Escrow Agent, to it at:

Signature Bank
261 Madison Ave.
New York, NY 10016
Attn: Cliff Broder, Group Director and Senior Vice President
Fax: 646-822-1359

7.2 Except as otherwise provided herein, this Agreement shall not be changed, modified or amended except by a writing signed by the Company and the parties to be charged, and this Agreement may not be discharged except by performance in accordance with its terms or by a writing signed by the party to be charged. No waiver of any default with respect to any provision, condition or requirement of this Agreement shall be deemed to be a continuing waiver in the future or a waiver of any subsequent default or a waiver of any other provision, condition or requirement hereof, nor shall any delay or omission of any party to exercise any right hereunder in any manner impair the exercise of any such right.

7.3 This Agreement shall be binding upon and inure to the benefit of the parties hereto and to their respective heirs, legal representatives, successors and assigns. The Company may not assign this Agreement or any rights or obligations hereunder without the prior written consent of Subscriber (other than by merger). Subscriber may assign any or all of its rights under this Agreement to any person to whom Subscriber assigns or transfers any Securities, provided that such transferee agrees in writing to be bound, with respect to the transferred Securities, by the provisions of the Transaction Documents.

7.4 The Transaction Documents and the Offering Materials, together with the exhibits and schedules thereto, contain the entire understanding of the parties with respect to the subject matter hereof and supersede all prior agreements and understandings, oral or written, with respect to such matters, which the parties acknowledge have been merged into such documents, exhibits and schedules.

7.5 Upon the execution and delivery of this Agreement by the Subscriber and the Company, this Agreement shall become a binding obligation of the Subscriber with respect to the purchase of Securities as herein provided, subject, however, to the right hereby reserved by the Company to enter into the same agreements with other Subscriber and to reject any subscription, in whole or in part, provided the Company returns to Subscriber any funds paid by Subscriber with respect to such rejected subscription or portion thereof, without interest or deduction.

7.6 All questions concerning the construction, validity, enforcement and interpretation of the Transaction Documents shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. Each party agrees that all legal proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Agreement and any other Transaction Documents (whether brought against a party hereto or its respective affiliates, directors, officers, shareholders, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the City of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the City of New York, borough of Manhattan for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein (including with respect to the enforcement of any of the Transaction Documents), and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is improper or is an inconvenient venue for such proceeding.

7.7 In order to discourage frivolous claims the parties agree that unless a claimant in any proceeding arising out of this Agreement succeeds in establishing his claim and recovering a judgment against another party (regardless of whether such claimant succeeds against one of the other parties to the action), then the other party shall be entitled to recover from such claimant all of its/their reasonable legal costs and expenses relating to such proceeding and/or incurred in preparation therefor.

7.8 The holding of any provision of this Agreement to be invalid or unenforceable by a court of competent jurisdiction shall not affect any other provision of this Agreement, which shall remain in full force and effect. If any provision of this Agreement shall be declared by a court of competent jurisdiction to be invalid, illegal or incapable of being enforced in whole or in part, such provision shall be interpreted so as to remain enforceable to the maximum extent permissible consistent with applicable law and the remaining conditions and provisions or portions thereof shall nevertheless remain in full force and effect and enforceable to the extent they are valid, legal and enforceable, and no provisions shall be deemed dependent upon any other covenant or provision unless so expressed herein.

7.9 It is agreed that a waiver by either party of a breach of any provision of this Agreement shall not operate, or be construed, as a waiver of any subsequent breach by that same party.

7.10 The Company agrees to execute and deliver all such further documents, agreements and instruments and take such other and further action as may be necessary or appropriate to carry out the purposes and intent of this Agreement.

7.11 This Agreement may be executed in two or more counterparts each of which shall be deemed an original, but all of which shall together constitute one and the same instrument. In the event that any signature is delivered by facsimile transmission or by e-mail delivery of a ".pdf" format data file, such signature shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such facsimile or ".pdf" signature page were an original thereof.

7.12 Nothing in this Agreement shall create or be deemed to create any rights in any person or entity not a party to this Agreement.

7.13 In addition to being entitled to exercise all rights provided herein or granted by law, including recovery of damages, the Subscriber and the Company will be entitled to specific performance under this Agreement. The parties agree that monetary damages may not be adequate compensation for any loss incurred by reason of any breach of obligations described in the foregoing sentence and hereby agrees to waive in any action for specific performance of any such obligation the defense that a remedy at law would be adequate.

7.14 The Company further understands and acknowledges that (i) Subscriber may engage in hedging activities at various times during the period that the Securities are outstanding, including, without limitation, during the periods that the value of the Shares deliverable with respect to Securities are being determined, and (ii) such hedging activities (if any) could reduce the value of the existing stockholders' equity interests in the Company at and after the time that the hedging activities are being conducted. The Company acknowledges that such aforementioned hedging activities do not constitute a breach of any of the Transaction Documents.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the parties hereto have executed this Unit Purchase Agreement as of the date set forth in the first paragraph hereof.

**COMPANY:**

**ACTINIUM PHARMACEUTICALS, INC.**

By: _____
Name:
Title:

Address:

Tel:
Fax:
email:

**SUBSCRIBERS:**

The Subscribers set forth on Exhibit A to the Agreement have executed a Subscription Agreement with the Company which provides, among other things, that by executing the Subscription Agreement each Subscriber is deemed to have executed this UNIT PURCHASE AGREEMENT in all respects and is bound to purchase the Units set forth in such Subscription Agreement and Exhibit A to the Agreement.

EXHIBIT A

SCHEDULE OF SUBSCRIBERS

| **Name of Subscriber** | **Units** | **Shares of Common Stock** | **Warrant Shares** | **Total Purchase Price** |
|---|---|---|---|---|
| | | | | |
| | | | | |

EXHIBIT B

Form of Lock-Up Agreement

**To subscribe for Units**
**in the private offering of**
**ACTINIUM PHARMACEUTICALS, INC.**

1. **Date and Fill** in the number of units (the "Units") (each Unit consisting of (a) twenty thousand (20,000) shares of the Company's common stock par value $0.001 per share (the "Common Stock") at a purchase price of $6.00 per share and (b) a five-year warrant (collectively, the "Warrants" and together with the Units and Common Stock, the "Securities") to purchase five thousand (5,000) shares of Common Stock of the Company at an exercise price equal to $9.00 per share, subject to equitable adjustment thereunder (the "Exercise Price") at a negotiated price of $120,000 per Unit being subscribed for and **Complete and Sign** the Signature Page included in the Subscription Agreement.

2. **Initial** the Accredited Investor Certification attached to this Subscription Agreement.

3. **Complete and Sign** the Signature Page attached to this Subscription Agreement. **NOTICE: Please note that by executing the attached Subscription Agreement, you will deemed to have executed the Unit Purchase Agreement (Exhibit B to the Memorandum, as defined below), the Registration Rights Agreement (Exhibit D to the Memorandum) and agreed to the terms of the Warrant (Exhibit C to the Memorandum) and all exhibits, supplements and schedules thereto, as such may be amended from time to time (collectively the "Transaction Documents"), each of which are attached to the Memorandum, and will be treated for all purposes as if you did review, approve and execute, if required, each such Transaction Document even though you may not have physically signed the signature pages to such documents**.

4. **Complete and Return** the attached Purchaser Questionnaire and, if applicable, Wire Transfer Authorization attached to this Subscription Agreement.

5. **Return** all forms to your Account Executive and then send all signed original documents with a check (if applicable) to:

**Laidlaw & Co. (UK) Ltd.**
**546 Fifth Avenue**
**5th Floor**
**New York, NY 10036**

6. Please make your subscription payment payable to the order of "**Signature Bank, as Escrow Agent for Actinium Pharmaceuticals, Inc." Account No. 1502171417."**

**For wiring funds directly to the escrow account, use the following instructions:**

**Signature Bank**
**261 Madison Avenue**
**New York, NY 10016**

| | |
|---|---|
| **Acct. Name:** | **Signature Bank as Escrow Agent for Actinium Pharmaceuticals, Inc.** |
| **ABA Number:** | **026013576** |
| **SWIFT Code:** | **SIGNUS33** |
| **A/C Number:** | **1502171417** |
| **FBO:** | **Purchaser Name**<br>**Social Security Number**<br>**Address** |

**ALL SUBSCRIPTION DOCUMENTS MUST BE FILLED IN AND SIGNED EXACTLY AS SET FORTH WITHIN.**

**SUBSCRIPTION AGREEMENT**

**ACTINIUM PHARMACEUTICALS, INC.**

Actinium Pharmaceuticals, Inc.
501 Fifth Avenue, 3rd Floor
New York, New York 10017
Attn: Kaushik J. Dave, CEO

Ladies and Gentlemen:

**1. Subscription.** The undersigned (the "Purchaser") will purchase the number of units (collectively, the "Units") of securities of Actinium Pharmaceuticals, Inc., a Delaware corporation (the "Company"), set forth on the signature page to this Subscription Agreement, at a purchase price of $120,000 per Unit, with each Unit consisting of (a) twenty thousand (20,000) shares of the Company's common stock par value $0.001 per share (the "Common Stock") at a purchase price of $6.00 per share and (b) a five-year warrant (collectively, the "Warrants" and together with the Units and Common Stock, the "Securities") to purchase five thousand (5,000) shares of Common Stock of the Company at an exercise price equal to $9.00 per share, subject to equitable adjustment thereunder (the "Exercise Price"). The Units are being offered (the "Offering") by the Company pursuant to the offering terms set forth in the Company's Confidential Private Placement Memorandum, dated December 11, 2013, as may be amended and/or supplemented, from time to time (collectively, the "Memorandum").

The Units are being offered on a "reasonable efforts, all or none" basis with respect to the minimum of $2,000,000 purchase price for the Units (the "Minimum Offering") and thereafter on a "reasonable efforts" basis up to the maximum of $6,000,000 purchase price for the Units (subject to the right of the Company to increase the maximum offering amount to $8,000,000 to cover over-allotments) (the "Maximum Offering"). The Units will be offered for sale until the earlier of (i) the date upon which subscriptions for the Maximum Offering offered hereunder have been accepted, (ii) January 31, 2014 (subject to the right of the Company and the Placement Agent to extend the offering until February 28, 2014 without further notice to investors), or (iii) the date upon which the Company and the Placement Agent elect to terminate the Offering (the "Termination Date").

The Company may hold an initial closing ("Initial Closing") at any time after the receipt of accepted subscriptions for the Minimum Offering. After the Initial Closing, subsequent closings with respect to additional Securities may take place at any time prior to the Termination Date as determined by the Company, with respect to subscriptions accepted prior to the Termination Date (each such closing, together with the Initial Closing, being referred to as a "Closing"). The last Closing of the Offering, occurring on or prior to the Termination Date, shall be referred to as the "Final Closing". Any subscription documents or funds received after the Final Closing will be returned, without interest or deduction. In the event that the any Closing does not occur prior to the Termination Date, all amounts paid by the Purchaser shall be returned to the Purchaser, without interest or deduction.

Subscriptions for investment below the minimum investment may be accepted at the discretion of the Placement Agent and the Company. The Company reserves the right (but is not obligated) to have its employees, agents, officers, directors and affiliates purchase Units in the Offering and all such purchases will be counted towards the Minimum Offering and the Maximum Offering.

The terms of the Offering are more completely described in the Memorandum and such terms are incorporated herein in their entirety. Certain capitalized terms used, but not otherwise defined herein, will have the respective meanings provided in the Memorandum.

2. **Payment.** The Purchaser encloses herewith a check payable to, or will immediately make a wire transfer payment to, "**Signature Bank, as Escrow Agent for Actinium Pharmaceuticals, Inc.** ," in the full amount of the purchase price of the Units being subscribed for. Together with the check for, or wire transfer of, the full purchase price, the Purchaser is delivering a completed and executed Signature Page to this Subscription Agreement along with a completed and executed Accredited Investor Certification, which are annexed hereto. **By executing this Subscription Agreement, you will be deemed to have executed the Unit Purchase Agreement (Exhibit B to the Memorandum) and the Registration Rights Agreement (Exhibit D to the Memorandum) as well as agreed to the terms of the Warrant (Exhibit C to the Memorandum) and all exhibits, supplements and schedules thereto, as such may be amended from time to time (collectively the "Transaction Documents"), each of which are attached to the Memorandum, and will be treated for all purposes as if you did review, approve and execute, if required, each such Transaction Document even though you may not have physically signed the signature pages to such documents.**

3 . **Deposit of Funds.** All payments made as provided in Section 2 hereof will be deposited by the Purchaser as soon as practicable with Signature Bank, as escrow agent (the "Escrow Agent"), or such other escrow agent appointed by Laidlaw and the Company, in a non-interest bearing escrow account (the "Escrow Account"). In the event that the Company does not effect a Closing during the Offering Period, the Escrow Agent will refund all subscription funds, without deduction and/or interest accrued thereon, and will return the subscription documents to each Purchaser. If the Company or Laidlaw rejects a subscription, either in whole or in part (at the sole discretion of the Company or Laidlaw), the rejected subscription funds or the rejected portion thereof will be returned promptly to such Purchaser without interest, penalty, expense or deduction.

4. **Acceptance of Subscription.** The Purchaser understands and agrees that the Company or Laidlaw, each in its sole discretion, reserves the right to accept this or any other subscription for the Units, in whole or in part, notwithstanding prior receipt by the Purchaser of notice of acceptance of this or any other subscription. The Company will have no obligation hereunder until the Company executes and delivers to the Purchaser an executed copy of the Purchase Agreement. If Purchaser's subscription is rejected in whole (at the sole discretion of the Company or Laidlaw), the Offering is terminated or the Minimum Offering is not subscribed for and accepted prior to the Termination Date, all funds received from the Purchaser will be returned without interest, penalty, expense or deduction, and this Subscription Agreement will thereafter be of no further force or effect. If Purchaser's subscription is rejected in part (at the sole discretion of the Company or Laidlaw) and the Company accepts the portion not so rejected, the funds for the rejected portion of such subscription will be returned without interest, penalty, expense or deduction, and this Subscription Agreement will continue in full force and effect to the extent such subscription was accepted. The Purchaser may revoke its subscription and obtain a return of the subscription amount paid to the Escrow Account at any time before the date of the Initial Closing. The Purchaser may not revoke this subscription or obtain a return of the subscription amount paid to the Escrow Agent on or after the date of the Initial Closing. Any subscription received after the Initial Closing but prior to the Termination Date shall be irrevocable.

5 . **Representations and Warranties of the Purchaser.** The Purchaser hereby acknowledges, represents, warrants, and agrees as follows:

(a) None of the Units, the Common Stock, the Warrants or the shares of Common Stock of the Company issuable upon exercise of the Warrants (collectively referred to hereafter as the "Securities") are registered under the Securities Act of 1933, as amended (the "Securities Act"), or any state securities laws. The Purchaser understands that the offering and sale of the Securities is intended to be exempt from registration under the Securities Act, by virtue of Section 4(2) thereof and the provisions of Regulation D promulgated thereunder, based, in part, upon the representations, warranties and agreements of the Purchaser contained in this Subscription Agreement and the Purchase Agreement;

(b) The Purchaser and the Purchaser's attorney, accountant, purchaser representative and/or tax advisor, if any (collectively, "Advisors"), have received and have carefully reviewed the Memorandum, this Subscription Agreement, and each of the Transaction Documents and all other documents requested by the Purchaser or its Advisors, if any, and understand the information contained therein, prior to the execution of this Subscription Agreement;

(c) Neither the Securities and Exchange Commission (the "Commission") nor any state securities commission has approved or disapproved of the Securities or passed upon or endorsed the merits of the Offering or confirmed the accuracy or determined the adequacy of the Memorandum. The Memorandum has not been reviewed by any Federal, state or other regulatory authority. Any representation to the contrary may be a criminal offense;

(d) All documents, records, and books pertaining to the investment in the Securities including, but not limited to, all information regarding the Company and the Securities, have been made available for inspection and reviewed by the Purchaser and its Advisors, if any;

(e) The Purchaser and its Advisors, if any, have had a reasonable opportunity to ask questions of and receive answers from the Company's officers and any other persons authorized by the Company to answer such questions, concerning, among other related matters, the Offering, the Securities, the Transaction Documents and the business, financial condition, results of operations and prospects of the Company and all such questions have been answered by the Company to the full satisfaction of the Purchaser and its Advisors, if any;

(f) In evaluating the suitability of an investment in the Company, the Purchaser has not relied upon any representation or other information (oral or written) other than as stated in the Memorandum;

(g) The Purchaser is unaware of, is in no way relying on, and did not become aware of the offering of the Securities through or as a result of, any form of general solicitation or general advertising including, without limitation, any article, notice, advertisement or other communication published in any newspaper, magazine or similar media or broadcast over television, radio or over the Internet, in connection with the offering and sale of the Securities and is not subscribing for the Securities and did not become aware of the Offering through or as a result of any seminar or meeting to which the Purchaser was invited by, or any solicitation of a subscription by, a person not previously known to the Purchaser in connection with investments in securities generally;

(h) The Purchaser has taken no action which would give rise to any claim by any person for brokerage commissions, finders' fees or the like relating to this Subscription Agreement or the transactions contemplated hereby (other than fees to be paid by the Company to Laidlaw, as described in the Memorandum);

(i) The Purchaser, either alone or together with its Advisors, if any, has such knowledge and experience in financial, tax, and business matters, and, in particular, investments in securities, so as to enable it to utilize the information made available to it in connection with the Offering to evaluate the merits and risks of an investment in the Securities and the Company and to make an informed investment decision with respect thereto;

(j) The Purchaser is not relying on the Company, Laidlaw or any of their respective employees or agents with respect to the legal, tax, economic and related considerations of an investment in any of the Securities and the Purchaser has relied on the advice of, or has consulted with, only its own Advisors;

(k) The Purchaser is acquiring the Securities solely for such Purchaser's own account for investment and not with a view to resale or distribution thereof, in whole or in part. The Purchaser has no agreement or arrangement, formal or informal, with any person to sell or transfer all or any part of any of the Securities and the Purchaser has no plans to enter into any such agreement or arrangement;

(l) The Purchaser understands and agrees that purchase of the Securities is a high risk investment and the Purchaser is able to afford an investment in a speculative venture having the risks and objectives of the Company. The Purchaser must bear the substantial economic risks of the investment in the Securities indefinitely because none of the Securities may be sold, hypothecated or otherwise disposed of unless subsequently registered under the Securities Act and applicable state securities laws or an exemption from such registration is available. Legends will be placed on the certificates representing the Common Stock, the Warrants and the shares of Common Stock issuable upon exercise of the Warrants to the effect that such securities have not been registered under the Securities Act or applicable state securities laws and appropriate notations thereof will be made in the Company's books;

(m) The Purchaser has adequate means of providing for such Purchaser's current financial needs and foreseeable contingencies and has no need for liquidity from its investment in the Securities for an indefinite period of time;

(n) The Purchaser is aware that an investment in the Securities involves a number of very significant risks and has carefully read and considered the Company's periodic filings with the United States Securities and Exchange Commission (the "Commission"), and the matters set forth in the Memorandum and, in particular, the matters under the caption "Risk Factors" therein and understands any of such risk may materially adversely affect the Company's operations and future prospects;

(o) At the time such Purchaser was offered the Securities, it was, and as of the date hereof it is, and on each date on which it exercises any Warrants, it will be an "accredited investor" within the meaning of Regulation D, Rule 501(a), promulgated by the Commission under the Securities Act and has truthfully and accurately completed the Purchaser Questionnaire attached to this Subscription Agreement and will submit to the Company such further assurances of such status as may be reasonably requested by the Company;

(p) The Purchaser: (i) if a natural person, represents that the Purchaser has reached the age of 21 and has full power and authority to execute and deliver this Subscription Agreement and all other related agreements or certificates and to carry out the provisions hereof and thereof; (ii) if a corporation, partnership, or limited liability company, or association, joint stock company, trust, unincorporated organization or other entity, represents that such entity was not formed for the specific purpose of acquiring the Securities, such entity is duly organized, validly existing and in good standing under the laws of the state of its organization, the consummation of the transactions contemplated hereby is authorized by, and will not result in a violation of state law or its charter or other organizational documents, such entity has full power and authority to execute and deliver this Subscription Agreement and all other related agreements or certificates and to carry out the provisions hereof and thereof and to purchase and hold the Securities, the execution and delivery of this Subscription Agreement has been duly authorized by all necessary action, this Subscription Agreement has been duly executed and delivered on behalf of such entity and is a legal, valid and binding obligation of such entity; or (iii) if executing this Subscription Agreement in a representative or fiduciary capacity, represents that it has full power and authority to execute and deliver this Subscription Agreement in such capacity and on behalf of the subscribing individual, ward, partnership, trust, estate, corporation, or limited liability company or partnership, or other entity for whom the Purchaser is executing this Subscription Agreement, and such individual, partnership, ward, trust, estate, corporation, or limited liability company or partnership, or other entity has full right and power to perform pursuant to this Subscription Agreement and make an investment in the Company, and represents that this Subscription Agreement constitutes a legal, valid and binding obligation of such entity. The execution and delivery of this Subscription Agreement will not violate or be in conflict with any order, judgment, injunction, agreement or controlling document to which the Purchaser is a party or by which it is bound;

(q) The Purchaer hereby acknowledges receipt and careful review of this Agreement, the Memorandum, the Warrant, the Registration Rights Agreement and all other exhibits, annexes and appendices thereto (collectively referred to as the "Offering Materials"), and has had access to the Company's Annual Report on Form 10-K and the exhibits thereto for the fiscal year ended December 31, 2012 (the "Form 10-K"), the Company's Quarterly Report on Form 10-Q and the exhibits thereto for the quarterly periods ended March 31, June 30 and September 30, 2013 (collectively, the "Form 10-Q") and all subsequent periodic and current reports filed with the United States Securities and Exchange Commission (the "SEC") as publicly filed with and available at the website of the SEC which can be accessed at www.sec.gov, and hereby represents that the Purchaser has been furnished by the Company during the course of the Offering with all information regarding the Company, the terms and conditions of the Offering and any additional information that the Purchaser has requested or desired to know, has been afforded the opportunity to ask questions of and receive answers from duly authorized officers or other representatives of the Company concerning the Company and has been provided any such additional information by the Company in writing to the full satisfaction of the Purchaser, if any;

(r) The Purchaser represents to the Company that any information which the undersigned has heretofore furnished or is furnishing herewith to the Company is complete and accurate and may be relied upon by the Company in determining the availability of an exemption from registration under Federal and state securities laws in connection with the offering of securities as described in the Memorandum;

(s) The Purchaser has significant prior investment experience, including investment in non-listed and unregistered securities. The Purchaser has a sufficient net worth to sustain a loss of its entire investment in the Company in the event such a loss should occur. The Purchaser's overall commitment to investments which are not readily marketable is not excessive in view of the Purchaser's net worth and financial circumstances and the purchase of the Securities will not cause such commitment to become excessive. This investment is a suitable one for the Purchaser;

(t) The Purchaser is satisfied that it has received adequate information with respect to all matters which it or its Advisors, if any, consider material to its decision to make this investment;

(u) The Purchaser acknowledges that any and all estimates or forward-looking statements or projections included in the Memorandum were prepared by the Company in good faith, but that the attainment of any such projections, estimates or forward-looking statements cannot be guaranteed, will not be updated by the Company and should not be relied upon;

(v) No oral or written representations have been made, or oral or written information furnished, to the Purchaser or its Advisors, if any, in connection with the offering of the Securities which are in any way inconsistent with the information contained in the Memorandum;

(w) Within five (5) days after receipt of a request from the Company, the Purchaser will provide such information and deliver such documents as may reasonably be necessary to comply with any and all laws and ordinances to which the Company is subject;

(x) THE SECURITIES OFFERED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OR THE SECURITIES LAWS OF CERTAIN STATES AND ARE BEING OFFERED AND SOLD IN RELIANCE ON EXEMPTIONS FROM THE REGISTRATION REQUIREMENTS OF SAID ACT AND SUCH LAWS. THE SECURITIES ARE SUBJECT TO RESTRICTIONS ON TRANSFERABILITY AND RESALE AND MAY NOT BE TRANSFERRED OR RESOLD EXCEPT AS PERMITTED UNDER SAID ACT AND SUCH LAWS PURSUANT TO REGISTRATION OR EXEMPTION THEREFROM. THE SECURITIES HAVE NOT BEEN APPROVED OR DISAPPROVED BY THE COMMISSION, ANY STATE SECURITIES COMMISSION OR ANY OTHER REGULATORY AUTHORITY, NOR HAVE ANY OF THE FOREGOING AUTHORITIES PASSED UPON OR ENDORSED THE MERITS OF THIS OFFERING OR THE ACCURACY OR ADEQUACY OF THE MEMORANDUM. ANY REPRESENTATION TO THE CONTRARY IS UNLAWFUL;

(y) In making an investment decision, investors must rely on their own examination of Company and the terms of the Offering, including the merits and risks involved. Investors should be aware that they will be required to bear the financial risks of this investment for an indefinite period of time;

( z ) **(For ERISA plans only)** The fiduciary of the ERISA plan (the "***Plan***") represents that such fiduciary has been informed of and understands the Company's investment objectives, policies and strategies, and that the decision to invest "plan assets" (as such term is defined in ERISA) in the Company is consistent with the provisions of ERISA that require diversification of plan assets and impose other fiduciary responsibilities. The Purchaser or Plan fiduciary (a) is responsible for the decision to invest in the Company; (b) is independent of the Company and any of its affiliates; (c) is qualified to make such investment decision; and (d) in making such decision, the Purchaser or Plan fiduciary has not relied on any advice or recommendation of the Company or any of its affiliates; and

(aa) The Purchaser has read in its entirety the Memorandum and all exhibits and annexes thereto, including, but not limited to, all information relating to the Company, and the Securities, and understands fully to its full satisfaction all information included in the Memorandum including, but not limited to, the Section entitled "Risk Factors" as well as any other information in the Offering Materials;

(bb) The Purchaser represents that (i) the Purchaser was contacted regarding the sale of the Securities by the Company or the Placement Agent (or another person whom the Purchaser believed to be an authorized agent or representative thereof) with whom the Purchaser had a prior substantial pre-existing relationship and (ii) it did not learn of the offering of the Securities by means of any form of general solicitation or general advertising, and in connection therewith, the Purchaser did not (A) receive or review any advertisement, article, notice or other communication published in a newspaper or magazine or similar media or broadcast over television or radio, whether closed circuit, or generally available; or (B) attend any seminar meeting or industry investor conference whose attendees were invited by any general solicitation or general advertising;

(cc) The Purchaser consents to the placement of a legend on any certificate or other document evidencing the Securities and, when issued, the shares of Common Stock issuable upon exercise of the Warrants (the "Warrant Shares"), that such securities have not been registered under the Securities Act or any state securities or "blue sky" laws and setting forth or referring to the restrictions on transferability and sale thereof contained in this Agreement. The Purchaser is aware that the Company will make a notation in its appropriate records with respect to the restrictions on the transferability of such Securities. The legend to be placed on each certificate shall be in form substantially similar to the following:

> "THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE UNITED STATES SECURITIES ACT OF 1933, AS AMENDED (THE "ACT") OR ANY STATE SECURITIES OR "BLUE SKY LAWS," AND MAY NOT BE OFFERED, SOLD, TRANSFERRED, ASSIGNED, PLEDGED OR HYPOTHECATED ABSENT AN EFFECTIVE REGISTRATION THEREOF UNDER SUCH ACT OR COMPLIANCE WITH RULE 144 PROMULGATED UNDER SUCH ACT, OR UNLESS THE COMPANY HAS RECEIVED AN OPINION OF COUNSEL, REASONABLY SATISFACTORY TO THE COMPANY AND ITS COUNSEL, THAT SUCH REGISTRATION IS NOT REQUIRED."

(dd) The Purchaser acknowledges that if he or she is a Registered Representative of a Financial Industry Regulatory Authority ("FINRA") member firm, he or she must give such firm the notice required by the FINRA's Rules of Fair Practice, receipt of which must be acknowledged by such firm prior to an investment in the Securities.

(ee) To effectuate the terms and provisions hereof, the Purchaser hereby appoint the Placement Agent as its attorney-in-fact (and the Placement Agent hereby accepts such appointment) for the purpose of carrying out the provisions of the Escrow Agreement by and between the Company, the Placement Agent and Signature Bank (the "Escrow Agreement") including, without limitation, taking any action on behalf of, or at the instruction of, the Purchaser and executing any release notices required under the Escrow Agreement and taking any action and executing any instrument that the Placement Agent may deem necessary or advisable (and lawful) to accomplish the purposes hereof. All acts done under the foregoing authorization are hereby ratified and approved and neither the Placement Agent nor any designee nor agent thereof shall be liable for any acts of commission or omission, for any error of judgment, for any mistake of fact or law except for acts of gross negligence or willful misconduct. This power of attorney, being coupled with an interest, is irrevocable while the Escrow Agreement remains in effect.

(ff) The Purchaser agrees not to issue any public statement with respect to the Offering, Purchaser's investment or proposed investment in the Company or the terms of any agreement or covenant between them and the Company without the Company's prior written consent, except such disclosures as may be required under applicable law.

(gg) The Purchaser understands, acknowledges and agrees with the Company that this subscription may be rejected, in whole or in part, by the Company, in the sole and absolute discretion of the Company, at any time before any Closing notwithstanding prior receipt by the Purchaser of notice of acceptance of the Purchaser's subscription.

(hh) The Purchaser acknowledges that the information contained in the Offering Materials or otherwise made available to the Purchaser is confidential and non-public and agrees that all such information shall be kept in confidence by the Purchaser and neither used by the Purchaser for the Purchaser's personal benefit (other than in connection with this subscription) nor disclosed to any third party for any reason, notwithstanding that a Purchaser's subscription may not be accepted by the Company; provided, however, that (a) the Purchaser may disclose such information to its affiliates and advisors who may have a need for such information in connection with providing advice to the Purchaser with respect to its investment in the Company so long as such affiliates and advisors have an obligation of confidentiality, and (b) this obligation shall not apply to any such information that (i) is part of the public knowledge or literature and readily accessible at the date hereof, (ii) becomes part of the public knowledge or literature and readily accessible by publication (except as a result of a breach of this provision) or (iii) is received from third parties without an obligation of confidentiality (except third parties who disclose such information in violation of any confidentiality agreements or obligations, including, without limitation, any subscription or other similar agreement entered into with the Company).

(ii) The Purchaser understands that Rule 144 promulgated under the Act ("Rule 144") requires, among other conditions, a minimum holding period of six-months prior to the resale of securities acquired in a non-public offering without having to satisfy the registration requirements under the Act. The Purchaser understands and hereby acknowledges that the Company is under no obligation to register the Securities under the Act or any state securities or "blue sky" laws or to assist the Purchaser in obtaining an exemption from various registration requirements, other than as set forth herein.

6. **Representations and Warranties of the Company.** The representations and warranties contained in Article 3 of the Purchase Agreement to be entered into by the Company and the Purchasers shall be incorporated herein by reference and shall be deemed to be made under this Subscription Agreement.

7 . **Indemnification.** The Purchaser agrees to indemnify and hold harmless the Company, Laidlaw and each of their respective officers, directors, managers, employees, agents, attorneys, control persons and affiliates from and against all losses, liabilities, claims, damages, costs, fees and expenses whatsoever (including, but not limited to, any and all expenses incurred in investigating, preparing or defending against any litigation commenced or threatened) based upon or arising out of any actual or alleged false acknowledgment, representation or warranty, or misrepresentation or omission to state a material fact, or breach by the Purchaser of any covenant or agreement made by the Purchaser herein or in any other document delivered in connection with this Subscription Agreement or any other Transaction Document.

8. **Binding Effect.** This Subscription Agreement will survive the death or disability of the Purchaser and will be binding upon and inure to the benefit of the parties and their heirs, executors, administrators, successors, legal representatives, and permitted assigns. If the Purchaser is more than one person, the obligations of the Purchaser hereunder will be joint and several and the agreements, representations, warranties and acknowledgments herein will be deemed to be made by and be binding upon each such person and such person's heirs, executors, administrators, successors, legal representatives and permitted assigns.

9. **Modification.** This Subscription Agreement will not be modified or waived except by an instrument in writing signed by the party against whom any such modification or waiver is sought.

10. **Notices.** Any notice or other communication required or permitted to be given hereunder will be in writing and will be mailed by certified mail, return receipt requested, or delivered by reputable overnight courier such as FedEx against receipt to the party to whom it is to be given (a) if to the Company, at the address set forth in the Purchase Agreement or (b) if to the Purchaser, at the address set forth on the signature page hereof (or, in either case, to such other address as the party will have furnished in writing in accordance with the provisions of this Section 10). Any notice or other communication given by certified mail will be deemed given at the time of certification thereof, except for a notice changing a party's address which will be deemed given at the time of receipt thereof. Any notice or other communication given by overnight courier will be deemed given at the time of delivery.

11. **Assignability.** This Subscription Agreement and the rights, interests and obligations hereunder are not transferable or assignable by the Purchaser and the transfer or assignment of any of the Securities will be made only in accordance with all applicable laws.

12. **Applicable Law.** This Subscription Agreement will be governed by and construed under the laws of the State of New York as applied to agreements among New York residents entered into and to be performed entirely within New York. The parties hereto (1) agree that any legal suit, action or proceeding arising out of or relating to this Subscription Agreement will be instituted exclusively in New York State Supreme Court, County of New York, or in the United States District Court for the Southern District of New York, (2) waive any objection which the parties may have now or hereafter to the venue of any such suit, action or proceeding, and (3) irrevocably consent to the jurisdiction of the New York State Supreme Court, County of New York, and the United States District Court for the Southern District of New York in any such suit, action or proceeding. Each of the parties hereto further agrees to accept and acknowledge service of any and all process which may be served in any such suit, action or proceeding in the New York State Supreme Court, County of New York, or in the United States District Court for the Southern District of New York and agrees that service of process upon it mailed by certified mail to its address will be deemed in every respect effective service of process upon it, in any such suit, action or proceeding. THE PARTIES HERETO AGREE, TO THE EXTENT PERMITTED BY APPLICABLE LAW, TO WAIVE THEIR RESPECTIVE RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF THIS SUBSCRIPTION AGREEMENT OR ANY DOCUMENT OR AGREEMENT CONTEMPLATED HEREBY.

13. **Blue Sky Qualification.** The purchase of Securities pursuant to this Subscription Agreement is expressly conditioned upon the exemption from qualification of the offer and sale of the Securities from applicable federal and state securities laws.

14. **Use of Pronouns.** All pronouns and any variations thereof used herein will be deemed to refer to the masculine, feminine, neuter, singular or plural as the identity of the person or persons referred to may require.

15. **Confidentiality.** The Purchaser acknowledges and agrees that any information or data the Purchaser has acquired from or about the Company not otherwise properly in the public domain, was received in confidence. The Purchaser agrees not to divulge, communicate or disclose, except as may be required by law or for the performance of this Subscription Agreement, or use to the detriment of the Company or for the benefit of any other person or persons, or misuse in any way, any confidential information of the Company, including any trade or business secrets of the Company and any business materials that are treated by the Company as confidential or proprietary, including, without limitation, confidential information obtained by or given to the Company about or belonging to third parties.

16. **Miscellaneous.**

(a) This Subscription Agreement, together with the other Transaction Documents, constitute the entire agreement between the Purchaser and the Company with respect to the subject matter hereof and supersede all prior oral or written agreements and understandings, if any, relating to the subject matter hereof. The terms and provisions of this Subscription Agreement may be waived, or consent for the departure therefrom granted, only by a written document executed by the party entitled to the benefits of such terms or provisions.

(b) Each of the Purchaser's and the Company's representations and warranties made in this Subscription Agreement will survive the execution and delivery hereof and delivery of the Securities.

(c) Each of the parties hereto will pay its own fees and expenses (including the fees of any attorneys, accountants, appraisers or others engaged by such party) in connection with this Subscription Agreement and the transactions contemplated hereby whether or not the transactions contemplated hereby are consummated.

(d) This Subscription Agreement may be executed in one or more counterparts each of which will be deemed an original, but all of which will together constitute one and the same instrument.

(e) Each provision of this Subscription Agreement will be considered separable and, if for any reason any provision or provisions hereof are determined to be invalid or contrary to applicable law, such invalidity or illegality will not impair the operation of or affect the remaining portions of this Subscription Agreement.

(f) Paragraph titles are for descriptive purposes only and will not control or alter the meaning of this Subscription Agreement as set forth in the text.

17. **Signature Page. It is hereby agreed by the parties hereto that the execution by the Purchaser of this Subscription Agreement, in the place set forth hereinbelow, will be deemed and constitute the agreement by the Purchaser to be bound by all of the terms and conditions hereof as well as by the Unit Purchase Agreement and each of the other Transaction Documents, and will be deemed and constitute the execution by the Purchaser of all such Transaction Documents without requiring the Purchaser's separate signature on any of such Transaction Documents.**

**[Remainder of page intentionally left blank.]**

## ANTI-MONEY LAUNDERING REQUIREMENTS

### The USA PATRIOT Act

The USA PATRIOT Act is designed to detect, deter, and punish terrorists in the United States and abroad. The Act imposes new anti-money laundering requirements on brokerage firms and financial institutions. Since April 24, 2002 all brokerage firms have been required to have new, comprehensive anti-money laundering programs.

To help you understand theses efforts, we want to provide you with some information about money laundering and our steps to implement the USA PATRIOT Act.

### What is money laundering?

Money laundering is the process of disguising illegally obtained money so that the funds appear to come from legitimate sources or activities. Money laundering occurs in connection with a wide variety of crimes, including illegal arms sales, drug trafficking, robbery, fraud, racketeering, and terrorism.

### How big is the problem and why is it important?

The use of the U.S. financial system by criminals to facilitate terrorism or other crimes could well taint our financial markets. According to the U.S. State Department, one recent estimate puts the amount of worldwide money laundering activity at $1 trillion a year.

**What are we required to do to eliminate money laundering?**

Under new rules required by the USA PATRIOT Act, our anti-money laundering program must designate a special compliance officer, set up employee training, conduct independent audits, and establish policies and procedures to detect and report suspicious transaction and ensure compliance with the new laws.

As part of our required program, we may ask you to provide various identification documents or other information. Until you provide the information or documents we need, we may not be able to effect any transactions for you.

**ACTINIUM PHARMACEUTICALS, INC.**
SIGNATURE PAGE TO
SUBSCRIPTION AGREEMENT

**Purchaser hereby elects to purchase a total of _____Unit(s) at a purchase price of $120,000 per Unit (NOTE: to be completed by the Purchaser).**

Date (NOTE: To be completed by the Purchaser): _____, 201_

If the Purchaser is an INDIVIDUAL, and if purchased as JOINT TENANTS, as TENANTS IN COMMON, or as COMMUNITY PROPERTY:

| | |
|---|---|
| **Print Name(s)** | **Social Security Number(s)** |
| **Signature(s) of Purchaser(s)** | **Signature** |
| **Date** | **Address** |

If the Purchaser is a PARTNERSHIP, CORPORATION, LIMITED LIABILITY COMPANY or TRUST:

| | |
|---|---|
| **Name of Partnership, Corporation, Limited Liability Company or Trust** | **Federal Taxpayer Identification Number** |
| **By:** | |
| **Name:** | **State of Organization** |
| **Title:** | |
| **Date** | **Address** |

**AGREED AND ACCEPTED:**

**ACTINIUM PHARMACEUTICALS, INC.**

By: _____ _____
Name: Date
Title:

**ACTINIUM PHARMACEUTICALS, INC.**
**ACCREDITED INVESTOR CERTIFICATION**

**For Individual Investors Only**
**(All individual investors must *INITIAL* where appropriate. Where there are joint investors both parties must *INITIAL*):**

**Initial _____** I certify that I have a "net worth" of at least $1 million either individually or through aggregating my individual holdings and those in which I have a joint, community property or other similar shared ownership interest with my spouse. For purposes of calculating net worth under this paragraph, (i) the primary residence shall not be included as an asset, (ii) to the extent that the indebtedness that is secured by the primary residence is in excess of the fair market value of the primary residence, the excess amount shall be included as a liability, and (iii) if the amount of outstanding indebtedness that is secured by the primary residence exceeds the amount outstanding 60 days prior to the execution of this Subscription Agreement, other than as a result of the acquisition of the primary residence, the amount of such excess shall be included as a liability.

**Initial _____** I certify that I have had an annual gross income for the past two years of at least $200,000 (or $300,000 jointly with my spouse) and expect my income (or joint income, as appropriate) to reach the same level in the current year.

**For Non-Individual Investors**
**(all Non-Individual Investors must *INITIAL* where appropriate):**

**Initial _____** The undersigned certifies that it is a partnership, corporation, limited liability company or business trust that is 100% owned by persons who meet either of the criteria for Individual Investors, above.

**Initial _____** The undersigned certifies that it is a partnership, corporation, limited liability company or business trust that has total assets of at least $5 million and was not formed for the purpose of investing in Company.

**Initial _____** The undersigned certifies that it is an employee benefit plan whose investment decision is made by a plan fiduciary (as defined in ERISA §3(21)) that is a bank, savings and loan association, insurance company or registered investment adviser.

**Initial _____** The undersigned certifies that it is an employee benefit plan whose total assets exceed $5,000,000 as of the date of the Subscription Agreement.

**Initial _____** The undersigned certifies that it is a self-directed employee benefit plan whose investment decisions are made solely by persons who meet either of the criteria for Individual Investors, above.

**Initial _____** The undersigned certifies that it is a U.S. bank, U.S. savings and loan association or other similar U.S. institution acting in its individual or fiduciary capacity.

**Initial _____** The undersigned certifies that it is a broker-dealer registered pursuant to §15 of the Securities Exchange Act of 1934.

**Initial _____** The undersigned certifies that it is an organization described in §501(c)(3) of the Internal Revenue Code with total assets exceeding $5,000,000 and not formed for the specific purpose of investing in Company.

**Initial _____** The undersigned certifies that it is a trust with total assets of at least $5,000,000, not formed for the specific purpose of investing in Company, and whose purchase is directed by a person with such knowledge and experience in financial and business matters that he is capable of evaluating the merits and risks of the prospective investment.

**Initial _____** The undersigned certifies that it is a plan established and maintained by a state or its political subdivisions, or any agency or instrumentality thereof, for the benefit of its employees, and which has total assets in excess of $5,000,000.

**Initial _____** The undersigned certifies that it is an insurance company as defined in §2(a)(13) of the Securities Act of 1933, as amended, or a registered investment company.

**ACTINIUM PHARMACEUTICALS, INC.**
Purchaser Questionnaire
**(*Must be completed by Purchaser)***

**Section A - Individual Purchaser Information**

Purchaser Name(s):

_____

Individual executing Profile or Trustee:

_____

Social Security Numbers / Federal I.D. Number:

_____

Date of Birth: _____ Marital Status: _____

Joint Party Date of Birth:_____
Investment Experience (Years): _____

Annual Income: _____
Liquid Net Worth:_____

Net Worth: _____

Investment Objectives ***(circle one or more):*** Long Term Capital Appreciation, Short Term Trading, Businessman's Risk, Income, Safety of Principal, Tax Exempt Income or other

Home Street Address:

_____

Home City, State & Zip Code:

_____

Home Phone: _____ Home Fax: _____

Home Email: _____

Employer:

_____

Employer Street Address:

_____

Employer City, State & Zip Code:

_____

Bus. Phone: _____ Bus. Fax: _____

Bus. Email: _____

Type of Business:

_____

LAIDLAW Account Executive / Outside Broker/Dealer:

_____

Please check if you are a FINRA member or affiliate of a FINRA member firm: _____

**ACTINIUM PHARMACEUTICALS, INC.**
**Purchaser Questionnaire**
**(*Must be completed by Purchaser)***

**Section B – Entity Purchaser Information**

Purchaser Name(s):
_____

Authorized Individual executing Profile or Trustee:
_____

Social Security Numbers / Federal I.D. Number:
_____

Investment Experience (Years): _____

Annual Income: _____

Net Worth: _____

Was the Entity formed for the specific purpose of purchasing the Common Stock and Warrants?
[ ] Yes [ ] No

Principal Purpose (Trust)_____

Type of Business:
_____

Investment Objectives ***(circle one or more):*** Long Term Capital Appreciation, Short Term Trading, Businessman's Risk, Income, Safety of Principal, Tax Exempt Income or other

Street Address:
_____

City, State & Zip Code:
_____

Phone: _____ Fax: _____

Email: _____

Laidlaw Account Executive / Outside Broker/Dealer:
_____

Please check if you are a FINRA member or affiliate of a FINRA member firm: _____

**Section C – Form of Payment – Check or Wire Transfer**

____ Check payable to "**SIGNATURE BANK, AS ESCROW AGENT FOR ACTINIUM PHARMACEUTICALS, INC.**

____ Wire funds from my outside account according to the "To subscribe for Units of Common Stock and Warrants to Purchase Shares of Common Stock in the private offering of ACTINIUM PHARMACEUTICALS, INC."

____ Wire funds from my LAIDLAW Account – See following page

____ The funds for this investment are rolled over, tax deferred from _____ within the Allowed 60-day window

**Section D – Purchaser Instructions for Payments of any Dividends**

☐ Please make any dividend and any other payment checks pursuant to the Units to "Sterne Agee & Leach Inc. c/f [**Insert Client Name]**" and deliver such checks to Laidlaw so that they may deposit them into my Laidlaw brokerage account

☐ Please make out any dividend and any other payment checks pursuant to the Units in the registered name of the Purchaser set forth in the signature page to the Subscription Agreement for the Units and mail such checks to me at the address specified in such signature page

**Section E – Securities Delivery Instructions (check one)**

____ Please deliver my securities to Laidlaw for deposit into my brokerage account.

____ Please deliver my securities to the address listed in the above Purchaser Questionnaire.

____ Please deliver my securities to the below address:

_____
_____
_____
_____

**Purchaser Signature(s): _____Date:_____**

**Wire Transfer Authorization**

TO: OPERATIONS MANAGER
LAIDLAW & CO. (UK) LTD.

RE: Client Wire Transfer Authorization
**ACTINIUM PHARMACEUTICALS, INC.**

DATE:_____

This memorandum authorizes the transfer of the following listed funds from my LAIDLAW Brokerage Account as follows:

LAIDLAW Brokerage Account # _____

Wire Amount $_____

**SIGNATURE BANK**
**261 Madison Avenue**
**New York, NY 10016**

**ABA Number: 026013576**
**For Credit to Signature Bank, as Escrow Agent for**
**Actinium Pharmaceuticals, Inc.**
**Account No.: 1502171417**

***REFERENCE***:

**PURCHASER'S LEGAL NAME**
_____

**TAX ID NUMBER**
_____

**PURCHASER'S ADDRESS**
_____

FBO: _____

Signature: _____

Signature: _____
(Joint Signature)

**ACTINIUM PHARMACEUTICALS, INC.**
**REGISTRATION RIGHTS AGREEMENT**

**T H I S  R E G I S T R A T I O N  R I G H T S  A G R E E M E N T** (the "***Agreement***"), dated as of _____, 2013, is made by and between Actinium Pharmaceuticals, Inc., a Delaware corporation (the "***Company***") and the undersigned investor (the "***Investor***").

## R E C I T A L S

**WHEREAS**, in connection with that certain Subscription Agreement of even date herewith by and between the Company and the Investor (the "***Subscription Agreement***") and Unit Purchase Agreement of even date herewith by and between the Company and the Investor (the "***Purchase Agreement***"), the Investor purchased from the Company, certain units (the "***Units***"), each Unit consisting of (a) twenty thousand (20,000) shares of the Company's common stock par value $0.001 per share (the "***Common Stock***") at a purchase price of $6.00 per share and (b) a five-year warrant (collectively, the "***Warrants***" and together with the Units and Common Stock, the "***Securities***") to purchase five thousand (5,000) shares of Common Stock of the Company at an exercise price equal to $9.00 per share, subject to equitable adjustment thereunder (the "***Exercise Price***").

**WHEREAS**, to induce the Investor to purchase the Units, the Company has agreed to grant the Investor certain rights with respect to registration of Registrable Securities under the Securities Act pursuant to the terms of this Agreement.

## AGREEMENT

**NOW, THEREFORE**, the Company and the Investor hereby covenant and agree as follows:

1. Recitals. The recitals set forth above are true and correct and are incorporated herein by reference.

2. Certain Definitions. As used in this Agreement, the following terms shall have the following respective meanings:

"***Agreement***" shall have the meaning set forth in the Preamble hereof.

"***Automatic Registration Statement***" shall have the meaning set forth in **Section 3(a)** of this Agreement.

"***Closing***" shall mean the closing of the sale of the Units in which the Investor Purchased the Units.

"***Closing Date***" means the date on which the Closing occurred.

"***Commission***" shall mean the Securities and Exchange Commission, or any other federal agency at the time administering the Securities Act.

"***Company***" shall have the meaning set forth in the Preamble hereof.

"***Effectiveness Date***" shall mean that date which is one hundred fifty days (150) days following the Filing Date or one hundred eighty (180) days following the Filing Date (in the case of a full SEC review).

"***Effectiveness Period***" shall have the meaning set forth in **Section 3(a)** of this Agreement.

"***Exchange Act***" shall mean the Securities Exchange Act of 1934, as amended.

"***Filing Date***" shall mean with respect to the Automatic Registration Statement required hereunder, that date which is forty-five (45) days following the Final Closing Date and, with respect to any additional Registration Statements which may be required herein, the earliest practical date on which the Company is permitted by SEC Guidance to file such additional Registration Statement related to the Registrable Securities.

"***Final Closing Date***" means closing date of the Offering after which the Company ceases to offer for sale the Units.

"***Investor***" shall have the meaning set forth in the Preamble hereof.

"***Legal Counsel***" means Sichenzia Ross Friedman Ference LLP or such other counsel as thereafter designated by a majority of the Investors.

"***Offering***" shall have the meaning set forth in the Subscription Agreement.

"***Piggyback Registration***" shall have the meaning set forth in **Section 4(a)** of this Agreement.

"***Prospectus***" means the prospectus included in a Registration Statement (including, without limitation, a prospectus that includes any information previously omitted from a prospectus filed as part of an effective registration statement in reliance upon Rule 430A promulgated by the Commission pursuant to the Securities Act), as amended or supplemented by any prospectus supplement, with respect to the terms of the offering of any portion of the Registrable Securities covered by a Registration Statement, and all other amendments and supplements to the Prospectus, including post-effective amendments, and all material incorporated by reference or deemed to be incorporated by reference in such Prospectus.

"***Purchase Agreement***" shall have the meaning set forth in the Preamble hereof.

"***Purchase Price***" shall have the meaning set forth in the Purchase Agreement.

"***Register***," "***registered***" and "***registration***" each shall refer to a registration of the Registrable Securities effected by preparing and filing a Registration Statement or statements or similar documents in compliance with the Securities Act and the declaration or ordering of effectiveness of such Registration Statement or document by the Commission.

"***Registrable Securities***" shall mean (a) all Shares, (b) all Warrant Shares then issuable upon exercise of the Warrant delivered to Investor in connection with the Offering (assuming on such date the Warrants are exercised in full without regard to any exercise limitations therein), (c) all shares of Common Stock issuable upon exercise of the warrants to be issued to Laidlaw and its agents in connection with the Offering (assuming on such date such warrants are exercised in full without regard to any exercise limitations therein), and (d) any securities issued or then issuable upon any stock split, dividend or other distribution, recapitalization or similar event with respect to the foregoing provided, however, that any such Registrable Securities shall cease to be Registrable Securities (i) when subject to an effective Registration Statement under the Securities Act as provided for hereunder, (ii) upon any sale pursuant to a Registration Statement or Rule 144 under the Securities Act or (iii) at such time such securities become eligible for resale without volume or manner-of-sale restrictions and without current public information pursuant to Rule 144 as set forth in a written opinion letter to such effect, addressed, delivered and acceptable to the Transfer Agent and the affected Investors.

"***Registration Statement***" means any registration statement required to be filed hereunder pursuant to Sections 3 or 4 and any additional registration statements contemplated herein, including (in each case) the Prospectus, amendments and supplements to any such registration statement or Prospectus, including pre- and post-effective amendments, all exhibits thereto, and all material incorporated by reference or deemed to be incorporated by reference in any such registration statement.

"***Rule 415***" means Rule 415 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended or interpreted from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same purpose and effect as such Rule.

"***Rule 424***" means Rule 424 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended or interpreted from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same purpose and effect as such Rule.

"***SEC Guidance***" means (i) any publicly-available written or oral guidance, comments, requirements or requests of the Commission staff and (ii) the Securities Act.

"***Securities Act***" shall mean the Securities Act of 1933, as amended.

"***Shares***" shall have the meaning set forth in the Preamble hereof.

"***Subscription Agreement***" shall have the meaning set forth in the first Recital hereof.

"***Warrant***" shall have the meaning set forth in the Preamble hereof.

"***Warrant Shares***" shall mean the shares of Common Stock to be issued upon exercise of the Warrants.

Capitalized terms used but not defined herein shall have the meanings set forth in the Subscription Agreement.

3. Automatic Registration.

(a) On or prior to the Filing Date, the Company shall prepare and file with the Commission a registration statement (the "***Automatic Registration Statement***") covering the resale of all of the Registrable Securities for an offering to be made on a continuous basis pursuant to Rule 415. The Automatic Registration Statement required hereunder shall be on Form S-1 or Form S-3, as applicable, and shall contain substantially the "Plan of Distribution" attached hereto as Annex A. Subject to the terms of this Agreement, the Company shall use its reasonable best efforts to cause the Automatic Registration Statement to be declared effective under the Securities Act as promptly as possible after the filing thereof, but in any event not later than the Effectiveness Date, and shall use its reasonable best efforts to keep the Automatic Registration Statement continuously effective under the Securities Act until the earlier of (a) one year from the date the Registration Statement is declared effective by the Commission or (b) until Rule 144 of the Securities Act is available to Investors with respect to all of the Registrable Securities (the "***Effectiveness Period***"). In the event the amount of Registrable Securities which may be included in the Registration Statement is limited due to SEC Guidance (provided that, the Company shall use diligent efforts to advocate with the Commission Staff for the registration of all of the Registrable Securities in accordance with the SEC Guidance, including without limitation, the SEC's interpretive responses regarding Delayed or Continuous Offering and Sale of Securities No. 612.09) the Company shall use its reasonable best efforts to register such maximum portion of the Registrable Securities as permitted by SEC Guidance. In the event that there is a limitation by the Commission on the number of Registrable Securities that may be included for registration at one time, the Company shall promptly so advise the Investor and use its best efforts to file an additional Automatic Registration Statement covering such ineligible Registrable Securities, on a pro-rata basis, within 30 days of the date such securities become eligible and cause such Automatic Registration Statement to be declared effective by the Commission as soon as reasonably practicable.

(b) The Company shall immediately notify the Investors via facsimile or by e-mail of the effectiveness of a Registration Statement on the second trading day after the Company telephonically confirms effectiveness with the Commission, which shall be the date requested for effectiveness of such Registration Statement. The Company shall, by 9:30 a.m. New York City time on the second trading day after the effective date of such Registration Statement, file a final Prospectus with the Commission as required by Rule 424. Notwithstanding any other provision of this Agreement and subject to the payment of liquidated damages pursuant to this Agreement, if any SEC Guidance sets forth a limitation on the number of Registrable Securities permitted to be registered on a particular Registration Statement (and notwithstanding that the Company used diligent efforts to advocate with the Commission for the registration of all or a greater portion of Registrable Securities), unless otherwise directed in writing by a Investor as to its Registrable Securities, the number of Registrable Securities to be registered on such Registration Statement will first be reduced by Registrable Securities represented by the shares of Common Stock purchased by the Subscribers pursuant to the Subscription Agreement and second by Registrable Securities represented by Warrant Shares (applied, in the case that some Warrant Shares may be registered, to the Investors on a pro rata basis based on the total number of unregistered Warrant Shares held by such Investors). In the event of a cutback hereunder, the Company shall give the Investor at least 5 trading days prior written notice along with the calculations as to such Investor's allotment.

(c) At any time after the Automatic Registration Statement has become effective, the Company may, upon giving prompt written notice of such action to the Investor, suspend the use of any such Automatic Registration Statement if, in the good faith judgment of the Company, the use of the Automatic Registration Statement covering the Registrable Securities would be detrimental to the Company or its stockholders at such time and the Company concludes, as a result, that it is in the best interests of the Company or its stockholders to suspend the use of such Automatic Registration Statement at such time. The Company shall have the right to suspend such Automatic Registration Statement for a period of not more than thirty (30) consecutive days from the date the Company notifies the Investor of such suspension, with such suspension not to exceed an aggregate of sixty (60) days (whether or not consecutive) during any 12-month period. In the case of the suspension of any effective Automatic Registration Statement, the Investor, immediately upon receipt of notice thereof from the Company, will discontinue any sales of Registrable Securities pursuant to such Registration Statement until advised in writing by the Company that the use of such Automatic Registration Statement may be resumed.

(d) If: (i) the Automatic Registration Statement is not filed on or prior to its Filing Date (if the Company files the Automatic Registration Statement without affording the Investors the opportunity to review and comment on the same as required by Section 5(a) herein, the Company shall be deemed to have not satisfied this clause (i), (ii) a Registration Statement registering for resale all of the Registrable Securities is not declared effective by the Commission by the Effectiveness Date (unless the reason for such non-registration of all or any portion of the Registrable Securities is as a result of SEC Guidance under Rule 415 or similar rule which limits the number of Registrable Securities which may be included in a registration statement with respect to the Investors), or (iii) after the effective date of a Registration Statement, such Registration Statement ceases for any reason to remain continuously effective as to all Registrable Securities included in such Registration Statement, or the Investors are otherwise not permitted to utilize the prospectus therein to resell such Registrable Securities, for more than ten (10) consecutive calendar days or more than an aggregate of fifteen (15) calendar days (which need not be consecutive calendar days) during any 12-month period (any such failure or breach being referred to as an "***Event***", and for purposes of clause (i) and (iv), the date on which such Event occurs, and for purpose of clause (iii) the date on which such ten (10) or fifteen (15) calendar day period, as applicable, is exceeded being referred to as "***Event Date***"), then, in addition to any other rights the Investors may have hereunder or under applicable law, on each such Event Date and on each monthly anniversary of each such Event Date (if the applicable Event shall not have been cured by such date) until the applicable Event is cured, the Company shall pay to each Investor an amount in cash, as partial liquidated damages and not as a penalty, equal to 1.0% of the aggregate purchase price paid by such Investor pursuant to the Subscription Agreement and Purchase Agreement. The parties agree that the maximum aggregate liquidated damages payable to an Investor under this Agreement shall be 6% of the aggregate Purchase Price paid by such Investor pursuant to the Purchase Agreement. If the Company fails to pay any partial liquidated damages pursuant to this Section in full within twenty days after the date payable, the Company will pay interest thereon at a rate of 18% per annum (or such lesser maximum amount that is permitted to be paid by applicable law) to the Investor, accruing daily from the date such partial liquidated damages are due until such amounts, plus all such interest thereon, are paid in full. The partial liquidated damages pursuant to the terms hereof shall apply on a daily pro rata basis for any portion of a month prior to the cure of an Event. Notwithstanding the foregoing, no payments shall be owed with respect to any period during which all of the holder's Registrable Shares may be sold by such holder under Rule 144 without volume or manner-of-sale restrictions pursuant to Rule 144 and without the requirement for the Company to be in compliance with the current public information requirement under Rule 144.

( e ) Legal Counsel. Subject to the terms and conditions of this Agreement, Investors shall have the right to select Legal Counsel to review and oversee, solely on its behalf, any Registration Statement pursuant to this Agreement. The Company shall also reimburse Legal Counsel for its fees and disbursements in connection with registration, filing or qualification pursuant to this Agreement which amount shall be limited to $10,000.

4. Piggyback Registrations.

(a) With respect to any Registrable Securities not otherwise included in the Automatic Registration Statement or any other Registration Statement as a result of any limitation imposed by the Commission under Rule 415 (the "***Excluded Registrable Securities***"), whenever the Company proposes to register (including, for this purpose, a registration effected by the Company for other shareholders) any of its securities under the Securities Act (other than pursuant to (i) an Automatic Registration pursuant to **Section 3** hereof or (ii) registration pursuant to a registration statement on Form S-4 or S-8 or any successor forms thereto), and the registration form to be used may be used for the registration of Registrable Securities (a "***Piggyback Registration***"), the Company will give written notice to the holder of Excluded Securities of its intention to effect such a registration and will, subject to the provisions of **Subsection 4(b)** hereof, include in such registration all Excluded Registrable Securities with respect to which the Company has received a written request for inclusion therein within twenty (20) days after the receipt of the Company's notice.

(b) If a Piggyback Registration is an underwritten secondary registration on behalf of holders of the Company's securities, and the managing underwriters advise the Company in writing that in their opinion the number of securities requested to be included in such registration exceeds the number which can be sold in such offering without adversely affecting the marketability of the offering, the Company will include in such registration a pro rata share of Excluded Registrable Securities requested to be included in such Registration Statement as calculated by dividing the number of Excluded Registrable Securities requested to be included in such Registration Statement by the number of the Company's securities requested to be included in such Registration Statement by all selling security holders. In such event, the holder of Excluded Registrable Securities shall continue to have registration rights under this Agreement with respect to any Excluded Registrable Securities not so included in such Registration Statement.

(c) Notwithstanding the foregoing, if, at any time after giving a notice of Piggyback Registration and prior to the effective date of the Registration Statement filed in connection with such registration, the Company shall determine for any reason not to register or to delay registration of such securities, the Company may, at its election, give written notice of such determination to each record holder of Excluded Registrable Securities and, following such notice, (i) in the case of a determination not to register, shall be relieved of its obligation to register any Excluded Registrable Securities in connection with such registration, and (ii) in the case of determination to delay registering, shall be permitted to delay registering any Excluded Registrable Securities for the same period as the delay in registering such other securities.

5. Registration Procedures. If and whenever the Company is required to affect the registration of any Registrable Securities under the terms herein, the Company will:

(a) not less than five (5) trading days prior to the filing of each Registration Statement and not less than one (1) trading day prior to the filing of any related Prospectus or any amendment or supplement thereto (including any document that would be incorporated or deemed to be incorporated therein by reference), the Company shall (i) furnish to each seller of Registrable Securities copies of all such documents proposed to be filed, which documents (other than those incorporated or deemed to be incorporated by reference) will be subject to the review of such sellers, and (ii) cause its officers and directors, counsel and independent registered public accountants to respond to such inquiries as shall be necessary, in the reasonable opinion of respective counsel to each seller of Registrable Securities, to conduct a reasonable investigation within the meaning of the Securities Act. Notwithstanding the above, the Company shall not be obligated to provide each seller of Registrable Securities advance copies of any universal shelf registration statement registering securities in addition to those required hereunder, or any Prospectus prepared thereto.

(b) prepare and file with the Commission the Registration Statement with respect to such securities and use its best efforts to cause such Registration Statement to become effective in an expeditious manner;

(c) (i) prepare and file with the Commission such amendments, including post-effective amendments, to a Registration Statement and the Prospectus used in connection therewith as may be necessary to keep a Registration Statement continuously effective as to the applicable Registrable Securities for the Effectiveness Period and prepare and file with the Commission such additional Registration Statements in order to register for resale under the Securities Act all of the Registrable Securities, (ii) cause the related Prospectus to be amended or supplemented by any required Prospectus supplement (subject to the terms of this Agreement), and, as so supplemented or amended, to be filed pursuant to Rule 424, (iii) respond as promptly as reasonably possible to any comments received from the Commission with respect to a Registration Statement or any amendment thereto and provide as promptly as reasonably possible to each seller of Registrable Securities true and complete copies of all correspondence from and to the Commission relating to a Registration Statement (provided that, the Company shall excise any information contained therein which would constitute material non-public information regarding the Company), and (iv) comply in all material respects with the applicable provisions of the Securities Act and the Securities and Exchange Act of 1934, as amended, with respect to the disposition of all Registrable Securities covered by a Registration Statement during the applicable period in accordance (subject to the terms of this Agreement) with the intended methods of disposition by each seller of Registrable Securities thereof set forth in such Registration Statement as so amended or in such Prospectus as so supplemented.

(d) Notify the Investors of Registrable Securities to be sold (which notice shall, pursuant to clauses (iii) through (vi) hereof, be accompanied by an instruction to suspend the use of the Prospectus until the requisite changes have been made) as promptly as reasonably possible (and, in the case of (i)(A) below, not less than one trading day prior to such filing) and (if requested by any such Person) confirm such notice in writing no later than one Trading day following the day (i)(A) when a Prospectus or any Prospectus supplement or post-effective amendment to a Registration Statement is proposed to be filed, (B) when the Commission notifies the Company whether there will be a "review" of such Registration Statement and whenever the Commission comments in writing on such Registration Statement, and (C) with respect to a Registration Statement or any post-effective amendment, when the same has become effective, (ii) of any request by the Commission or any other federal or state governmental authority for amendments or supplements to a Registration Statement or Prospectus or for additional information, (iii) of the issuance by the Commission or any other federal or state governmental authority of any stop order suspending the effectiveness of a Registration Statement covering any or all of the Registrable Securities or the initiation of any Proceedings for that purpose; (iv) of the receipt by the Company of any notification with respect to the suspension of the qualification or exemption from qualification of any of the Registrable Securities for sale in any jurisdiction, or the initiation or threatening of any Proceeding for such purpose, (v) of the occurrence of any event or passage of time that makes the financial statements included in a Registration Statement ineligible for inclusion therein or any statement made in a Registration Statement or Prospectus or any document incorporated or deemed to be incorporated therein by reference untrue in any material respect or that requires any revisions to a Registration Statement, Prospectus or other documents so that, in the case of a Registration Statement or the Prospectus, as the case may be, it will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading and (vi) of the occurrence or existence of any pending corporate development with respect to the Company that the Company believes may be material and that, in the determination of the Company, makes it not in the best interest of the Company to allow continued availability of a Registration Statement or Prospectus, provided that, any and all of such information shall remain confidential to each Investor until such information otherwise becomes public, unless disclosure by a Investor is required by law; provided, further, that notwithstanding each Investor's agreement to keep such information confidential, each such Investor makes no acknowledgement that any such information is material, non-public information.

(e) Use its commercially reasonable efforts to avoid the issuance of, or, if issued, obtain the withdrawal of (i) any order stopping or suspending the effectiveness of a Registration Statement, or (ii) any suspension of the qualification (or exemption from qualification) of any of the Registrable Securities for sale in any jurisdiction, at the earliest practicable moment.

(f) if during the Effectiveness Period, the number of Registrable Securities at any time exceeds 100% of the number of shares of Common Stock then registered in a Registration Statement, then the Company shall file as soon as reasonably practicable, but in any case prior to the applicable Filing Date, an additional Registration Statement covering the resale by the Investors of not less than the number of such Registrable Securities.

(g) Furnish to Legal Counsel, without charge, at least one conformed copy of each such Registration Statement and each amendment thereto, including financial statements and schedules, all documents incorporated or deemed to be incorporated therein by reference to the extent requested by such Person, and all exhibits to the extent requested by such Person (including those previously furnished or incorporated by reference) promptly after the filing of such documents with the Commission; provided, that any such item which is available on the EDGAR system need not be furnished in physical form;

(h) use its commercially reasonable efforts (i) to register or qualify the Registrable Securities covered by such Registration Statement under the state securities or "blue sky" laws of such jurisdictions as the sellers of Registrable Securities or, in the case of an underwritten public offering, the managing underwriter, reasonably shall request, (ii) to prepare and file in those jurisdictions such amendments (including post-effective amendments) and supplements, and take such other actions, as may be necessary to maintain such registration and qualification in effect at all times for the period of distribution contemplated thereby and (iii) to take such further action as may be necessary or advisable to enable the disposition of the Registrable Securities in such jurisdictions, provided, that the Company shall not for any such purpose be required to qualify generally to transact business as a foreign corporation in any jurisdiction where it is not so qualified or to consent to general service of process in any such jurisdiction;

(i) use its commercially reasonable efforts to list the Registrable Securities covered by such Registration Statement with any securities exchange on which the common stock of the Company is then listed;

(j) The Company shall cooperate with any broker-dealer through which a Investor proposes to resell its Registrable Securities in effecting a filing with the FINRA Corporate Financing Department pursuant to NASD Rule 5110, as requested by any such Investor, and the Company shall pay the filing fee required by such filing within two (2) Business Days of request therefor;

(h) immediately notify each seller of Registrable Securities and each underwriter under such Registration Statement, at any time when a Prospectus relating thereto is required to be delivered under the Securities Act, of the happening of any event of which the Company has knowledge as a result of which the Prospectus contained in such Registration Statement, as then in effect, includes any untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein not misleading in light of the circumstances then existing and promptly amend or supplement such Registration Statement to correct any such untrue statement or omission;

( i ) If the Company notifies the Investors in accordance with any provision above to suspend the use of any Prospectus until the requisite changes to such Prospectus have been made, then the Investors shall suspend use of such Prospectus. The Company will use its commercially reasonable efforts to ensure that the use of the Prospectus may be resumed as promptly as is practicable.

(k) if the offering is an underwritten offering, at the request of any seller of Registrable Securities, furnish to such seller on the date that Registrable Securities are delivered to the underwriters for sale pursuant to such registration: (i) a copy of an opinion, dated such date, of counsel representing the Company for the purposes of such registration, addressed to the underwriters, stating that such Registration Statement has become effective under the Securities Act and that (A) to the knowledge of such counsel, no stop order suspending the effectiveness thereof has been issued and no proceedings for that purpose have been instituted or are pending or contemplated under the Securities Act, (B) the Registration Statement, the related Prospectus and each amendment or supplement thereof comply as to form in all material respects with the requirements of the Securities Act (except that such counsel need not express any opinion as to financial statements or other financial or statistical information contained therein) and (C) to such other effects as reasonably may be requested by counsel for the underwriters; and (ii) a copy of a letter dated such date from the independent public accountants retained by the Company, addressed to the underwriters, stating that they are independent registered public accountants within the meaning of the Securities Act and that, in the opinion of such accountants, the financial statements of the Company included in the Registration Statement or the Prospectus, or any amendment or supplement thereof, comply as to form in all material respects with the applicable accounting requirements of the Securities Act, and such letter shall additionally cover such other financial matters (including information as to the period ending no more than five business days prior to the date of such letter) with respect to such registration as such underwriters reasonably may request;

(l) take all actions reasonably necessary to facilitate the timely preparation and delivery of certificates (not bearing any legend restricting the sale or transfer of such securities) representing the Registrable Securities to be sold pursuant to the Registration Statement and to enable such certificates to be in such denominations and registered in such names as each seller of Registrable Securities or any underwriters may reasonably request; and

(m) take all other reasonable actions necessary to expedite and facilitate the registration of the Registrable Securities pursuant to the Registration Statement.

6 . Obligations of Investor. The Investor shall furnish to the Company such information regarding such Investor, the number of Registrable Securities owned and proposed to be sold by it, the intended method of disposition of such securities and any other information as shall be required to effect the registration of the Registrable Securities, and cooperate with the Company in preparing the Registration Statement and in complying with the requirements of the Securities Act.

7. Expenses.

(a) All expenses incurred by the Company in complying with **Sections 3, 4 and 5** including, without limitation, all registration and filing fees (including the fees of the Commission and any other regulatory body with which the Company is required to file), printing expenses, fees and disbursements of counsel and independent public accountants for the Company, fees and expenses (including counsel fees) incurred in connection with complying with state securities or "blue sky" laws, if not previously paid by the Company in connection with an Issuer Filing, with respect to any filing that may be required to be made by any broker through which a Investor intends to make sales of Registrable Securities with FINRA pursuant to NASD Rule 5110, so long as the broker is receiving no more than a customary brokerage commission in connection with such sale and fees of transfer agents and registrars are called "Registration Expenses." All underwriting discounts and selling commissions applicable to the sale of Registrable Securities are called "Selling Expenses."

(b) The Company will pay all Registration Expenses in connection with any Registration Statement filed hereunder, and the Selling Expenses in connection with each such Registration Statement shall be borne by the participating sellers in proportion to the number of Registrable Securities sold by each or as they may otherwise agree. In addition, the Company shall be responsible for all of its internal expenses incurred in connection with the consummation of the transactions contemplated by this Agreement (including, without limitation, all salaries and expenses of its officers and employees performing legal or accounting duties), the expense of any annual audit and the fees and expenses incurred in connection with the listing of the Registrable Securities on any securities exchange as required hereunder. In no event shall the Company be responsible for any broker or similar commissions of any Investor or, except to the extent provided for in the Transaction Documents, any legal fees or other costs of the Investors

(c) Notwithstanding anything herein to the contrary, at the request of any Investor, the Company shall employ its counsel at the Company's expense to prepare any and all legal opinions necessary for the prompt removal of restrictive legends from certificates representing Registrable Securities as, when and to the extent such legends may be removed in compliance with the Securities Act and/or Rule 144.

8. Indemnification and Contribution.

(a) Indemnification by the Company. The Company shall, notwithstanding any termination of this Agreement, indemnify and hold harmless each Investor, the officers, directors, members, partners, agents, brokers (including brokers who offer and sell Registrable Securities as principal as a result of a pledge or any failure to perform under a margin call of Common Stock), investment advisors and employees (and any other Persons with a functionally equivalent role of a Person holding such titles, notwithstanding a lack of such title or any other title) of each of them, each Person who controls any such Investor (within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act) and the officers, directors, members, stockholders, partners, agents and employees (and any other Persons with a functionally equivalent role of a Person holding such titles, notwithstanding a lack of such title or any other title) of each such controlling Person, to the fullest extent permitted by applicable law, from and against any and all losses, claims, damages, liabilities, costs (including, without limitation, reasonable attorneys' fees) and expenses (collectively, "Losses"), as incurred, arising out of or relating to (1) any untrue or alleged untrue statement of a material fact contained in a Registration Statement, any Prospectus or any form of prospectus or in any amendment or supplement thereto or in any preliminary prospectus, or arising out of or relating to any omission or alleged omission of a material fact required to be stated therein or necessary to make the statements therein (in the case of any Prospectus or supplement thereto, in light of the circumstances under which they were made) not misleading or (2) any violation or alleged violation by the Company of the Securities Act, the Exchange Act or any state securities law, or any rule or regulation thereunder, in connection with the performance of its obligations under this Agreement, except to the extent, but only to the extent, that (i) such untrue statements or omissions are based solely upon information regarding such Investor furnished in writing to the Company by such Investor expressly for use therein, or to the extent that such information relates to such Investor or such Investor's proposed method of distribution of Registrable Securities and was reviewed and expressly approved in writing by such Investor expressly for use in a Registration Statement, such Prospectus or in any amendment or supplement thereto (it being understood that the Investor has approved Annex A hereto for this purpose) or (ii) in the case of an occurrence of an event of the type specified in Section 3(c)(iii)-(vi), the use by such Investor of an outdated or defective Prospectus after the Company has notified such Investor in writing that the Prospectus is outdated or defective and prior to the receipt by such Investor of the Advice contemplated in Section 6(d). The Company shall notify the Investors promptly of the institution, threat or assertion of any Proceeding arising from or in connection with the transactions contemplated by this Agreement of which the Company is aware.

(b) Indemnification by Investors. Each Investor shall, severally and not jointly, indemnify and hold harmless the Company, its directors, officers, agents and employees, each Person who controls the Company (within the meaning of Section 15 of the Securities Act and Section 20 of the Exchange Act), and the directors, officers, agents or employees of such controlling Persons, to the fullest extent permitted by applicable law, from and against all Losses, as incurred, to the extent arising out of or based solely upon: (x) such Investor's failure to comply with the prospectus delivery requirements of the Securities Act or (y) any untrue or alleged untrue statement of a material fact contained in any Registration Statement, any Prospectus, or in any amendment or supplement thereto or in any preliminary prospectus, or arising out of or relating to any omission or alleged omission of a material fact required to be stated therein or necessary to make the statements therein not misleading (i) to the extent, but only to the extent, that such untrue statement or omission is contained in any information so furnished in writing by such Investor to the Company specifically for inclusion in such Registration Statement or such Prospectus or (ii) to the extent that such information relates to such Investor's proposed method of distribution of Registrable Securities and was reviewed and expressly approved in writing by such Investor expressly for use in a Registration Statement (it being understood that the Investor has approved Annex A hereto for this purpose), such Prospectus or in any amendment or supplement thereto or (ii) in the case of an occurrence of an event of the type specified in Section 3(c)(iii)-(vi), the use by such Investor of an outdated or defective Prospectus after the Company has notified such Investor in writing that the Prospectus is outdated or defective and prior to the receipt by such Investor of the Advice contemplated in Section 6(d). In no event shall the liability of any selling Investor hereunder be greater in amount than the dollar amount of the net proceeds received by such Investor upon the sale of the Registrable Securities giving rise to such indemnification obligation.

(c) Conduct of Indemnification Proceedings. If any Proceeding shall be brought or asserted against any Person entitled to indemnity hereunder (an "Indemnified Party"), such Indemnified Party shall promptly notify the Person from whom indemnity is sought (the "Indemnifying Party") in writing, and the Indemnifying Party shall have the right to assume the defense thereof, including the employment of counsel reasonably satisfactory to the Indemnified Party and the payment of all fees and expenses incurred in connection with defense thereof; provided, that, the failure of any Indemnified Party to give such notice shall not relieve the Indemnifying Party of its obligations or liabilities pursuant to this Agreement, except (and only) to the extent that it shall be finally determined by a court of competent jurisdiction (which determination is not subject to appeal or further review) that such failure shall have prejudiced the Indemnifying Party.

An Indemnified Party shall have the right to employ separate counsel in any such Proceeding and to participate in the defense thereof, but the fees and expenses of such counsel shall be at the expense of such Indemnified Party or Parties unless: (1) the Indemnifying Party has agreed in writing to pay such fees and expenses, (2) the Indemnifying Party shall have failed promptly to assume the defense of such Proceeding and to employ counsel reasonably satisfactory to such Indemnified Party in any such Proceeding, or (3) the named parties to any such Proceeding (including any impleaded parties) include both such Indemnified Party and the Indemnifying Party, and counsel to the Indemnified Party shall reasonably believe that a material conflict of interest is likely to exist if the same counsel were to represent such Indemnified Party and the Indemnifying Party (in which case, if such Indemnified Party notifies the Indemnifying Party in writing that it elects to employ separate counsel at the expense of the Indemnifying Party, the Indemnifying Party shall not have the right to assume the defense thereof and the reasonable fees and expenses of no more than one separate counsel shall be at the expense of the Indemnifying Party). The Indemnifying Party shall not be liable for any settlement of any such Proceeding effected without its written consent, which consent shall not be unreasonably withheld or delayed. No Indemnifying Party shall, without the prior written consent of the Indemnified Party, effect any settlement of any pending Proceeding in respect of which any Indemnified Party is a party, unless such settlement includes an unconditional release of such Indemnified Party from all liability on claims that are the subject matter of such Proceeding.

Subject to the terms of this Agreement, all reasonable fees and expenses of the Indemnified Party (including reasonable fees and expenses to the extent incurred in connection with investigating or preparing to defend such Proceeding in a manner not inconsistent with this Section) shall be paid to the Indemnified Party, as incurred, within ten Trading days of written notice thereof to the Indemnifying Party; provided, that, the Indemnified Party shall promptly reimburse the Indemnifying Party for that portion of such fees and expenses applicable to such actions for which such Indemnified Party is judicially determined not to be entitled to indemnification hereunder.

(d) Contribution. If the indemnification under Section 5(a) or 5(b) is unavailable to an Indemnified Party or insufficient to hold an Indemnified Party harmless for any Losses, then each Indemnifying Party shall contribute to the amount paid or payable by such Indemnified Party, in such proportion as is appropriate to reflect the relative fault of the Indemnifying Party and Indemnified Party in connection with the actions, statements or omissions that resulted in such Losses as well as any other relevant equitable considerations. The relative fault of such Indemnifying Party and Indemnified Party shall be determined by reference to, among other things, whether any action in question, including any untrue or alleged untrue statement of a material fact or omission or alleged omission of a material fact, has been taken or made by, or relates to information supplied by, such Indemnifying Party or Indemnified Party, and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such action, statement or omission. The amount paid or payable by a party as a result of any Losses shall be deemed to include, subject to the limitations set forth in this Agreement, any reasonable attorneys' or other fees or expenses incurred by such party in connection with any Proceeding to the extent such party would have been indemnified for such fees or expenses if the indemnification provided for in this Section was available to such party in accordance with its terms.

The parties hereto agree that it would not be just and equitable if contribution pursuant to this Section 5(d) were determined by pro rata allocation or by any other method of allocation that does not take into account the equitable considerations referred to in the immediately preceding paragraph. Notwithstanding the provisions of this Section 5(d), no Investor shall be required to contribute, in the aggregate, any amount in excess of the amount by which the net proceeds actually received by such Investor from the sale of the Registrable Securities subject to the Proceeding exceeds the amount of any damages that such Investor has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission.

The indemnity and contribution agreements contained in this Section are in addition to any liability that the Indemnifying Parties may have to the Indemnified Parties.

9 . Changes in Capital Stock. If, and as often as, there is any change in the capital stock of the Company by way of a stock split, stock dividend, combination or reclassification, or through a merger, consolidation, reorganization or recapitalization, or by any other means, appropriate adjustment shall be made in the provisions hereof so that the rights and privileges granted hereby shall continue as so changed.

10. Representations and Warranties of the Company. The Company represents and warrants to the Investor as follows:

(a) The execution, delivery and performance of this Agreement by the Company have been duly authorized by all requisite corporate action and will not violate any provision of law, any order of any court or other agency of government, the Certificate of Incorporation or Bylaws of the Company or any provision of any indenture, agreement or other instrument to which it or any or its properties or assets is bound, conflict with, result in a breach of or constitute (with due notice or lapse of time or both) a default under any such indenture, agreement or other instrument or result in the creation or imposition of any lien, charge or encumbrance of any nature whatsoever upon any of the properties or assets of the Company or its subsidiaries.

(b) This Agreement has been duly executed and delivered by the Company and constitutes the legal, valid and binding obligation of the Company, enforceable in accordance with its terms, subject to any applicable bankruptcy, insolvency or other laws affecting the rights of creditors generally and to general equitable principles and the availability of specific performance.

11. Rule 144 Requirements. The Company agrees to:

(a) make and keep current public information about the Company available, as those terms are understood and defined in Rule 144 under the Securities Act;

(b) use its best efforts to file with the Commission in a timely manner all reports and other documents required of the Company under the Securities Act and the Exchange Act (at any time after it has become subject to such reporting requirements); and

(c) furnish to any holder of Registrable Securities upon request (i) a written statement by the Company as to its compliance with the reporting requirements of Rule 144 and of the Securities Act and the Exchange Act (at any time after it has become subject to such reporting requirements), (ii) a copy of the most recent annual or quarterly report of the Company, and (iii) such other reports and documents of the Company as such holder may reasonably request to avail itself of any similar rule or regulation of the Commission allowing it to sell any such securities without registration.

12. Termination. All of the Company's obligations to register Registrable Shares under **Sections 3, 4,** and **5** hereof shall terminate upon the date on which the Investor holds no Registrable Securities or all of the Registrable Securities are eligible for resale without volume or manner-of-sale restrictions pursuant to Rule 144 and without the requirement for the Company to be in compliance with the current public information requirement under Rule 144, as determined by counsel to the Company pursuant to a written opinion letter to such effect, addressed and acceptable to the Company's transfer agent and the Investor.

13. Miscellaneous.

(a) Except as set forth on Schedule 13(a) annexed hereto, neither the Company nor any of its security holders (other than the Investors in such capacity pursuant hereto) may include other securities of the Company in any Registration Statements other than the Registrable Securities during the Effectiveness Period.

(b) All covenants and agreements contained in this Agreement by or on behalf of any of the parties hereto shall bind and inure to the benefit of the respective successors and assigns of the parties hereto (including without limitation transferees of any Registrable Securities), whether so expressed or not.

(c) All notices, requests, consents and other communications hereunder shall be in writing and shall be delivered in person, mailed by certified mail, return receipt requested, postage prepaid, addressed or sent by a nationally recognized overnight courier service: (i) if to the Company, at 501 Fifth Avenue, 3rd Floor, New York, New York 10017, Attn:, Chief Executive Officer; and (ii) if to any holder of Registrable Securities, to such holder at such address as may have been furnished to the Company or its counsel in writing by such holder; or, in any case, at such other address or addresses as shall have been furnished, in writing to the Company or its counsel (in the case of a holder of Registrable Securities) or to the holders of Registrable Securities (in the case of the Company) in accordance with the provisions of this paragraph. Any notice or other communication or deliveries hereunder shall be deemed given and effective upon actual receipt by the party to whom such notice is required to be given.

(d) This Agreement shall be governed by and construed under the laws of the State of New York, without giving effect to principles of conflicts of laws. The Company and Investor (i) agree that any legal suit, action or proceeding arising out of or relating to this Agreement shall be instituted exclusively in in New York State Supreme Court, County of New York, or in the United States District Court for the Southern District of New York, (ii) waive any objection which the Company or Investor may have now or hereafter to the venue of any such suit, action or proceeding, and (iii) irrevocably consent to the jurisdiction of any such federal or state court in any such suit, action or proceeding. The Company and Investor further agree to accept and acknowledge service of any and all process which may be served in any such suit, action or proceeding and agree that service of process upon the Company or Investor mailed by certified mail, return receipt requested, postage prepaid, to, in the case of the Company, the Company's address, and in the case of the Investor, to the Investor's address as set forth on the Company's books and records, shall be deemed in every respect effective service of process upon the Company, in any such suit, action or proceeding. THE PARTIES HERETO AGREE TO WAIVE THEIR RESPECTIVE RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF THIS AGREEMENT OR ANY DOCUMENT OR AGREEMENT CONTEMPLATED HEREBY.

(e) In the event of a breach by the Company or by the Investor, of any of their obligations under this Agreement, the Investor or the Company, as the case may be, in addition to being entitled to exercise all rights granted by law and under this Agreement, including recovery of damages, will be entitled to specific performance of its rights under this Agreement. The Company and the Investor agree that monetary damages would not provide adequate compensation for any losses incurred by reason of a breach by it of any of the provisions of this Agreement and hereby further agrees that, in the event of any action for specific performance in respect of such breach, it shall waive the defense that a remedy at law would be adequate.

(f) This Agreement and the provisions herein, including the provisions of this sentence, may not be terminated, amended, modified or supplemented, and waivers or consents to departures from the provisions hereof may not be given, unless the same shall be in writing and signed by the Company and the Investors of 51% or more of the then outstanding Registrable Securities (including, for this purpose any Registrable Securities issuable upon exercise or conversion of any Security). If a Registration Statement does not register all of the Registrable Securities pursuant to a waiver or amendment done in compliance with the previous sentence, then the number of Registrable Securities to be registered for each Investor shall be reduced pro rata among all Investors and each Investor shall have the right to designate which of its Registrable Securities shall be omitted from such Registration Statement. Notwithstanding the foregoing, a waiver or consent to depart from the provisions hereof with respect to a matter that relates exclusively to the rights of a Investor or some Investors and that does not directly or indirectly affect the rights of other Investors may be given by such Investor or Investors of all of the Registrable Securities to which such waiver or consent relates; provided, however, that the provisions of this sentence may not be amended, modified, or supplemented except in accordance with the provisions of the first sentence of this Section 13(e).

(g) Failure of any party to exercise any right or remedy under this Agreement or otherwise, or delay by a party in exercising such right or remedy, shall not operate as a waiver thereof. No waiver shall be effective unless and until it is in writing and signed by the party granting the waiver.

(h) This Agreement may be executed in two or more counterparts (including by facsimile or .pdf transmission) each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. This Agreement, once executed by a party, may be delivered to the other party hereto by facsimile transmission of a copy of this Agreement bearing the signature of the party so delivering this Agreement.

(i) The obligations of each Investor hereunder are several and not joint with the obligations of any other Investor hereunder, and no Investor shall be responsible in any way for the performance of the obligations of any other Investor hereunder. Nothing contained herein or in any other agreement or document delivered at any closing, and no action taken by any Investor pursuant hereto or thereto, shall be deemed to constitute the Investors as a partnership, an association, a joint venture or any other kind of entity, or create a presumption that the Investors are in any way acting in concert with respect to such obligations or the transactions contemplated by this Agreement. Each Investor shall be entitled to protect and enforce its rights, including without limitation the rights arising out of this Agreement, and it shall not be necessary for any other Investor to be joined as an additional party in any proceeding for such purpose

(j) If any provision of this Agreement shall be held to be illegal, invalid or unenforceable, such illegality, invalidity or unenforceability shall attach only to such provision and shall not in any manner affect or render illegal, invalid or unenforceable any other provision of this Agreement, and this Agreement shall be carried out as if any such illegal, invalid or unenforceable provision were not contained herein.

(k) This Agreement constitutes the entire agreement among the Company and the Investor relative to the subject matter hereof and supersedes in its entirety any and all prior agreements, understandings and discussions with respect thereto.

(l) The headings of the sections of this Agreement are for convenience and shall not by themselves determine the interpretation of this Agreement.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties have executed this Registration Rights Agreement as of the date first written above.

**ACTINIUM PHARMACEUTICALS, INC.**

By: _____
Name:
Title:

[SIGNATURE PAGE OF HOLDERS FOLLOWS]

Name of Holder: _____

*Signature of Authorized Signatory of Holder*: _____

Name of Authorized Signatory: _____

Title of Authorized Signatory: _____

Annex A

Plan of Distribution

Each Selling Stockholder (the "***Selling Stockholders***") of the securities and any of their pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their securities covered hereby on the [principal Trading 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 of 1933, as amended (the "***Securities Act***"), if available, rather than under this prospectus.

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 the Company that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the securities. In no event shall any broker-dealer receive fees, commissions and markups which, in the aggregate, would exceed eight percent (8%).

The Company is required to pay certain fees and expenses incurred by the Company incident to the registration of the securities. The Company has agreed to indemnify the Selling Stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

Because Selling Stockholders may be deemed to be "underwriters" within the meaning of the Securities Act, they will be subject to the prospectus delivery requirements of the Securities Act including Rule 172 thereunder. In addition, any securities covered by this prospectus which qualify for sale pursuant to Rule 144 under the Securities Act may be sold under Rule 144 rather than under this prospectus. The Selling Stockholders have advised us that there is no underwriter or coordinating broker acting in connection with the proposed sale of the resale securities by the Selling Stockholders.

We agreed to keep this prospectus effective until the earlier of (i) the date on which the securities may be resold by the Selling Stockholders without registration and without regard to any volume or manner-of-sale limitations by reason of Rule 144, without the requirement for the Company to be in compliance with the current public information under Rule 144 under the Securities Act or any other rule of similar effect or (ii) all of the securities have been sold pursuant to this prospectus or Rule 144 under the Securities Act or any other rule of similar effect. 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).

**REGISTRATION RIGHTS AGREEMENT**

**EXHIBIT A**

| Name of Purchaser | Units | Common Stock | Warrant Shares | Total Purchase Price Amount |
|---|---|---|---|---|
| | | | | $ |

**SLOAN-KETTERING INSTITUTE FOR CANCER RESEARCH**
**1275 York Avenue, New York, NY 10065**

*Via E-Mail*
Sergio Traversa, Pharm.D.
Interim President, Interim Chief Executive Officer and Interim Chief Financial Officer
Actinium Pharmaceutical, Inc.
straversa@actiniumpharmaceuticals.com

Sept 4, 2013

Dear Dr. Traversa,

The purpose of this Letter Agreement is to set forth the understanding between **Actinium Pharmaceutical, Inc.** ("API") and **Sloan-Kettering Institute for Cancer Research** ("SKI") regarding the total amount owed by API to SKI, for the period of 2011 to 2014, pursuant the relevant terms of the agreements listed below. This Letter Agreement does not amend or otherwise affect the obligations owed by each party under the agreements listed below. In order to facilitate the payment of the amounts that API owes to SKI, SKI will invoice API for the amounts owed pursuant each agreement listed below. The amounts payable by API are reflected in the API Invoice Schedule (attached as Exhibit A), and API agrees to pay the amounts indicated in each invoice.

The total amount that API owes SKI for the period of 2011 to 2014 is **$815,100** plus all relevant licensed intellectual property related pass through costs to be determined. In calculating the total amount that API owes to SKI, the relevant terms in the following agreements were considered:

**Article 1**: The License, Development and Commercialization Agreement dated February 11, 2002 as amended on August 7, 2006 (the "License Agreement"), which contains the following three immediately relevant recurring payment terms that API needs to comply with: **(i)** Payment of Patent Expenses; **(ii)** a $50,000 Annual Maintenance Fee; and **(iii)** a minimum of $50,000 in Annual Research Funding, both of which are directly applicable to 2014, the year which is outside of the scope of the agreements discussed under Articles 2 and 3 below.

**Article 2**: A Letter Agreement dated June 19, 2011 (the "Forgiveness Agreement"), in which SKI agreed that the amounts that had accrued under the Letter Agreement dated April 9, 2009 (the "Forbearance Agreement") would be forgiven in exchange for API's promise to pay SKI the following amounts in license fees and research funding: **(i)** $50,000 in 2011, **(ii)** $200,000 in 2012, and **(iii)** $250,000 in 2013, which schedule replaces the schedule that would have otherwise been due under the License Agreement referred to in Article 1 above, but does not alter the allocation of the payments, for the period from 2011 through 2013.

**Article 3**: The two (2) Letter Agreements dated April 15, 2011 (the "Loan Agreements"), in which API requested the following two loans totaling $215,100: **(i)** $43,600; and **(ii)** $171,500.

The total amount that API owes SKI for the period of 2011 to 2014 does not include amounts API may owe for patent expenses under the License Agreement. The amount owed for patent expense will be determined at a later date and invoiced accordingly. Additionally, notwithstanding this Letter Agreement or the relevant Loan Agreement, the repayment of $43,600 loan, referenced in Article 3, will not be used for research, and will instead be deposited into the account from which the funds for the loans originated.

During the period of 2011 to 2013, API paid SKI a total of $321,500, reducing the total amount owed for the period of 2011 to 2014 to **$493,600**. In determining the reduced amount that API owes to SKI, the statements made by API in the Form 8K/A filed with the U.S. Securities and Exchange Commission on December 28, 2012 were taken into account. To partially satisfy the above mentioned outstanding obligation, the parties may enter into a proposed Sponsor Research Agreement (the "SRA") for the period of 2013 to 2014. If that SRA is executed and the SRA payments are received by SKI (a total of $339,537) then the balance of the total amount owed for the period of 2011 to 2014 would be reduced to **$154,063**. Please see Exhibit A which contains the API Invoice Schedule specifying the amounts that API owes and Exhibit B which contains a table summarizing the discussion above.

In addition to the amounts that API owes to SKI, SKI may also be entitled to a credit for any unused portion of the $255,600 that SKI paid to API for certain future services that were supposed to be rendered during 2011, as a result of a third Letter Agreement dated April 15, 2011. The amount of the credit, if any, will be determined at a later date and agreed to in writing by both parties.

This Letter Agreement, and all claims arising out of, relating to or in connection with this Agreement, are governed by and construed in accordance with the laws of the State of New York, without regard to its provisions concerning the applicability of the laws of other jurisdictions. All claims arising out of, relating to or in connection with this Letter Agreement, or the relationship between the parties hereto, are subject to the exclusive jurisdiction of and venue in the federal and state courts within New York, and both API and SKI hereby consent to the exclusive jurisdiction and venue of these courts, without regard to any conflicts of law principles.

Please indicate your agreement to the forgoing on behalf of API by signing below.

Sincerely,

**SLOAN-KETTERING INSTITUTE FOR CANCER RESEARCH**

By: _____

Gregory Raskin, M.D.
Executive Director, Office of Technology Development

Accepted and agreed as of the date first written above:
**ACTINIUM PHARMACEUTICALS, INC.**

By: _____
(Duly Authorized Officer)

Name: Sergio Traversa, Pharm.D.

Title: Interim: President; Chief Executive Officer; and Chief Financial Officer

Date: Sept 4, 2013

Exhibit 23.1

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We hereby consent to the inclusion in this Registration Statement on Form S-1 of our report dated March 15, 2013 relating to the consolidated financial statements of Actinium Pharmaceuticals, Inc. as of December 31, 2012 and 2011, for the years ended December 31, 2012 and 2011 and for the period from June 13, 2000 (inception) to December 31, 2012. We also consent to the reference to our firm under the heading *"Experts"* appearing therein.

/s/ GBH CPAs, PC

GBH CPAs, PC
www.gbhcpas.com
Houston, Texas

January 31, 2014