

Actinium Pharmaceuticals, Inc.
Form DEF 14A
November 14, 2017
UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 14A
Proxy Statement Pursuant to Section 14(a) of the Securities Exchange Act of 1934
(Amendment No.)

Filed by the Registrant

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- Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))
- Definitive Proxy Statement
- Definitive Additional Materials
- Soliciting Material under Rule 14a-12

Actinium Pharmaceuticals, Inc.

(Name of Registrant as Specified In Its Charter)

N/A

(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

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Letter to Shareholders

November 14, 2017

Dear Actinium Shareholders,

A luminary in biotech once let on to me that the most important thing he always looked for in a biotech company as a predictor of success was the team, as a good team could create value from even mediocre assets. Well, we believe firmly that we have stellar assets, and in the middle of this year, Actinium was afforded the opportunity to refresh and recalibrate the senior team. With the new team in place, we have had one of the most eventful periods for Actinium Pharmaceuticals to date. For example, we have enrolled more patients in the past few months than in the five prior years combined. This improved operational capability is critical as we drive toward the visible clinical milestones that are needed to establish the value of our clinical assets. As this year comes to a close, I would like to review our progress and accomplishments for you and also provide an outlook for what is promising to be a transformational period with significant value creation potential for the Company.

Today, Actinium is actively engaged in conducting three clinical trials with assets that have either first-in-class or best-in-class potential. The high quality of the hospitals and reputation of the doctors involved in our trials are the envy of many larger companies. These trials are all expected to yield visible clinical results during the remainder of this year and in 2018-2019. We have for the first time, fielded, and had accepted, multiple publications at the prestigious American Society of Hematology, or ASH Meeting, that show case the multi-faceted nature of Actinium's assets and technology platform. We have launched the AWE Program or Actinium Warhead Enabling Program on the back of experimental results that showcase the power of our platform technology in enabling improved cell killing efficacy of daratumumab, or Darzalex[®], a blockbuster product in multiple myeloma after it has been coupled with actinium-225. We have successfully manufactured enough antibody drug supply to satisfy our needs for the next couple of years. Importantly, we are bringing to bear the experience of the new team members to clinical drug development. This is clearly evidenced not only by the meaningful progress made in patient enrollment across our trials but also by our ability to smartly think about the data signals we have received in the Actimab-A trial and to exploit those for further development.

This improved productivity in all areas of the company is a direct result of a higher functioning team which we will continue to grow selectively and strengthen. We anticipate that the expected clinical results of Iomab-B, Actimab-A and Actimab-M, the AWE Program, and other clinical programs that we will unveil going forward will facilitate strategic collaborations and help drive value for the Company and you, our loyal shareholders. As a preview, and a harbinger of things to come please read the section on our CD33 program in this letter. We thank you for your support that allows us to work in realizing our vision for this company. It is with a sense of pride that we review our key accomplishments thus far in 2017.

2017 Review

- Iomab-B Pivotal Phase 3 Trial — All is well. Met target of activating the SIERRA trial at 15 leading U.S. bone marrow transplant centers. Growing enrollment expected to yield visible clinical milestones.

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- Data Driven Newsflash. Not just Actimab-A, not just Actimab-M but an emerging, industry leading CD33 program applicable to numerous hematologic indications due to the power of our alpha radiation approach.
- Recent Developments. Drug approvals and strategic deals in industry validate our CD33 approach.
- Lightbulb Moments. Potential to build an Industry leading CD33 program based on evidence from current trials.

- Actimab-A Update. Strong single agent activity seen in Phase 2. On track for topline results in 2018.
- Actimab-M Update. Trial expanded due to encouraging initial data and strong interest. On track for topline results in 2018.
- AWE Technology enables AWE Program launch based on AWESome experimental results.
- Strong balance sheet allows us to execute on value-enhancing milestones.

Going forward, we believe that the clinical progress and data generated in 2017 will enable our strengthened team to deliver on the multiple, significant value-creation milestones expected between now and the end of 2018 and we provide that outlook after the detailed review below.

2017 Review — Company Achievements Enable Multiple Value Creating Events Going Forward

Iomab-B Pivotal Phase 3 Trial — All Is Well. Met Target of Activating the SIERRA Trial at 15 Leading U.S. Bone Marrow Transplant Centers. Growing Enrollment Expected to Yield Visible Clinical Milestones.

Iomab-B is our first-in-class, lead drug product candidate that targets CD-45, an antigen expressed on all proliferating blood cancer and bone marrow cells. The intent of Iomab-B is to safely destroy all cancer and bone marrow cells before a patient can get a potentially curative Bone Marrow Transplant, or BMT. Currently, chemotherapy is used to destroy or condition the bone marrow and due to its toxicity, it is not well tolerated. Often times, chemotherapy cannot be used for elderly patients with relapsed or refractory Acute Myeloid Leukemia for which Iomab-B is intended. As a result, these patients for whom no other conventional chemotherapy works cannot receive a BMT which is potentially curative, and they tend to have a very short life span. Thereby, Iomab-B offers these patients a chance for a BMT and a chance of a cure or longer survival.

At present, the pivotal, Phase 3 SIERRA (Study of Iomab-B in Elderly Relapsed or Refractory AML) trial for Iomab-B is being conducted at 15 leading bone marrow transplant centers in the United States. We are proud to have met this target and believe that we will add selectively another 3-7 premier sites. The sites where the trial is being conducted perform over 30% of the BMT procedures in the U.S. each year. Our team worked tirelessly to initiate the trial at these BMT centers and has done a stellar job educating and supporting their staffs. We have found that once a site has dosed its first patient, the pace of enrollment at that site subsequently increases. At this time, our clinical team is working hard with the sites to ensure that enrollment continues to remain strong and we continue to believe that enrollment of the Iomab-B clinical trial by the end of 2018, along with the interim Data Monitoring Committee readouts at 25 percent, 50 percent and 75 percent of enrollment will be achievable.

In initiating the SIERRA trial at these top BMT centers, we gained invaluable insights into the operations and dynamics at top BMT centers. We will use this to our advantage as we begin to think about the commercialization of Iomab-B. In the U.S., the top 50 centers perform more than 80% of all BMT procedures. Our commercial efforts will focus on implementing Iomab-B at these centers. We are confident that we will succeed in accomplishing this based on the success our team has had in implementing the Iomab-B pivotal trial at centers such as MD Anderson Cancer Center, the Mayo Clinic, Memorial Sloan Kettering Cancer Center, Baylor and many of the other top BMT centers.

Actinium is focused on and committed to enabling safer myeloablation for BMT to drive better outcomes for patients. We are determined to complete the pivotal, Phase 3 SIERRA trial as efficiently as possible and to submit a Biologics License Application (BLA) to the FDA for approval in 2019. We are confident in our ability to build a bone marrow transplant franchise based around Iomab-B that will have commercial operations servicing the top 50 BMT centers in the U.S., which we believe will be an asset in and of itself, as we will embark on life cycle management activities with Iomab-B during this timeframe. As mentioned during the mid-year review and worthwhile repeating, we note that Iomab-B still stands alone as the only induction and conditioning agent currently in clinical development with no

visible competition evident in the clinic. This is an important fact to keep in mind.

Finally, we look forward to providing updates on the trial by the end of this year and continuing to provide updates in 2018 as we progress towards the completion of enrollment and prepare for regulatory filings.

Data Driven Newsflash. Not Just Actimab-A, Not Just Actimab-M But an Emerging, Industry Leading CD33 Program Applicable to Numerous Hematologic Indications Due to the Power of Our Technology Platform Using Alpha Radiation Approach.

Recent Development. Drug Approvals and Strategic Deals in Industry Validate Our CD33 Approach.

In the past few months there has been a lot of excitement related to Acute Myeloid Leukemia treatments as four therapies have received approval after decades of stagnation, with just one therapy having been approved in the forty years prior. That therapy was the CD33-targeting Antibody Drug Conjugate (ADC) Mylotarg which had been initially approved under the leadership of our Chief Medical Officer, Dr. Mark Berger, who led its clinical development. Highly relevant to us, the CD33 field in AML has been very active of late with the reapproval of Mylotarg, which had been withdrawn from the market by Pfizer for safety issues, and strategic transactions like Jazz Pharmaceuticals' \$75 million upfront licensing deal with Immunogen, which included their CD33 targeting ADC currently in a Phase 1 trial. We are encouraged about Mylotarg's reapproval as it represents validation of the CD33 target, which is expressed in virtually all patients with AML. We are also delighted to see strategic partners showing interest in this field, as we believe we have a superior technological approach that will differentiate us from other CD33 targeting therapies and AML therapies. We have been planning and intend to reveal between year-end and mid-2018 various initiatives that will clearly demonstrate the superior potential of our CD33 program.

Lightbulb Moments. Potential to Build an Industry Leading CD33 Program Based on Evidence From Current Trials.

The studies to date using our CD33 targeting antibody linked to alpha radiation (Bismab-A (discontinued), Actimab-A, Actimab-M) have taught us a great deal about the strengths of using our Antibody Radiation Conjugate (ARC) approach and Actinium intends to take advantage of these strengths. We will address three of them here. One of those strengths (as discussed briefly in the paragraph on Actimab-A below) is simply the ability to treat AML, a cancer known to be a radiosensitive, with radiation and produce a response rate that provides clear evidence of the potency of the drug candidate as a single agent. Instead of continuing to add additional cytotoxic chemotherapies to produce combination cytotoxic treatments, adding Actimab-A to intensive cytotoxic treatments would enable us to bring an entirely different treatment modality to the combination. Secondly, as discussed in our ASH abstract for Actimab-A (and in the paragraph below), the dose of Actimab-A initially used as a front-line therapy for older AML patients unfit for intensive chemotherapies in our current Phase 2 trial was associated with myelosuppression that lasted longer than was clinically desirable. We also determined that the safety profile of Actimab-A outside of myelosuppression is extremely benign with no extramedullary (outside the bone marrow) toxicity. Given this profile we believe that Actimab-A would likely also have great clinical potential in situations such as preparation for allogeneic bone marrow transplant, where myelosuppression is not a problem since the bone marrow is going to be replaced. Lastly, we've also learned that Actimab-A is most effective when the peripheral blast burden is low, as then it's able to distribute well to all the AML cells in the bone marrow. So, another potential use for Actimab-A would be after initial therapy has produced a remission, as it's known that without further therapy, relapse rates will be high. At remission, of course, there are no peripheral blasts, so this may be a fruitful time to use Actimab-A at lower doses given its potency and safety profile, particularly in older patients who cannot tolerate multiple intensive therapies. Again, we intend to reveal between year-end and mid-2018 various initiatives designed to clearly demonstrate the superior potential of our CD33 program compared to the competition.

Actimab-A Update. Strong Single Agent Activity Seen in Phase 2. On Track for Topline Results in 2018.

Our thinking regarding the CD33 program has evolved, in part, due to certain developments in the Actimab-A Phase 2 trial and alluded to in the ASH abstract published November 1, 2017, highlighting preliminary data from the current Phase 2 trial of Actimab-A. Encouragingly, as a single agent administered twice and 7 days apart, Actimab-A at 2 uCi/kg of body weight showed a 56% response rate in patients over the age of 60 who are unfit for intensive chemotherapy. The Actimab-A presentation at ASH will have additional data on this trial. Our target patient population does not have effective treatment options and is very difficult to treat. The patients enrolled in our trial thus

far had a median age of 75 with many having unfavorable cytogenetics and prior hematologic diseases like myelodysplastic syndrome, making treatment of these patients even more complex. We are excited to see Actimab-A's ability to produce responses for these patients as a single agent which clearly demonstrate its efficacy potential and are constructive about the topline results expected in 2018. Equally exciting is that minimal non-hematologic toxicities were observed in patients receiving Actimab-A, particularly lack of veno-occlusive

disease, a liver toxicity that is seen in ADC's such as Mylotarg and which led to the discontinuation of Seattle Genetics' high profile CD33 program this year. Based on the Actimab-A results, we are of the view that our CD33 program has the potential to be best in class based on its activity as a single agent and safety profile. We believe that this profile is a function of our technological approach of using an ARC (versus ADC's). Our targeting agent linked to Actinium-225 does not have to be internalized like ADC's and can still kill cells from the outside, either by direct binding of the antibody to the cell surface or by cross fire. We believe this characteristic of our product will allow us to expand into other areas and the Actimab-M trial is the first of several that we are planning in order to better exploit the signals we have obtained from our clinical data set.

Actimab-M Update. Trial Expanded Due to Initial Data, Strong Interest. On Track for Topline Results in 2018.

In 2016 we committed to initiating a third clinical program in 2017. We achieved this goal in early February of 2017 with the initiation of our Actimab-M Phase 1 trial which targets CD33 positive, multiple myeloma patients with advanced disease that were relapsed or refractory to several lines of therapy. This is an out-of-the-box idea with a strong scientific, clinical and commercial rationale for targeting multiple myeloma with a CD33 targeting ARC. First, myeloma is a radiation-sensitive cancer which cannot be treated with external radiation due to its diffuse nature, so use of targeted radiation could be promising. There is a sizable segment of multiple myeloma patients that express CD33 at levels in line with AML (80-90%) so using an ARC proven to show efficacy in AML for these patients is supportive of our rationale. Further, the drugs approved to date have low efficacy as single agents and are either chemotherapy or immunotherapy based, none of them are curative, and standard treatment of these patients tends to be combination therapies. Using a different modality such as Actimab-M with current approaches could be promising, assuming we get an efficacy signal from this proof of concept trial. Lastly, the population of multiple myeloma patients that we target with Actimab-M is larger than AML, which assuming an efficacy signal, would make this program an attractive value proposition for a potential partner. At the present time, the Actimab-M trial is enrolling patients and based on interest from leading cancer centers in participating in this trial, we have taken over management of the trial and brought the Investigational New Drug (IND) in-house to facilitate expedited expansion. Preliminary positive safety information has prompted us to revise the protocol to allow for a higher dose level and revised dosing schedule in order to improve the odds of success. Despite these changes, we are projecting that we will be able to meet our objective of topline results in the Actimab-M trial in 2018.

AWE Technology Enables AWE Program Launch Based on AWESome Experimental Results.

This year, we reinvigorated intellectual property generation using our AWE or Actinium Warhead Enabling technology platform with activity that has brought our portfolio to 72 patents granted, pending or filed in the U.S. and internationally. The time has also come for the Company to leverage its AWE technology platform for external purposes, in addition to pipeline expansion of our own programs. To this end, we have launched the AWE Program by showcasing the ability of using our AWE technology platform to produce superior drug candidates. The ASH poster demonstrating the vastly superior cell killing abilities of Actinium-225 labeled daratumumab compared to unlabeled daratumumab, or Darzalex®, a blockbuster, commercial product for multiple myeloma is the initial validation of the capabilities we have developed this year to support the AWE Program and also for the AWE technology platform. We intend to offer these capabilities in a collaborative fashion to potential partners who are seeking to develop ARC's for their own pipelines or biobetters of existing drugs. We believe there are myriad opportunities to create biobetters by increasing efficacy, improving safety, dosing or administration and providing companies with commercial drugs the means to manage their products' lifecycles. We believe that this is a strategy that can create tremendous value, as was recently shown by Novartis' announced acquisition of Advanced Accelerator Applications Inc. for \$3.9 billion in large part because the latter's radiation-coupled somatostatin analog biobetter Lutathera® is showing a superior profile to Novartis' blockbuster drug Sandostatif®.

Strong Balance Sheet Allows Us to Execute on Value-Enhancing Milestones

We reported a cash balance of \$20.5 million in our 3Q:2017 quarterly filing. We believe this capital will allow us to execute on several value-enhancing milestones that we highlight below. We pride ourselves on being a team of 25 employees that “punch above our weight” and that we keep things lean. Going forward, our team is committed to the development of drug candidates and the progression of clinical trials in the most efficient and cost-effective manner possible. We are confident in our ability to drive value for shareholders by building on our recent progress in team building and product development, leveraging our upgraded expertise and the recent clinical insights.

Company Outlook — Clinical Trial Progress And 2017 Data Will Enable Strengthened Team To Deliver On The Multiple, Significant Value-Creation Milestones Expected in 2018 That Can Transform The Company

Actinium has made tremendous progress in second half of 2017 with the advancement of our three clinical trials, innovative research that we expect will result in new clinical programs and drug candidates, and strategic programs such as AWE aimed at unlocking value. In addition to all that we have highlighted above, we have achieved several milestones and we expect to achieve additional milestones by the end of 2017 and in 2018. We expect 2018 to be a significant year for Actinium as we are focused on completing enrollment for Iomab-B and delivering visible clinical or topline data on all three ongoing trials. Assuming that the early signs bear themselves out and yield positive results, significant and transformative value creation is possible.

Key Value Enhancing Catalysts for the Remainder of 2017 and 2018

- Actimab-A Phase 2 clinical trial update via ASH poster presentation
- CD33 program update and unveiling of new clinical initiative
- Iomab-B SIERRA trial update by year end
- Iomab-B SIERRA trial site expansion and DMC enrollment updates
- Complete enrollment of the pivotal Phase 3 trial by year end
- Actimab-A Phase 2 clinical trial top line data
- Actimab-M Phase 1 clinical trial top line data
- Implementation of fourth clinical program
- Intellectual property generation leveraging our AWE Technology Platform
- AWE Program initiatives designed to facilitate collaborations
- Selective expansion of the team to further bolster clinical development and research & development
- Explore strategic initiatives to enhance our capabilities in supply chain and research & development

In the second half of 2017 our refreshed and recalibrated executive team has come together and is working towards a unified vision for what Actinium Pharmaceuticals will become. Our entire team has never been stronger, more aligned or energized. As a result, we have been able to accomplish a number of meaningful milestones, but perhaps most importantly, we have laid a foundation for 2018 and beyond, where we can finally begin to realize the true potential of Actinium's assets. We believe a disconnect exists between the value of our drug candidates, technology and know-how, with respect to the value that is being ascribed to the Company in the public markets. We recognize that this is frustrating to you as shareholders and commit to you that we are focused on producing results to eliminate this dislocation of value. All of us at Actinium feel privileged to work on developing such promising therapies and technology, which we confidently believe will have meaningful impacts on the lives of patients with our drug candidates that are either first-in-class or best-in-class. We thank you for your support that allows us to work towards this worthwhile endeavor.

Please send in your completed proxy form as soon as possible as indicated in the proxy materials. We hope that you support the proposals in line with management and the board's recommendations. We believe these proposals will

enable us to best succeed in our goal to build a leading company to develop and deliver transformative medicines for bone marrow transplants and blood cancers by harnessing the power of our proprietary assets and technology and in part by selectively acquiring enhanced capabilities that fit our strategy

Indeed, we are counting on your unfettered support as in the past!

Sincerely and with deep gratitude,

Sandesh Seth

Chairman and CEO

Forward-Looking Statements for Actinium Pharmaceuticals, Inc.

This letter contains “forward-looking statements” as defined in the Private Securities Litigation Reform Act of 1995. These statements are based on management’s current expectations and involve risks and uncertainties, which may cause actual results to differ materially from those set forth in the statements. The forward-looking statements may include statements regarding product development, product potential, or financial performance. No forward-looking statement can be guaranteed and actual results may differ materially from those projected. Actinium Pharmaceuticals undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future events, or otherwise.

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Stockholders Should Read the Entire Proxy Statement Carefully Prior to Returning Their Proxies

PROXY STATEMENT

FOR

ANNUAL MEETING OF STOCKHOLDERS

GENERAL

The enclosed proxy is solicited on behalf of the Board of Directors of Actinium Pharmaceuticals, Inc. for use at our annual meeting of stockholders to be held at The Garden City Hotel, 45 Seventh St, Garden City, NY 11530 on December 20, 2017 at 9:30 a.m. Eastern Standard Time. Voting materials, including this proxy statement and proxy card, are expected to be first delivered to all or our stockholders on or about November 13, 2017.

QUESTIONS AND ANSWERS

Following are some commonly asked questions raised by our stockholders and answers to each of those questions.

What may I vote on at the annual meeting?

At the annual meeting, stockholders will consider and vote upon the following matters:

- Proposal 1: To elect David Nicholson and Richard I. Steinhart as Class I directors to serve for a three-year term that expires at the 2020 Annual Meeting of Stockholders, or until his successor is elected and qualified or until his earlier resignation or removal; and
- Proposal 2: To ratify the appointment of GBH CPAs, PC as our independent registered public accounting firm; and
- Proposal 3: To approve an amendment to our Actinium Pharmaceuticals, Inc. 2013 Amended and Restated Stock Plan, as amended, to increase the shares of our common stock available for issuance thereunder by 5 million shares from 12,750,000 to 17,750,000, to support planned hiring efforts as our company grows; and
- Proposal 4: To approve an amendment to our Certificate of Incorporation to increase the number of common stock, par value \$0.001 per share, we are authorized to issue to 400,000,000 shares; and
- To consider and act upon any other business as may properly come before the annual meeting or any adjournments thereof.

How does the Board of Directors recommend that I vote on the proposals?

Our Board unanimously recommends that the stockholders vote "FOR" all proposals being put before our stockholders at the Meeting.

How do I vote?

Whether you plan to attend the annual meeting or not, we urge you to vote by proxy. If you vote by proxy, the individuals named on the proxy card applicable to your class of stock, or your "proxies," will vote your shares in the manner you indicate. You may specify whether your shares: should be voted for or withheld for the nominee for director; should be voted for, against or abstained with respect to the ratification of the

appointment of the Company's independent registered public accounts; should be voted for, against or abstained with respect to approving an amendment to our Actinium Pharmaceuticals, Inc. 2013 Amended and Restated Stock Plan, as amended; and should be voted for, against or abstained with respect to approving an amendment to our Certificate of Incorporation to increase the number of common shares we are authorized to issue to 400,000,000 shares. Voting by proxy will not affect your right to attend the annual meeting. If your shares are

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registered directly in your name through our transfer agent, Action Stock Transfer Corporation, or you have stock certificates registered in your name, you may submit a proxy to vote:

- **By Internet or by telephone. Follow the instructions attached to the proxy card to submit a proxy to vote by Internet or telephone.**
- **By mail. If you received one or more proxy cards by mail, you can vote by mail by completing, signing, dating and returning the enclosed proxy card applicable to your class of stock in the enclosed postage prepaid envelope. Your proxy will be voted in accordance with your instructions. If you sign the proxy card but do not specify how you want your shares voted, they will be voted as recommended by our Board of Directors.**
- **In person at the meeting. If you attend the annual meeting, you may deliver your completed proxy card in person or you may vote by completing a ballot, which will be available at the annual meeting. You are required to register in advance of the annual meeting if you plan to attend the annual meeting in person. If you wish to register in advance of the annual meeting, please contact our investor relations office by no later than December 13, 2017, by e-mail to soloughlin@actiniumpharma.com, mail to Actinium Pharmaceuticals, Inc., 275 Madison Avenue, 7th Floor, New York, New York 10016, or telephone at (646) 677-3875.**

Telephone and Internet voting facilities for all stockholders of record will be available 24-hours a day and will close at 11:59 p.m., Eastern Standard Time, on December 19, 2017.

If your shares are held in “street name” (held in the name of a bank, broker or other nominee who is the holder of record), you must provide the bank, broker or other nominee with instructions on how to vote your shares and can do so as follows:

- **By Internet or by telephone. Follow the instructions you receive from the record holder to vote by Internet or telephone.**
- **By mail. You should receive instructions from the record holder explaining how to vote your shares.**
- **In person at the meeting. Contact the broker, bank or other nominee who holds your shares to obtain a broker’s proxy card and bring it with you to the annual meeting. You will not be able to vote at the annual meeting unless you have a proxy card from your broker, bank or other nominee.**

What happens if additional matters are presented at the annual meeting?

Other than the election of directors, the ratification of the appointment of our auditor, the amendment of our stock plan to increase the number of shares that may be granted under the plan, and approving an amendment to our certificate of incorporation to increase our authorized shares, we are not aware of any other business to be acted upon at the annual meeting. If you grant a proxy, the person named as proxy holder, Sandesh Seth, our Chairman and Chief Executive Officer, or CEO, will have the discretion to vote your shares on any additional matters properly presented for a vote at the annual meeting.

What happens if I do not give specific voting instructions?

If you hold shares in your name and you sign and return a proxy card without giving specific voting instructions, your shares will be voted as recommended by our Board of Directors, or Board, on all matters and as the proxy holder may determine in his discretion with respect to any other matters properly presented for a vote before the annual meeting. If you hold your shares through a stockbroker, bank or other nominee and you do not provide instructions on how to vote, your stockbroker or other nominee may exercise their discretionary voting power with respect to certain proposals that are considered as “routine” matters. For example, Proposal 2 — ratification of the appointment of GBH

CPAs, PC as our independent registered public accounting firm, and Proposal 4 — the amendment to our certificate of incorporation to increase our authorized shares, are considered routine matters, and thus your stockbroker, bank or other nominee may exercise their discretionary voting power with respect to Proposals 2 and 4. **If the organization that holds your shares does not receive instructions from you on how to vote your shares on a non-routine matter, the organization that holds your shares will inform us that it does not have the authority to vote on these matters with respect to your shares.** This is generally referred

to as a “broker non-vote.” When the vote is tabulated for any particular matter, broker non-votes will be counted for purposes of determining whether a quorum is present, but will not otherwise be counted. In the absence of specific instructions from you, your broker does not have discretionary authority to vote your shares with respect to Proposal 1 — the election of David Nicholson and Richard I. Steinhart as members to our Board, and Proposal 3 — the increase in shares of our stock plan. **We encourage you to provide voting instructions to the organization that holds your shares by carefully following the instructions provided in the notice.**

What is the quorum requirement for the annual meeting?

On November 8, 2017, the Record Date for determining which stockholders are entitled to vote, there were 80,025,073 shares of our common stock outstanding, which is our only class of voting securities. Each share of common stock entitles the holder to one vote on matters submitted to a vote of our stockholders. Thirty Four percent (34%) of our outstanding common shares as of the Record Date must be present at the annual meeting (in person or represented by proxy) in order to hold the meeting and conduct business. This is called a quorum. Your shares will be counted for purposes of determining if there is a quorum, even if you wish to abstain from voting on some or all matters introduced at the annual meeting, if you are present and vote in person at the meeting or have properly submitted a proxy card or voted by fax, by phone or by using the Internet.

How can I change my vote after I return my proxy card?

You may revoke your proxy and change your vote at any time before the final vote at the annual meeting. You may do this by signing a new proxy card with a later date, by voting on a later date by using the Internet (only your latest Internet proxy submitted prior to the annual meeting will be counted), or by attending the annual meeting and voting in person. However, your attendance at the annual meeting will not automatically revoke your proxy unless you vote at the annual meeting or specifically request in writing that your prior proxy be revoked.

Is my vote confidential?

Proxy instructions, ballots and voting tabulations that identify individual stockholders are handled in a manner that protects your voting privacy. Your vote will not be disclosed either within our company or to third parties, except:

- as necessary to meet applicable legal requirements;
- to allow for the tabulation of votes and certification of the vote; and
- to facilitate a successful proxy solicitation.

Any written comments that a stockholder might include on the proxy card will be forwarded to our management.

Where can I find the voting results of the annual meeting?

The preliminary voting results will be announced at the annual meeting. The final voting results will be tallied by our Inspector of Elections and reported in a Current Report on Form 8-K which we will file with the Securities and Exchange Commission, or SEC, within four business days of the date of the annual meeting.

How can I obtain a separate set of voting materials?

To reduce the expense of delivering duplicate voting materials to our stockholders who may have more than one Actinium Pharmaceuticals, Inc. stock account, we are delivering only one Notice to certain stockholders who share an address, unless otherwise requested. If you share an address with another stockholder and have received only one Notice, you may write or call us to request to receive a separate Notice. Similarly, if you share an address with another

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stockholder and have received multiple copies of the Notice, you may write or call us at the address and phone number below to request delivery of a single copy of this Notice. For future annual meetings, you may request separate Notices, or request that we send only one Notice to you if you are receiving multiple copies, by writing or calling us at:

Actinium Pharmaceuticals, Inc.
Attention: Steve O'Loughlin, Principal Financial Officer
275 Madison Avenue, 7th Floor
New York, New York 10016
Tel: (646) 677-3875

Who pays for the cost of this proxy solicitation?

We will pay the costs of the solicitation of proxies. We may also reimburse brokerage firms and other persons representing beneficial owners of shares for expenses incurred in forwarding the voting materials to their customers who are beneficial owners and obtaining their voting instructions. In addition to soliciting proxies by mail, our board members, officers and employees may solicit proxies on our behalf, without additional compensation, personally, electronically or by telephone.

How can I obtain a copy of Actinium Pharmaceuticals, Inc.'s 2016 Annual Report on Form 10-K?

This proxy statement and our 2016 annual report to stockholders are available for viewing, printing and downloading at www.proxyvote.com. To view these materials, please have your 12-digit control number(s) available that appears on your Notice or proxy card. On this website, you can also elect to receive future distributions of our proxy statements and annual reports to stockholders by electronic delivery.

Additionally, you can find a copy of our Annual Report on Form 10-K, which includes our financial statements, for the fiscal year ended December 31, 2016 on the website of the SEC, at www.sec.gov, or in the "All SEC Filings" section of the "Investors" section of our website at www.actiniumpharma.com. You may also obtain a printed copy of our Annual Report on Form 10-K including our financial statements, free of charge, from us by sending a written request to: Actinium Pharmaceuticals, Inc., 275 Madison Avenue, 7th Floor, New York, NY 10016, attention: Principal Financial Officer.

What is the voting requirement to elect directors?

Directors are elected by a plurality of the votes cast in person or by proxy at the annual meeting and entitled to vote on the election of directors. "Plurality" means that the nominees receiving the greatest number of affirmative votes will be elected as directors, up to the number of directors to be chosen at the meeting. Broker non-votes will not affect the outcome of the election of directors because brokers do not have discretion to cast votes on this proposal without instruction from the beneficial owner of the shares.

What is the voting requirement to approve the other three proposals?

The proposal to ratify the appointment of GBH CPAs, PC as our independent registered public accounting firm will be approved if there is a quorum and the votes cast "FOR" the proposal exceeds those cast against the proposal. The proposal to approve an amendment to our 2013 stock plan to increase the shares authorized under the plan will be approved if there is a quorum and the votes cast "FOR" the proposal exceeds those cast against the proposal. The proposal to amend the charter to increase the authorized shares of the company will be approved if at least 50% of the issued and outstanding shares votes "FOR" the proposal and this exceeds those cast against the proposal.

Abstentions and broker non-votes will be treated as shares that are present, or represented and entitled to vote for purposes of determining the presence of a quorum at the annual meeting. Abstentions will not be counted in determining the number of votes cast in connection with any matter presented at the annual meeting. Broker non-votes will not be counted as a vote cast on any matter presented at the annual meeting.

Do I Have Dissenters' (Appraisal) Rights?

Appraisal rights are not available to our shareholders with any of the proposals described above to be brought before the annual meeting of shareholders.

How can I communicate with the non-employee directors on the Actinium Pharmaceuticals, Inc. Board of Directors?

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Our Board encourages stockholders who are interested in communicating directly with the non-employee directors as a group to do so by writing to the non-employee directors in care of our Chairman and CEO. Stockholders can send communications by mail to:

Sandesh Seth, Chairman and Chief Executive Officer
Actinium Pharmaceuticals, Inc.
275 Madison Avenue, 7th Floor
New York, New York 10016

Correspondence received that is addressed to the non-employee directors will be reviewed by our Chairman of the Board or his designee, who will regularly forward to the non-employee directors a summary of all such correspondence and copies of all correspondence that, in the opinion of our chairman, deals with the functions of our Board or committees thereof or that our chairman otherwise determines requires their attention. Directors may at any time review a log of all correspondence received by us that is addressed to the non-employee members of our Board and request copies of any such correspondence.

WHO CAN HELP ANSWER YOUR QUESTIONS?

You may seek answers to your questions by writing, calling or emailing us at:

Steve O'Loughlin
Principal Financial Officer
Actinium Pharmaceuticals, Inc.
275 Madison Avenue, 7th Floor
New York, NY 10016
Email: *soloughlin@actiniumpharma.com*
Tel: 646-677-3875

CORPORATE GOVERNANCE

Board of Directors

The Board of Directors oversees our business affairs and monitors the performance of management. In accordance with our corporate governance principles, our Board does not involve itself in day-to-day operations. The directors keep themselves informed through discussions with the Chairman and CEO, other key executives, and by reading the reports and other materials that we send them and by participating in Board and committee meetings. Our directors hold office until their successors have been elected and duly qualified unless the director resigns or by reason of death or other cause is unable to serve in the capacity of director. Biographical information about our directors is provided in “Election of Directors — Proposal No. 1” on page 32.

Term of Office

Our directors are divided into three classes, designated Class I, Class II and Class III. Class I shall consists of two directors, Class II shall consist of one director, and Class III consists of one director.

The term of each director is set forth below or until their successors are duly elected:

| Director | Class | Term (from 2017 Annual Meeting, if elected) |
|---------------------|-----------|---|
| David Nicholson | Class I | 3 years |
| Richard I Steinhart | Class I | 3 years |
| Sandesh Seth | Class II | 1 year |
| Ajit S. Shetty | Class III | 2 years |

Notwithstanding the foregoing, 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 classified board of directors, Class I shall serve a three year term from the date of the 2017 Annual Shareholders Meeting; Class II shall serve a one year term from the date of the 2017 Annual Shareholders Meeting; and Class III shall serve a two year term from the date the date of the 2017 Annual Shareholders Meeting. Directors elected at each annual meeting are elected for a three year term.

Director Independence

We use the definition of “independence” of the NYSE American stock exchange to make this determination. We are listed on the NYSE American under the symbol “ATNM”. NYSE MKT corporate governance rule Sec. 803(A)(2) provides that an “independent director” means a person other than an executive officer or employee of the company. No director qualifies as independent unless the issuer’s board of directors affirmatively determines that the director does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. The following is a non-exclusive list of persons who shall not be considered independent under NYSE American rules:

- a director who is, or during the past three years was, employed by the company, other than prior employment as an interim executive officer (provided the interim employment did not last longer than one year);
- a director who accepted or has an immediate family member who 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, other than the following:
 - (i) compensation for board or board committee service;
 - (ii) compensation paid to an immediate family member who is an employee (other than an executive officer) of the company,

- (iii) compensation received for former service as an interim executive officer (provided the interim employment did not last longer than one year); or
- (iv) benefits under a tax-qualified retirement plan, or non-discretionary compensation;

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- a director who is an immediate family member of an individual who is, or at any time during the past three years was, employed by the company as an executive officer;
- a director who is, or has an immediate family member who 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 (other than those arising solely from investments in the company's securities or payments under non-discretionary charitable contribution matching programs) that exceed 5% of the organization's consolidated gross revenues for that year, or \$200,000, whichever is more, in any of the most recent three fiscal years;
- a director who is, or has an immediate family member who is, employed as an executive officer of another entity where at any time during the most recent three fiscal years any of the issuer's executive officers serve on the compensation committee of such other entity; or
- a director who is, or has an immediate family member who is, a current partner of the company's outside auditor, or was a partner or employee of the company's outside auditor who worked on the company's audit at any time during any of the past three years.

Under the above-mentioned NYSE American director independence rules, David Nicholson, Ajit S. Shetty, and Richard I. Steinhart are independent directors of the Company.

Board Leadership Structure

In October 2013, Sandesh Seth was appointed Chairman of our Board of Directors and in June 2017 Mr. Seth was named Chief Executive Officer of the Company. In September 2017, David Nicholson was appointed lead independent director of our board of directors ("Lead Independent Director"). Our Lead Independent Director chairs the executive sessions of our board of director meetings; provides feedback to the Chairman and CEO; if appropriate, and in coordination with executive management, be available for consultation and direct communication with major shareholders; and leads the board's evaluation of the Chairman and CEO. We have a separate chair for each committee of our board of directors, all of whom are independent directors. The chairs of each committee report on the activities of their committees in fulfilling their responsibilities at the meetings of our board of directors.

Board of Directors Meetings and Attendance

During the fiscal year 2016, our Board held 9 meetings. No director attended fewer than 89% of the total number of meetings of our Board and of any committees of which he was a member during the year ended December 31, 2016. It is our policy that directors should make every effort to attend the annual meeting of stockholders, and each of our directors attended the annual meeting of stockholders in 2016.

Code of Business Conduct and Ethics

We adopted a Code of Business Conduct and Ethics that applies to all of our directors, officers and employees, including our principal executive officer and principal financial and accounting officer. A copy of the Code of Business Conduct and Ethics is available on the Investor section of our website at www.actiniumpharma.com. We will post on our website any amendment to our Code of Business Conduct and Ethics or waivers of our Code of Business Conduct and Ethics for directors and executive officers.

Complaints Regarding Accounting Matters

The Audit Committee has established procedures for:

- the receipt, retention and treatment of complaints regarding accounting, internal accounting controls, or auditing matters; and
- the confidential, anonymous submission by our employees of concerns regarding questionable accounting or auditing matters.

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Communications with Directors

The Board of Directors has approved procedures for stockholders to send communications to individual directors or the non-employee directors as a group. Written correspondence should be addressed to the director or directors in care of Sandesh Seth, Chairman and CEO of Actinium Pharmaceuticals, Inc., 275 Madison Avenue, 7th Floor, New York, NY 10016. Correspondence received that is addressed to the non-employee directors will be reviewed by our Chairman and CEO or his designee, who will regularly forward to the non-employee directors a summary of all such correspondence and copies of all correspondence that, deals with the functions of our Board of Directors or committees thereof or that he otherwise determines requires their attention. Directors may at any time review a log of all correspondence received by us that is addressed to the non-employee members of our Board of Directors and request copies of any such correspondence. You may also contact individual directors by calling our principal executive offices at (646) 677-3875.

Legal Proceedings

There are no legal proceedings to which any director, director nominee or officer of our company, any owner of record or beneficially of more than 5% of common stock, or any associate of any such director, director nominee, officer of our company or major security holder is a party in legal proceedings adverse to our company or has a material interest adverse to us.

Compliance With Section 16(a) of the Exchange Act

Based solely upon a review of copies of such forms filed on Forms 3, 4, and 5, and amendments thereto furnished to us we believe that as of the date of this proxy, our executive officers, directors and greater than 10 percent beneficial owners have complied on a timely basis with all Section 16(a) filing requirements.

BOARD COMMITTEES

Committees of the Board of Directors

Our Board of Directors has formed three standing committees: audit, compensation and corporate governance. 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 | Corporate Governance Committee |
| Richard I. Steinhart* | David Nicholson* | Ajit S. Shetty* |
| David Nicholson | Ajit S. Shetty | David Nicholson |
| Ajit S. Shetty | Richard I. Steinhart | 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 NYSE MKT. Richard I. Steinhart is the chairman of the audit committee. Our audit committee met four times during the year ended December 31, 2016.

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. Our compensation committee met four times during the year ended December 31, 2016.

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.

Corporate Governance Committee

Our corporate governance committee, which currently consists of three directors, monitors our corporate governance system. Our corporate governance committee met two times during the year ended December 31, 2016.

Nomination of Directors

Board of Director nominations are selected, or recommended for our Board's selection, by a majority of the independent directors. Our independent directors include David Nicholson, Ajit S. Shetty and Richard I. Steinhart. These directors are charged with the responsibility of proposing potential director nominees to the board of directors for consideration. All of our independent directors are independent directors as defined by the rules of the NYSE MKT. Our independent directors use criteria by which they will seek to evaluate candidates to serve on our Board. The evaluation methodology includes items such as experience in the biotechnology sector, experience with public companies, executive managerial experience, operations and commercial experience, fundraising experience and contacts in the investment banking industry, personal and skill set compatibility with current board members, industry reputation, knowledge of our company generally, and independence.

DIRECTOR COMPENSATION

The following table sets forth the compensation of our non-employee directors for the 2016 fiscal year:

| Name | Fees Earned or Paid in Cash | Stock Awards | Option Awards(1) | All Other Compensation | Total |
|---|--------------------------------|-----------------|---------------------|---------------------------|------------|
| David Nicholson | \$ 59,000 | — | 107,090 | — | \$ 166,090 |
| Richard Steinhart | \$ 63,000 | — | 107,090 | — | \$ 170,090 |
| Sergio Traversa (resigned June 2017) | \$ 58,500 | — | 107,090 | — | \$ 165,590 |

(1) At the end of fiscal year 2016, the aggregate number of option awards outstanding for each director was as follows: (i) for Dr. Nicholson, 199,900, (ii) for Mr. Steinhart, 149,950, and (iii) for Mr. Traversa, 169,950.

In accordance with SEC rules, the amounts shown reflect the aggregate grant date fair value of option awards granted to non-employee Directors during 2016, computed in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 718.

Our non-employee directors are paid an annual fee of \$40,000 and receive annual option grants of 25,000 shares. In addition, the Lead Independent Director will receive \$10,000 per year for service in that role. Board committee members will receive the following compensation:

| BOD Committee | Chairman | Member |
|----------------------|-----------|----------|
| Audit | \$ 15,000 | \$ 6,000 |
| Compensation | \$ 10,000 | \$ 5,000 |
| Corporate Governance | \$ 7,500 | \$ 3,000 |

AUDIT COMMITTEE REPORT

Report of the Audit Committee of the Board of Directors

The Audit Committee provides assistance to the Board of Directors in fulfilling its oversight responsibilities relating to our corporate accounting and reporting practices toward assurance of the quality and integrity of our consolidated financial statements. The purpose of the Audit Committee is to serve as an independent and objective party to monitor our financial reporting process and internal control system; oversee, review and appraise the audit activities of our independent registered public accounting firm and internal auditing function, maintain complete, objective and open communication between the Board of Directors, the independent accountants, financial management and the internal audit function.

Our independent registered public accounting firm reports directly to the Audit Committee and the Audit Committee is solely responsible to appoint or replace our independent registered public accounting firm and to assure its independence and to provide oversight and supervision thereof. The Audit Committee determines compensation of the independent registered public accounting firm and has established a policy for approval of non-audit related engagements awarded to the independent registered public accounting firm. Such engagements must not impair the independence of the registered public accounting firm with respect to our company as prescribed by the Sarbanes-Oxley Act of 2002; thus payment amounts are limited and non-audit related engagements must be approved in advance by the Audit Committee. The Audit Committee determines the extent of funding that we must provide to the Audit Committee to carry out its duties and has determined that such amounts were sufficient in 2016.

With respect to the fiscal year ended December 31, 2016, in addition to its other work, the Audit Committee:

- Reviewed and discussed with management our audited consolidated financial statements as of December 31, 2016 and for the year then ended; and
- Discussed with GBH CPAs, PC the matters required to be discussed by Statement on Auditing Standards No. 61, "Communication with Audit Committees," as amended, with respect to its review of the findings of the independent registered public accounting firm during its examination of our financial statements.

The Audit Committee recommended, based on the review and discussion summarized above, that the Board of Directors include the 2016 audited consolidated financial statements in the 2016 Form 10-K for the fiscal year ended December 31, 2016 for filing with the SEC.

Audit Committee of the Board of Directors of Actinium Pharmaceuticals, Inc.

Richard I. Steinhart, Chairman

Ajit S. Shetty

David Nicholson

Information About Our Auditors

Our Audit Committee of our Board appointed GBH CPAs, PC as the independent registered public accounting firm to conduct the audit of our consolidated financial statements for the 2016 fiscal year and to report on our consolidated balance sheets, statements of income and other related statements. GBH CPAs, PC has served as our independent registered public accounting firm since December 2012. The Audit Committee Charter includes the procedures for pre-approval of all fees charged by our independent registered public accounting firm. Under the procedure, our Audit Committee approves the engagement letter with respect to audit and review services. Other fees are subject to pre-approval by our Audit Committee. The audit and audit-related fees paid to the auditors with respect to the 2016

fiscal year were pre-approved by our Audit Committee.

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Fees and Services

The aggregate fees billed for the fiscal years ended December 31, 2016 and 2015 for professional services rendered by GBH CPAs, PC for the audits of the Company's annual financial statements included in Form 10-K ("Audit Fees"), tax compliance, advice, and planning ("Tax Fees"), and other products or services provided ("Other Fees"):

| | Year Ended December 31, 2016 | Year Ended December 31, 2015 |
|----------------------|---------------------------------|---------------------------------|
| Audit Fees | \$ 146,918 | \$ 136,800 |
| Audit – Related Fees | — | — |
| Tax Fees | — | — |
| All Other Fees | — | — |
| Total | \$ 146,918 | \$ 136,800 |
| Pre-Approval Policy | | |

Our Audit Committee adopted policies and procedures for the pre-approval of audit and non-audit services performed by the independent registered public accountants pursuant to which our Audit Committee generally is required to pre-approve the audit and permissible non-audit services performed by the independent registered public accountants in order to ensure that the provision of such services does not impair the registered accountants' independence.

All audit services and non-audit services and all fees associated with such services performed by our independent registered public accounting firm in the 2016 fiscal year were approved by our Audit Committee. Consistent with these policies and procedures, all future audit services and non-audit services and all fees associated with such services performed by our independent registered public accounting firm will be approved by our Chairperson of our Audit Committee and ratified by our Audit Committee or approved by our full Audit Committee.

Compensation Committee Report*

Our Compensation Committee has reviewed and discussed with management the Compensation Discussion and Analysis (“CD&A”) included in this proxy statement. Based on that review and discussion, the Compensation Committee has recommended to our Board that the CD&A be included in the proxy statement.

Submitted by:

The Compensation Committee of the Board of Directors

/s/ David Nicholson, Chairman

/s/ Ajit S. Shetty

/s/ Richard I. Steinhart

* The information contained in this Compensation Committee Report shall not be deemed to be “soliciting material” or “filed” or incorporated by reference in future filings with the SEC, or subject to the liabilities of Section 18 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), except to the extent that we specifically request that the information be treated as soliciting material or specifically incorporate it by reference into a document filed under the Securities Act of 1933, as amended, or the Exchange Act.

Compensation Discussion and Analysis

Our Compensation Committee of our Board of Directors has the responsibility to review, determine and approve the compensation for our executive officers. Further, our Compensation Committee oversees our overall compensation strategy, including compensation policies, plans and programs that cover all employees. In 2016, our Stockholders voted on an advisory basis with respect to our compensation program for named executive officers. Of the votes cast (excluding abstentions and broker non-votes), 69.0% were cast in support of the program. In light of this, in reviewing the executive compensation program for 2016, our Compensation Committee decided to retain the general overall program design, which ties a significant portion of the executives’ pay closely with our performance. In the future, our Compensation Committee will continue to consider the executive compensation program in light of changing circumstances and stockholder feedback.

We currently employ four executive officers, each of whom serves as a “Named Executive Officer” (or NEO) for purposes of SEC reporting: (1) Sandesh Seth, our Chairman and Chief Executive Officer (who we refer to in this Compensation Discussion and Analysis as our CEO); (2) Steve O’Loughlin, our Principal Financial Officer, (3) Mark Berger, our Chief Medical Officer; and (4) Nitya Ray, our Executive Vice-President, Head of Product Development, Manufacturing and Supply Chain.

This Compensation Discussion and Analysis sets forth a discussion of the compensation for our NEOs as well as a discussion of our philosophies underlying the compensation for our NEOs and our employees generally.

Objectives of Our Compensation Program

The Compensation Committee’s philosophy seeks to align the interests of our stockholders, officers and employees by tying compensation to individual and company performance, both directly in the form of salary or annual cash incentive payments, and indirectly in the form of equity awards. The objectives of our compensation program enhance our ability to:

- attract and retain qualified and talented individuals; and
- provide reasonable and appropriate incentives and rewards to our team for building long-term value within our company, in each case in a manner comparable to companies similar to ours.

In addition, we strive to be competitive with other similarly situated companies in our industry. The process of developing pharmaceutical products and bringing those products to market is a long-term proposition and outcomes may not be measurable for several years. Therefore, in order to build long-term value for our company and its stockholders, and in order to achieve our business objectives, we believe that we must compensate our officers and employees in a competitive and fair manner that reflects current company activities, but also reflects contributions to building long-term value.

We utilize the services of StreeterWyatt Governance LLC to review compensation programs of peer companies in order to assist the Compensation Committee in determining the compensation levels for our NEOs, as well as for other employees of our company. StreeterWyatt is a recognized independent consulting company and services clients throughout the United States.

The companies that comprise our peer group are selected and reviewed no less frequently than biennially.

Elements of Our Compensation Program and Why We Chose Each

Main Compensation Components

Our company-wide compensation program, including for our NEOs, is broken down into three main components: base salary, performance cash bonuses and potential long-term compensation in the form of stock options or restricted stock awards. We believe these three components constitute the minimum essential elements of a competitive compensation package in our industry.

Salary

Base salary is used to recognize the experience, skills, knowledge and responsibilities required of our NEOs as well as recognizing the competitive nature of the biopharmaceutical industry. This is determined partially by evaluating our peer companies as well as the degree of responsibility and experience levels of our NEOs and their overall contributions to our company. Base salary is one component of the compensation package for NEOs; the other components being cash bonuses, annual equity grants, and company benefit programs. Base salary is determined in advance whereas the other components of compensation are awarded in varying degrees following an assessment of the performance of a NEO. This approach to compensation reflects the philosophy of our Board and its Compensation Committee to emphasize and reward, on an annual basis, performance levels achieved by our NEOs.

Performance Bonus Plan

We have a performance bonus plan under which bonuses are paid to our NEOs based on achievement of company performance goals and objectives established by the Compensation Committee and/or our Board as well as on individual performance. The bonus program is discretionary and is intended to: (i) strengthen the connection between individual compensation and our company's achievements; (ii) encourage teamwork among all disciplines within our company; (iii) reinforce our pay-for-performance philosophy by awarding higher bonuses to higher performing employees; and (iv) help ensure that our cash compensation is competitive. Depending on the cash position of the company, the Compensation Committee and our Board have the discretion to not pay cash bonuses in order that we may conserve cash and support ongoing development programs and commercialization efforts. Regardless of our cash position, we consistently grant annual merit-based stock options to continue incentivizing both our senior management and our employees.

Based on their employment agreements, each NEO is assigned a target payout under the performance bonus plan, expressed as a percentage of base salary for the year. Actual payouts under the performance bonus plan are based on the achievement of corporate performance goals and an assessment of individual performance, each of which is separately weighted as a component of such officer's target payout. For the NEOs, the corporate goals receive the highest weighting in order to ensure that the bonus system for our management team is closely tied to our corporate performance. Each employee also has specific individual goals and objectives as well that are tied to the overall corporate goals. For employees, mid-year and end-of-year progress is reviewed with the employees' managers.

Equity Incentive Compensation

We view long-term compensation, currently in the form of stock options and restricted stock generally vesting in annual increments over four years, as a tool to align the interests of our NEOs and employees generally with the creation of stockholder value, to motivate our employees to achieve and exceed corporate and individual objectives and to encourage them to remain employed by the company. While cash compensation is a significant component of employees' overall compensation, the Compensation Committee and our Board (as well as our NEOs) believe that the driving force of any employee working in a small biotechnology company should be strong equity participation. We believe that this not only creates the potential for substantial longer term corporate value but also serves to motivate employees and retain their loyalty and commitment with appropriate personal compensation.

Other Compensation

In addition to the main components of compensation outlined above, we also provide contractual severance and/or change in control benefits to our Chairman and CEO. The change in control benefits for all applicable persons have a “double trigger.” A double trigger means that the executive officers will receive the change in control benefits described in the agreements only if there is both (1) a Change in Control of our company (as defined in the agreements) and (2) a termination by us of the applicable person’s employment “without cause” or a resignation by the applicable persons for “good reason” (as defined in the agreements) within a specified time period prior to or following the Change in Control. We believe this double trigger requirement creates the potential to maximize stockholder value because it prevents an unintended windfall to management, as no benefits are triggered solely in the event of a Change in Control, while providing appropriate incentives to act in furtherance of a change in control that may be in the best interests of the stockholders. We believe these severance or change in control benefits are important elements of our compensation program that assist us in retaining talented individuals at the executive and senior managerial levels and that these arrangements help to promote stability and continuity of our executives and senior management team. Further, we believe that the interests of our stockholders will be best served if the interests of these members of our management are aligned with theirs. We believe that providing change in control benefits lessens or eliminates any potential reluctance of members of our management to pursue potential change in control transactions that may be in the best interests of the stockholders. We also believe that it is important to provide severance benefits to members of our management, to promote stability and focus on the job at hand.

We also provide benefits to the executive officers that are generally available to all regular full-time employees of our company, including our medical and dental insurance, and a 401(k) plan. At this time, we do not provide any perquisites to any of our NEOs. Further, we do not have deferred compensation plans, pension arrangements or post-retirement health coverage for our executive officers or employees. All of our employees not specifically under contract are “at-will” employees, which means that their employment can be terminated at any time for any reason by either us or the employee. Our Chairman and CEO has an employment agreement that provides lump sum compensation in the event of his termination without cause or, under certain circumstances, upon a Change of Control.

Determination of Compensation Amounts

A number of factors impact the determination of compensation amounts for our NEOs, including the individual’s role in the company and individual performance, length of service with the company, competition for talent, individual compensation package, assessments of internal pay equity and industry data. Stock price performance has generally not been a factor in determining annual compensation because the price of our common stock is subject to a variety of factors outside of our control.

Industry Survey Data

In collaboration with StreeterWyatt, we establish and maintain a list of peer companies to best assure ourselves that we are compensating our executives on a fair and reasonable basis, as set forth above under the heading “Objectives of our Compensation Program.” We also utilize StreetWyatt-prepared data for below-executive level personnel, which data focuses on similarly-sized bio-tech companies. The availability of peer data is used by the Compensation Committee strictly as a guide in determining compensation levels with regard to salaries, cash bonuses and performance-related annual equity grants to all employees. However, the availability of this data does not imply that the Compensation Committee is under any obligation to exactly follow peer companies in compensation matters.

Determination of Base Salaries

As a guideline for NEO base salary, we perform formal benchmarks against respective comparable positions in our established peer group. We adjust salaries based on our assessment of our NEOs’ levels of responsibility, experience, overall compensation structure and individual performance. The Compensation Committee is not obliged to raise

salaries purely on the availability of data. Merit-based increases to salaries of executive officers are based on our assessment of individual performance and the relationship to applicable salary ranges. Cost of living adjustments may also be a part of that assessment.

Performance Bonus Plan

Concurrently with the beginning of each calendar year, preliminary corporate goals that reflect our business priorities for the coming year are prepared by the CEO with input from the other executive officers. These goals are weighted by relative importance. The draft goals and proposed weightings are presented to the Compensation Committee and the Board and discussed, revised as necessary, and then approved by our Board. The Compensation Committee then reviews the final goals and their weightings to determine and confirm their appropriateness for use as performance measurements for purposes of the bonus program. The goals and/or weightings may be re-visited during the year and potentially restated in the event of significant changes in corporate strategy or the occurrence of significant corporate events. Following the agreement of our Board on the corporate objectives, the goals are then shared with all employees in a formal meeting(s), and are reviewed periodically throughout the year.

Determination of Equity Incentive Compensation

To assist us in assessing the reasonableness of our equity grant amounts, we have reviewed StreeterWyatt supplied information. Such information included equity data from a cross-section of similar companies in our industry.

Equity Grant Practices

All stock options and/or restricted stock granted to the NEOs and other executives are approved by the Compensation Committee. Exercise prices for options are set at the closing price of our common stock on the date of grant. Grants are generally made: (i) on the employee's start date and (ii) at our Board meetings held each February and following annual performance reviews. However, grants have been made at other times during the year. The size of year-end grants for each NEO is assessed against our internal equity guidelines. Current market conditions for grants for comparable positions and internal equity may also be assessed. Also, grants may be made in connection with promotions or job-related changes in responsibilities. In addition, on occasion, the Compensation Committee may make additional special awards for extraordinary individual or company performance.

Compensation Setting Process

At the February meetings of our Board and the Compensation Committee, overall corporate performance and relative achievement of the corporate goals for the prior year are assessed. The relative achievement of each goal is assessed and quantified and the summation of the individual components results in a corporate goal rating, expressed as percentages. The Compensation Committee then approves the final disbursement of salary increases, cash bonuses and option or restricted stock grants.

The Compensation Committee looks to the CEO's performance assessments of the other NEOs and his recommendations regarding a performance rating for each, as well as input from the other members of our Board. These recommendations may be adjusted by the Compensation Committee prior to finalization. For the CEO, the Compensation Committee evaluates his performance, taking into consideration input from the other members of our Board, and considers the achievement of overall corporate objectives by both the CEO specifically and the company generally. The CEO is not present during the Compensation Committee's deliberations regarding his compensation.

The Compensation Committee has the authority to directly engage, at our company's expense, any compensation consultants or other advisors (such as StreeterWyatt) that it deems necessary to determine the amount and form of employee, executive and director compensation. In determining the amount and form of employee, executive and director compensation, the Compensation Committee has reviewed and discussed historical salary information as well as salaries for similar positions at comparable companies. However the availability of this data does not imply that the Compensation Committee is under any obligation to exactly follow peer companies' compensation practices.

We paid consultant fees to StreeterWyatt of \$20,000. NEOs may have indirect input in the compensation results for other executive officers by virtue of their participation in the performance review and feedback process for the other executive officers.

DIRECTORS AND EXECUTIVE OFFICERS

Directors And Executive Officers

The names, positions and ages of our directors and executive officers as of November 8, 2017, are as follows:

| Name | Age | Position |
|---------------------------|-----|---|
| Sandesh Seth, MS, MBA | 53 | Chairman and Chief Executive Officer (Principal Executive Officer) |
| Steve O’Loughlin, BS | 32 | Principal Financial Officer (Principal Financial and Accounting Officer) |
| Mark Berger, MD | 62 | Chief Medical Officer |
| Nitya Ray, PhD | 65 | Executive Vice-President, Head of Product Development, Manufacturing and Supply Chain |
| David Nicholson, PhD | 62 | Director |
| Ajit S. Shetty, PhD | 71 | Director |
| Richard I. Steinhart, MBA | 60 | Director |

Subject to the classified board provisions of our charter, all directors hold office until the next annual meeting of stockholders and the election and qualification of their successors. Officers are elected annually by our Board and serve at the discretion of our Board.

There are no 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, Chairman and CEO

Mr. Sandesh Seth has been our Chief Executive Officer since June 2017. Mr. Seth has been a Director since March 2012, our Chairman of the Board since October 2013, and served as Executive Chairman from August 2014 to June 2017. Mr. Seth was affiliated with Laidlaw & Co. (UK) Ltd., a healthcare focused, investment banking and wealth management firm where he was Head of Healthcare Investment Banking. Mr. Seth is the Chairman of the Board of Relmada Therapeutics, Inc., a publicly listed, specialty pharmaceuticals company focused on pain therapeutics.

Mr. Seth has 25+ years of experience in investment banking (Cowen & Co.), equity research (Bear Stearns, Commonwealth Associates) and in the pharma industry (Pfizer, Warner-Lambert, SmithKline in strategic planning, business development and R&D project management). 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 U.S. FDA regulations.

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.

Steve O’Loughlin, BS, Principal Financial Officer

Steve O'Loughlin has been our Principal Financial Officer since May 2017. Mr. O'Loughlin joined Actinium in October 2015 as Vice President, Finance and Corporate Development, with almost a decade of life sciences industry experience gained from previous positions in investment banking and publicly traded life sciences companies. Prior to Actinium, from June 2015 to October 2015, Mr. O'Loughlin worked at J. Streicher LLC as an investment banker, from August 2012 to June 2015 Mr. O'Loughlin held the position of Vice President, Corporate Finance and Development and was a corporate officer at Protea Biosciences, Inc., a publicly traded life sciences tools company. Previously, From June 2010 to June 2012, Mr. O'Loughlin held corporate development positions with Caliber

I.D., a publicly traded diagnostics company. Mr. O'Loughlin previously worked in investment banking at Jesup & Lamont where he focused on the biotechnology and life sciences industries. Mr. O'Loughlin has a B.S. in Business Administration with a concentration in finance from Ramapo College of New Jersey.

Mark S. Berger, MD, Chief Medical Officer

Dr. Berger has been our Chief Medical Officer since January 2017. From September 2013 to January 2017 Dr. Berger worked for Kadmon Corporation where he was Senior Vice President, Clinical Research. In this role he was responsible for all clinical aspects of new drug development including designing and managing clinical trials in oncology indications (non-small cell lung cancer and glioblastoma) and non-oncology indications (chronic graft versus host disease and polycystic kidney disease). Dr. Berger joined Kadmon after serving as Chief Medical Officer of Deciphera Pharmaceuticals from June 2011 to September 2013. Prior to Deciphera, Dr. Berger was Vice President for Clinical Development at Gemin X Pharmaceuticals where he led the clinical strategy, design and management of clinical trials for two novel oncology agents including obatoclox, a pan Bcl-2 inhibitor. Based on the results of a randomized Phase 2 clinical trial of obatoclox, Gemin X was acquired by Cephalon in March of 2011 for a total consideration of \$525 million including \$225 million in an upfront cash payment.

Before his work with biotechnology companies, Dr. Berger held key positions in two global pharmaceutical companies. Dr. Berger previously served as Group Director, Medicine Development Centre-Oncology for GlaxoSmithKline. In this position Dr. Berger managed the development of Tykerb (lapatinib) in lung and breast cancer where he designed and led two Phase 2 clinical trials before planning and leading a 399 patient pivotal Phase 3 trial that resulted in the FDA approval of Tykerb in breast cancer. In addition, he managed the Lapatinib Expanded Access Program (LEAP) that enrolled over 4000 patients on a global basis. Dr. Berger began his career in drug development at Wyeth Research where he led the planning and execution of the pivotal Phase 2 trial for Mylotarg, which was the first antibody targeted chemotherapy agent and targeted CD33, similar to Actimab-A. He presented the Mylotarg clinical data at the FDA's Oncology Drug Advisory Committee meeting, after which Mylotarg received accelerated FDA approval for patients with relapsed AML.

Dr. Berger has a B.A. in biology from Wesleyan University and received his M.D. from the University of Virginia School of Medicine. He did his Hematology-Oncology fellowship at the University of Pennsylvania where he was an Assistant Professor of Medicine, and also was a Research Fellow at the Ludwig Institute for Cancer Research and the Imperial Cancer Research Fund, both in London. Dr. Berger is board certified in internal medicine, hematology and medical oncology.

Nitya Ray, PhD, Executive Vice-President, Head of Product Development, Manufacturing and Supply Chain

Dr. Nitya Ray has been our Executive Vice-President, Head of Product Development, Manufacturing and Supply Chain since June 2017. Dr. Ray joins the Company from CytoDyn, Inc. where he was Sr. Vice President of Manufacturing and CMC Team Leader. At CytoDyn Dr. Ray developed robust and cost effective manufacturing processes for an antibody therapeutic drug candidate, currently in two Phase 3 clinical studies intended to treat and prevent HIV infection. Dr. Ray led a successful regulatory meetings with the FDA while simultaneously developing strategies for process development, scale-up, validation, commercial manufacturing, and supply chain to support potential commercialization of the CytoDyn's HIV therapeutic drug candidate. Prior to CytoDyn, Dr. Ray spent 15 years at Progenics Pharmaceuticals, Inc., a radiopharmaceutical therapeutic and diagnostic company, most recently as Senior Vice President, Manufacturing. At Progenics, Dr. Ray led the development of scalable manufacturing processes and achieved order-of-magnitude cost reduction through improved productivity and scale. In addition, Dr. Ray built process and product development teams for Progenics' small molecule, biologics, and radiopharmaceuticals that developed innovative processes for various phases of clinical development and commercial manufacturing. Dr. Ray supported in-house cGMP biologics manufacturing for Phase 1-3 clinical development and managed relationships with Contract Development and manufacturing Organizations (CDMO's) on a global basis. Dr. Ray also worked at Hoffman-La Roche with a focus on biopharmaceuticals and Verax Corporation in roles of increasing responsibility.

Dr. Ray has a Ph.D. in Biochemical Engineering and an M.S. in Chemical and Biochemical Engineering from Rutgers University and a B.S. in Chemical Engineering from Jadavpur University.

David Nicholson, PhD, Director

David Nicholson has been a Director of the Company since 2008. Dr. Nicholson is also a member of our Audit Committee, Compensation Committee and Corporate Governance Committee. In August 2014, Dr. Nicholson

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joined Actavis plc and Forest Laboratories, Inc. as Senior Vice President, Actavis Global Brands R&D. From March 2012 to August 2014, Dr. Nicholson was on the Executive Committee of Bayer CropScience 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, Dr. 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.

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.

Ajit S. Shetty, PhD, Director

Dr. Shetty has been a Director of the Company since March, 2017. Dr. Shetty is also a member of our, Audit Committee, Compensation Committee, and Chairman of our Corporate Governance Committee. Dr. Shetty joined Janssen Pharmaceutica, Inc. in 1976 ultimately rising to the position of President in 1986 where he led the establishment of Janssen's business in the U.S. From 1999 to 2008 he was Managing Director of Janssen Pharmaceutica, during this time the Janssen Group of companies' global sales grew from \$1 billion to \$8 billion, and from 2004 until 2012 he was Chairman of the Board of Directors. In Dr. Shetty's most recent role at Johnson & Johnson he was head of Enterprise Supply Chain, where he reported to the CEO and was responsible for the transformation and optimization of Johnson & Johnson's supply chain. Dr. Shetty earned a Ph.D. in Metallurgy and B.A. Natural Sciences from Trinity College, Cambridge University and a Master of Business Administration from Carnegie Mellon University. Dr. Shetty has served as a member of Agile Therapeutics, Inc.'s board of directors since February 2016. In 2007, Dr. Shetty was bestowed the title of Baron by King Albert II of Belgium for his exceptional merits. He is a member of the Board of Trustees of Carnegie Mellon University, serves on the Board of Governors for GS1 (Global Standards) in Belgium and formerly served on the Corporate Advisory Board of the John Hopkins Carey Business School. In 2016, Dr. Shetty was named as Chairperson of the Vlaams Instituut voor Biotechnologie (VIB), a Belgium based life sciences research institute focused on translating scientific results into pharmaceutical, agricultural and industrial applications. In addition, he was elected *Manager of the Year* in 2004 in Flanders and received a Life-Time Achievement Award in India in 2010. We believe Dr. Shetty's qualifications to sit on our Board include his extensive pharmaceutical experience leading commercial and supply chain operations and his significant education background.

That Dr. Shetty has 37 years of leadership and executive experience in the pharmaceutical industry, that he has significant supply chain knowledge and that he has experience conducting business in the U.S. and Europe, led us to conclude that Dr. Shetty should serve as a director.

Richard I. Steinhart, MBA, Director

Mr. 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 and Corporate Governance Committee. Since October 2017 Mr. Steinhart has been the Chief Financial Officer of BioXcel Therapeutics, Inc. Since March 2014, Mr. Steinhart has been a Member of the Board of Directors of Atossa Genetics, Inc. where he is Chairman of the Audit Committee

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and a member of the Compensation Committee. From October 2015 to April 2017, Mr. Steinhart was Vice President and CFO at Remedy Pharmaceuticals, a privately-held, clinical stage pharmaceutical company. From January 2014 through September 2015 Mr. Steinhart had been a financial and strategic consultant to the biotechnology and medical device industries. From April 2006 through December 2013, Mr. Steinhart was employed by MELA Sciences, Inc., as their Vice President, Finance and Chief Financial Officer, Treasurer and Secretary. In April 2012, Mr. Steinhart received a promotion to Sr. Vice President, Finance and Chief Financial Officer. From May 1992 until joining MELA Sciences, 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. Mr. Steinhart began his career at Price Waterhouse, now known as PricewaterhouseCoopers. He holds BBA and MBA degrees from Pace University and is a Certified Public Accountant (inactive).

That Mr. Steinhart brings nearly 30 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.

EXECUTIVE COMPENSATION

The following discussion provides compensation information pursuant to SEC rules and may contain statements regarding future individual and Company performance targets and goals. These targets and goals are disclosed in the limited context of the Company's compensation programs and should not be understood to be statements of management's expectations or estimates of results or other guidance. We specifically caution stockholders not to apply these statements to other contexts.

Chief Executive Officer's Compensation

In a Consulting Agreement Amended and Restated on August 6, 2015, as amended, Mr. Seth entered into an agreement (the "Agreement") with the Company to serve as Executive Chairman. The Company is in the process of adapting the existing Executive Chairman agreement with Mr. Seth to an employment agreement with Mr. Seth as the Company's Chief Executive Officer. The employment agreement will incorporate the material compensatory terms from the Agreement. Mr. Seth is currently paid an annual consulting fee of \$525,000. Mr. Seth is also entitled to participate in our bonus program, which shall be established by our Board pursuant to which our Board shall award bonuses based upon the achievement of written individual and corporate objectives such as our Board shall determine. In September, 2014, our Board also granted to Mr. Seth an option to purchase 280,000 common shares at an exercise price of \$6.13 per share. The options vest at the rate of 2% of the grant each month from the grant date until fully vested in accordance with the provisions of our Amended and Restated 2013 Stock Plan. The Chairman and CEO shall also be awarded stock option and/or restricted stock grants at our Board's discretion. Mr. Seth's agreement includes severance benefits, including in the event of a change of control of the Company, and to provide for immediate vesting of options in accordance with our Amended and Restated 2013 Stock Plan. The term of the agreement is until February 21, 2021.

If the Company terminates the consulting arrangement other than for cause or if Mr. Seth resigns for good reason, Mr. Seth shall be entitled to the following:

- (i) a single lump sum payment equal to twenty-four (24) months of Mr. Seth's compensation (at the rate in effect as of the date of termination);
- (ii) continued health benefits for the 24-month period beginning on the date of termination; and
- (iii) All outstanding equity awards granted to Mr. Seth under the Company's equity compensation plans shall become immediately vested and exercisable (as applicable) as of the date of such termination and the performance goals with respect to such outstanding performance awards, if any, will be deemed satisfied at "target".

If the Company terminates Mr. Seth's consulting arrangement other than for cause or if Mr. Seth resigns for good reason, in any case during the 12-month period beginning on the date of a change in control, Mr. Seth shall be entitled to the following:

- (i) a single lump sum payment equal to thirty (30) months of Mr. Seth's compensation (at the rate in effect as of the date of termination);
- (ii) continued health benefits for the 30-month period beginning on the date of termination; and
- (iii) All outstanding equity awards granted to Mr. Seth under the Company's equity compensation plans shall become immediately vested and exercisable (as applicable) as of the date of such termination and the performance goals with respect to such outstanding performance awards, if any, will be deemed satisfied at "target".

Principal Financial Officer Compensation

On September 17, 2015, the Company and Mr. O’Loughlin entered into an employment agreement (the “Employment Agreement”). He is currently our Principal Financial Officer. Mr. O’Loughlin’s employment with the Company is on an “at will” basis, meaning that either Mr. O’Loughlin or the Company may terminate his employment at any time for any reason or no reason, without further obligation or liability, except as provided in his Employment Agreement.

Salary

- Mr. O’Loughlin’s current annual base salary is \$250,000.

Bonus

- Mr. O’Loughlin’s is entitled to participate in an executive bonus program pursuant to which the Board of Directors may award him bonuses, based upon the 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, he shall be entitled to a cash bonus in an amount to be determined by the board with a target of 20% of the base salary.

Options

- Mr. O’Loughlin received an initial stock option grant of 100,000 options. The options and restricted stock vest over a four year period, twenty-eight percent (28%) of the initial options granted vest twelve months after the date of grant and two percent (2%) of the remainder shall vest each month thereafter until fully vested.

Non-Solicitation

- Mr. O’Loughlin agreed that during the term of his employment with the Company, and for a period of 24 months following the cessation of employment with the Company for any reason or no reason, he shall not directly or indirectly solicit, induce, recruit or encourage any of the our employees or consultants to terminate their relationship with us, or attempt any of the foregoing. For a period of 24 months following cessation of employment with us for any reason or no reason, he shall not attempt to negatively influence any of our clients or customers from purchasing our products or services.

Chief Medical Officer Compensation

On December 27, 2016, the Company and Dr. Mark S. Berger entered into an agreement (the “Berger Employment Agreement”), to employ Dr. Berger as our Chief Medical Officer.

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

- Salary is \$360,000 per year. Dr. Berger may be entitled to a cash bonus in an amount to be determined by the Board with a target of 30% of the base salary.
- The Board granted to Dr. Berger an option to purchase 325,000 common shares of the Company at an exercise price of \$1.04 per share.
- Vesting Schedule. 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. 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. Berger’s continuing service with the Company.
- Dr. Berger is also eligible to participate in the Company’s benefit plans that are generally provided for executive employees.
- Non-Competition. During the term and for a period of two years thereafter, Dr. Berger shall not, either directly or indirectly, engage (as principal, partner, employee, consultant, owner, independent contractor, advisor or otherwise, with or without compensation) in any business that directly or indirectly is developing, or plans to develop,

radioimmunotherapies for cancer or any therapy related to bone marrow transplant (the “Competing Business”). Notwithstanding the foregoing, this does not prevent Dr. Berger from being engaged or employed with business that has a Competing Business as part of its business, so long as he is not engaged or involved in any way in the Competing Business at such business or enterprise.

Non-Solicitation. 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 shall not directly or indirectly solicit, induce, recruit or encourage any of our employees or consultants to terminate their relationship with us, or attempt any of the foregoing, either for himself or any other person or entity.

Executive Vice-President, Head of Product Development, Manufacturing and Supply Chain Compensation

On May 26, 2017 the Company and Dr. Nitya Ray entered into an Offer Letter (the “Employment Agreement”). Pursuant to the Employment Agreement, Dr. Ray is entitled to the following compensation and benefits:

- Salary is \$325,000 per year, and Dr. Ray may be entitled to a cash bonus in an amount to be determined by the Board with a target of 30% of the base salary.
- The Board granted to Dr. Ray an option to purchase 250,000 common shares at an exercise price equal to the closing price of our common stock on June 15, 2017.
- Vesting Schedule. 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. 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 Dr. Ray’s continuing service with the Company.
- Dr. Ray is also eligible to participate in our benefit plans that are generally provided for executive employees.
- Non-Competition. During the term and for a period of three years thereafter, Dr. Ray shall not, either directly or indirectly, engage (as principal, partner, employee, consultant, owner, independent contractor, advisor or otherwise, with or without compensation) in any business that directly or indirectly is developing, or plans to develop, radioimmunotherapies for cancer or any therapy related to bone marrow transplant (the “Competing Business”). Notwithstanding the foregoing, this does not prevent Dr. Ray from being engaged or employed with business that has a Competing Business as part of its business, so long as he is not engaged or involved in any way in the Competing Business at such business or enterprise.

Non-Solicitation. 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 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.

Summary Compensation Table

The following table provides information regarding the compensation earned during the fiscal years ended December 31, 2016, 2015 and 2014 by our Chief Executive Officer and Chief Technology Officer.

| Name/Position | Year | Salary | Bonus | Option Awards | All Other Compensation ⁽³⁾ | Total |
|--|------|------------|---------------------------|---------------|---------------------------------------|--------------|
| Kaushik J. Dave, CEO ⁽¹⁾ | 2016 | \$ 405,000 | \$ 105,000 ⁽⁶⁾ | \$ 996,513 | \$ 98,593 | \$ 1,605,106 |
| | 2015 | 353,500 | \$ 51,000 ⁽⁴⁾ | \$ 969,113 | \$ 1,254,603 | \$ 2,628,216 |
| | 2014 | 350,000 | 41,042 ⁽⁵⁾ | 798,865 | 397,844 | 1,587,751 |
| Dragan Cicic, CTO ⁽²⁾ | 2016 | \$ 280,500 | \$ 40,000 ⁽⁶⁾ | \$ 93,922 | \$ 0 | \$ 414,422 |
| | 2015 | 277,750 | \$ 35,000 ⁽⁴⁾ | \$ 125,317 | \$ 17,286 | \$ 455,353 |
| | 2014 | 260,416 | 53,000 ⁽⁵⁾ | 101,844 | 4,081 | 419,341 |

(1) Dr. Kaushik J. Dave became the Company's President and CEO in September 2013 and resigned in May 2017.

(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. Dr. Cicic resigned in May 2017.

(3) Includes restricted stock based compensation awarded and other additional payments made during the period.

Sandesh Seth was appointed our CEO in June 2017, Dr. Mark Berger was appointed our Chief Medical Officer in February 2017, and Dr. Nitya Ray was appointed our Executive Vice-President, Head of Product Development, Manufacturing and Supply Chain in May 2017.

(4) The bonus disclosed in this item relates to 2014 but was contingent upon board approval, which occurred in 2015.

(5) The bonus disclosed in this item relates to 2013 but was contingent upon board approval, which occurred in 2014.

(6) The bonus disclosed in this item relates to 2015 but was contingent upon board approval, which occurred in 2016.

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.

Outstanding Equity Awards at Fiscal Year-End Table

OUTSTANDING EQUITY AWARDS AT FISCAL YEAR-END — 2016

The following table sets forth all unexercised stock options that have been awarded to our named executives by the Company and were outstanding as of December 31, 2016.

| Name | Option Awards | | | | Stock Awards | | | | |
|--------------|---|---|---|--------------------------------|----------------------------|---|---|--|---|
| | Number of Securities Underlying Unexercised Options (#) (Exercisable) (b) | Number of Securities Underlying Unexercised Options (#) (Unexercisable) (c) | Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Options (#) (d) | Option Exercise Price (\$) (e) | Option Expiration Date (f) | Number of Shares or Units of Stock That Have Not Vested (g) | Market Value of Shares or Units of Stock That Have Not Vested (h) | Equity Incentive Plan Awards: Number of Shares, Units or Other Rights That Have Not Vested (i) | Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Other Rights That Have Not Vested (j) |
| Kaushik J. | | | | | | | | | |
| Dave | 519,750 | 155,250 | — | 6.70 | 12/16/2023 | — | — | — | — |
| | 67,500 | 82,500 | — | 3.58 | 02/18/2025 | — | — | — | — |
| | 127,099 | 16,426 | — | 2.52 | 05/05/2025 | — | — | — | — |
| | — | 400,000 | — | 1.99 | 04/15/2026 | — | — | — | — |
| Dragan Cicic | | | | | | | | | |
| | 33,300 | — | — | 0.78 | 11/28/2017 | — | — | — | — |
| | 333,000 | — | — | 0.78 | 02/10/2022 | — | — | — | — |
| | 49,950 | — | — | 1.50 | 08/30/2022 | — | — | — | — |
| | 47,952 | 1,998 | — | 1.50 | 12/19/2022 | — | — | — | — |
| | 21,420 | 10,080 | — | 5.55 | 02/21/2024 | — | — | — | — |
| | 15,750 | 19,250 | — | 3.58 | 02/21/2025 | — | — | — | — |
| | 2,874 | — | — | 2.52 | 05/05/2025 | — | — | — | — |
| | — | 50,000 | — | 1.99 | 04/15/2026 | — | — | — | — |

Sandesh Seth was appointed our CEO in June 2017, Dr. Mark Berger was appointed our Chief Medical Officer in February 2017, and Dr. Nitya Ray was appointed our Executive Vice-President, Head of Product Development, Manufacturing and Supply Chain in May 2017.

Pension Benefits

At the present time, we do not sponsor a qualified or non-qualified defined benefit. Our Compensation Committee may elect to adopt qualified or non-qualified benefit plans in the future if it determines that doing so is in our best interest.

Potential Payments Under Severance/Change in Control Arrangements

The table below sets forth potential payments payable to our Chief Executive Officer in the event of a termination of employment or consulting arrangement, as applicable, under various circumstances. For purposes of calculating the potential payments set forth in the table below, we have assumed that (i) the date of termination was September 29, 2017 and (ii) the stock price was \$0.51, which was the closing market price of our common stock on September 29, 2017, the last business day of the third quarter.

| Name | Termination of Employment Other Than for Cause or Resignation for Good Reason (Not in Connection with a Change in Control). (\$) | Termination Following a Change in Control without Cause or Executive Resigns with Good Reason (\$) |
|--------------------------------|---|---|
| Sandesh Seth | | |
| Cash Payment | \$ 1,480,000 | \$ 1,850,000 |
| Total Cash and Benefits | \$ 1,480,000 | \$ 1,850,000 |

The term “change of control” means:

- (i) 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” (as that term is used in Section 13(d)(3) of the Exchange Act) that is not an Affiliate;
- (ii) the “Incumbent Directors” (meaning those individuals who, on date the Plan was adopted by the Board (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, and further provided that 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) cease for any reason to constitute at least a majority of the Board;
- (iii) the date which is 10 business days prior to the consummation of a complete liquidation or dissolution of the Company;
- (iv) the acquisition by any Person of “Beneficial Ownership” (within the meaning of Rule 13d-3 and Rule 13d-5 under the Exchange Act, except that in calculating the Beneficial Ownership of any particular Person, 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) of 50% or more (on a fully diluted basis) of either (A) 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 (B) 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 of Control: (I) any acquisition by the Company or any Affiliate, (II) any acquisition by any employee benefit plan sponsored or maintained by the Company or any Affiliate, (III) any acquisition which complies with clauses, (A), (B) and (C) of subsection (v) of this definition, or (IV) 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

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(v) 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: (A) more than 50% of the total voting power of (I) the entity resulting from such Business Combination (the "Surviving Company"), or (II) 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; (B) 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 (C) 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

The cash component (as opposed to option accelerations) of any change of control payment would be structured as a one-time cash severance payment.

PRINCIPAL STOCKHOLDERS

The following table shows the beneficial ownership of our Common Stock as of November 8, 2017 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 November 8, 2017, 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.

Unless otherwise indicated, the principal address of each of the persons below is c/o Actinium Pharmaceuticals, Inc., 275 Madison Ave, 7th floor, New York, NY 10016.

| | Number of Shares of Common Stock and Preferred Stock | | Percentage of Ownership(a) | |
|--|--|-----|-------------------------------|----------|
| | Beneficially Owned | | | |
| Executive Officers and Directors | | | | |
| Sandesh Seth | 955,214 | (1) | 1.2 | % |
| Steve O'Loughlin | 118,000 | (2) | * | % |
| Mark Berger, MD | 5,000 | (3) | * | % |
| Nitya G. Ray, PhD | 10,000 | (4) | * | % |
| David Nicholson, PhD | 170,400 | (5) | * | % |
| Ajit S. Shetty, PhD | — | (6) | * | % |
| Richard I. Steinhart, MBA | 110,950 | (7) | * | % |
| All Directors and Officers as a Group (7 persons) | 1,369,564 | | 1.7 | % |
| All other 5% holders | | | | |
| Memorial Sloan Kettering Cancer Center | | | | |
| 546 5th Avenue, 14th Floor | | | | |
| New York, NY 10036 | 4,209,409 | | 5.3 | % |
| Armistice Capital, LLC | 4,000,000 | | 5.0 | % |
| Armistice Capital Master Fund Ltd. | | | | |
| Steven Boyd | | | | |
| 510 Madison Avenue, 22nd Floor | | | | |
| New York, New York 10022 | | | | |

* less than 1%

(a) Based on 80,025,073 shares of Common Stock outstanding as of November 8, 2017

(1) 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, 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, and warrants to purchase 57,212 shares of Common Stock at an exercise price of \$2.34 per share. 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. 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 James Capital Group, LLC in connection with the Share Exchange. On August 30, 2012 and December 12, 2012, Mr. Seth was granted options to purchase an aggregate of 49,950 shares of Common Stock at an exercise price of \$1.50 per share. On September 13, 2014, Mr. Seth was granted 280,000 options with an exercise price of \$6.13 per share. On February 18, 2015, Mr. Seth was granted 150,000 options with an exercise price of \$3.58 per share. On April 15, 2016, Mr. Seth was granted an option to purchase an aggregate of 500,000 shares of the Common Stock at an exercise price of \$1.99 per share. On March 14, 2017, Mr. Seth was granted options to purchase an aggregate of 750,000 shares of Common Stock at an exercise price of \$1.39 per share. All options are subject to vesting. Within 60 days of November 8, 2017, 787,350 options will have vested. Includes 75,833 shares of Common Stock.

(2) On October 1, 2015, Mr. O’Loughlin was granted 100,000 options with an exercise price of \$1.79 per share. On April 14, 2016, Mr. O’Loughlin was granted options to purchase an aggregate of 50,000 shares of Common Stock at an exercise price of \$1.99 per share. On March 14, 2017, Mr. O’Loughlin was granted options to purchase an aggregate of 100,000 shares of Common Stock at an exercise price of \$1.39 per share. All options are subject to vesting. Within 60 days of November 8, 2017, 114,500 options will have vested. Includes 3,500 shares of Common Stock.

(3) On January 17, 2017, Dr. Berger was granted an option to purchase an aggregate of 325,000 shares with an exercise price of \$1.04 per share. No options are exercisable within 60 days of November 8, 2017. Includes 5,000 shares of Common Stock.

(4) On June 15, 2017, Dr. Ray was granted an option to purchase an aggregate of 250,000 shares with an exercise price of \$1.15 per share. No options are exercisable within 60 days of November 8, 2017. Includes 10,000 shares of Common Stock.

(5) On February 12, 2012, Dr. Nicholson was granted options to purchase an aggregate of 49,950 shares of Common Stock at an exercise price of \$0.784 per share and on August 12, 2012 and December 19, 2012, Dr. Nicholson was granted options to purchase an aggregate of 49,950 shares of Common Stock at an exercise price of \$1.50 per share. On February 18, 2015, Dr. Nicholson was granted 25,000 options with an exercise price of \$3.58 per share. On April 15, 2016, Dr. Nicholson was granted an option to purchase an aggregate of 75,000 shares of the Common Stock at an exercise price of \$1.99 per share. On March 14, 2017, Dr. Nicholson was granted options to purchase an aggregate of 75,000 shares of Common Stock at an exercise price of \$1.39 per share. All options are subject to vesting. Within 60 days of November 8, 2017, 160,400 options will have vested. Includes 10,000 shares of Common Stock.

(6) On March 28, 2017, Dr. Shetty was granted an option to purchase an aggregate of 75,000 shares of Common Stock with an exercise price of \$1.58 per share. No options are exercisable within 60 days of November 8, 2017.

(7) On December 16, 2013 Mr. Steinhart was granted options to purchase an aggregate of 49,950 shares of Common Stock at an exercise price of \$6.70 per share. On February 18, 2015, Mr. Steinhart was granted an option to purchase 25,000 shares of Common Stock at an exercise price of \$3.58 per share. On April 15, 2016, Mr. Steinhart was granted an option to purchase an aggregate of 75,000 shares of the Common Stock at an exercise price of \$1.99 per share. On March 14, 2017, Mr. Steinhart was granted options to purchase an aggregate of 75,000 shares of Common Stock at an exercise price of \$1.39 per share. All options are subject to vesting. Within 60 days of November 8, 2017, 110,950 options will have vested.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The following sets forth a summary of transactions, or any currently proposed transaction, in which the Company was to be a participant and the amount involved exceeded or exceeds \$120,000 and in which any related person had or will have a direct or indirect material interest (other than compensation described under “Executive Compensation”). We believe the terms obtained or consideration that we paid or received, as applicable, in connection with the transactions described below were comparable to terms available or the amounts that would be paid or received, as applicable, in arm’s-length transactions.

Transactions with Related Persons

On February 11, 2015, the Company completed a public offering of common shares and warrants, representing gross proceeds of approximately \$20.0 million and a net amount of approximately \$18.5 million after deducting the underwriting discount and the other offering expenses. Laidlaw & Company (UK) Ltd., of which Mr. Seth, Chairman and CEO was the former Head of Healthcare Investment Banking, acted as sole book-running manager for the offering. The offering was made pursuant to a shelf registration statement (File No. 333-194768) previously filed with and declared effective by the U.S. Securities and Exchange Commission.

In an agreement dated March 11, 2015 and effective August 11, 2014, Mr. Seth entered into a consulting agreement with the Company to serve as Executive Chairman of the Company. The agreement was amended and restated on August 6, 2015. Mr. Seth is also entitled to participate in a Company bonus program, which shall be established by the Board pursuant to which the Board shall award bonuses to the consultant, based upon the achievement of written individual and corporate objectives such as the Board shall determine. During the term of the agreement, the performance cash bonus shall be at least at the same amount as the performance cash bonus paid to the Chief Executive Officer of the Company. On September 23, 2014, the Board also granted to the Executive Chairman an option to purchase 280,000 common shares of the Company at an exercise price of \$6.13 per share. The options vest at the rate of 2% of the grant each month from the grant date until fully vested in accordance with the provisions of the Company’s Amended and Restated 2013 Stock Plan.

On June 5, 2015, the Company sold approximately \$5 million of its common stock in a registered direct offering to certain investors. Laidlaw & Company (UK) Ltd. acted as the sole placement agent with respect to the offering. The securities were offered pursuant to the Company’s effective shelf registration statement previously filed with the SEC on Form S-3.

On December 21, 2015, Actinium entered into an Investor Rights Agreement (the “Investor Rights Agreement”) with Memorial Sloan Cancer Center (“MSKCC”). Under the terms of the Investor Rights Agreement, MSKCC has agreed to forebear from transferring or otherwise disposing of its approximately 5.7 million Actinium shares (other than pursuant to a piggyback registration as described below) until the start of the Actimab-A Phase 2 clinical study (but, in no event until later than March 31, 2016). Thereafter MSKCC shall be permitted to sell its shares subject to a weekly volume limitation of 150,000 shares (which limit may be increased to up to 250,000 shares per week to the extent any prior weekly allotments were not fully used) and applicable law so long as MSKCC maintains at least 25% of its current shareholding in Actinium through December 31, 2016. Actinium has granted MSKCC piggyback registration rights that would be triggered in the event Actinium were to engage in a public registered offering of its shares for its own account where other shareholders are participating as selling shareholders or where such public registered offering is for the account of other selling shareholders. In addition, following December 31, 2016, Actinium has granted MSKCC unlimited Form S-3 registration rights with respect to its shares.

Non-Competition Agreements and Indemnity Agreements

Our executive officers have signed non-competition agreements, which provide that all inventions become the immediate property of our 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. Our executive officers and directors have also entered into indemnity agreements with us.

MATTERS TO BE CONSIDERED AT THE ANNUAL MEETING

PROPOSAL 1

ELECTION OF DIRECTORS

Nominee for the Board of Directors

The Company’s Certificate of Incorporation (the “Charter”) established a classified Board of Directors with three classes of directors. Currently there are four directors divided into three classes designated Class I, Class II, and Class III. The term of office for each Class I director expires at the 2017 Annual Meeting; the term of office for each Class II director expires at the 2018 annual meeting of shareholders; and the term of office for each Class III director expires at the 2019 annual meeting of shareholders. Pursuant to the Charter, the directors due for election at the 2017 Annual meeting are David Nicholson and Richard I. Steinhart (Class I).

The Board of Directors proposes the election of the following individuals to serve on its Board of Directors for a term that continues pursuant to the director terms outlined below or until his successor is duly elected. The nominees are current board members Messrs. Nicholson and Steinhart. In the event the nominee is unable or unwilling to serve as a director, the individual named as proxy on the proxy card will vote the shares that he represents for election of such other person or persons as the Board of Directors may recommend. The Board of Directors has no reason to believe that the nominee will be unable or unwilling to serve.

The following is information about the nominee, including biographical data for at least the last five years. Should the nominees become unavailable to accept nomination or election as a director, the individual named as proxy on the enclosed proxy card will vote the shares that he represents for the election of such other person as the Board of Directors may recommend.

The Board of Directors is responsible for supervision of the overall affairs of the company. Following the annual meeting, the Board of Directors will consist of four directors. The term of each director is set forth below or until their successors are duly elected:

| Director | Class | Term (from 2017 Annual Meeting, if elected) |
|---------------------|-----------|---|
| David Nicholson | Class I | 3 years |
| Richard I Steinhart | Class I | 3 years |
| Sandesh Seth | Class II | 1 year |
| Ajit S. Shetty | Class III | 2 years |

Directors elected at each annual meeting commencing in 2017 shall be elected for a 3 year term. The name of the nominee for our Board of Directors and information about him is set forth below. There are no family relationships between any of the executive officers and directors.

David Nicholson, PhD, Director

David Nicholson has been a Director of the Company since 2008. Dr. Nicholson is also a member of our Audit Committee, Compensation Committee and Corporate Governance Committee. In August 2014, Dr. Nicholson joined Actavis plc and Forest Laboratories, Inc. as Senior Vice President, Actavis Global Brands R&D. From March 2012 to August 2014, Dr. Nicholson was on the Executive Committee of Bayer CropScience 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, Dr. 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.

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, MBA, Director

Mr. 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 and Corporate Governance Committee. Since March 2014, Mr. Steinhart has been a Member of the Board of Directors of Atossa Genetics, Inc. where he is Chairman of the Audit Committee and a member of the Compensation Committee. From October 2015 to April 2017, Mr. Steinhart was Vice President and CFO at Remedy Pharmaceuticals, a privately-held, clinical stage pharmaceutical company. From January 2014 through September 2015 Mr. Steinhart had been a financial and strategic consultant to the biotechnology and medical device industries. From April 2006 through December 2013, Mr. Steinhart was employed by MELA Sciences, Inc., as their Vice President, Finance and Chief Financial Officer, Treasurer and Secretary. In April 2012, Mr. Steinhart received a promotion to Sr. Vice President, Finance and Chief Financial Officer. From May 1992 until joining MELA Sciences, 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. Mr. Steinhart began his career at Price Waterhouse, now known as PricewaterhouseCoopers. He holds BBA and MBA degrees from Pace University and is a Certified Public Accountant (inactive).

That Mr. Steinhart brings nearly 30 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.

Vote Required

Directors are elected by a plurality of the votes cast in person or by proxy at the annual meeting and entitled to vote on the election of directors. "Plurality" means that the nominees receiving the greatest number of affirmative votes will be elected as directors, up to the number of directors to be chosen at the meeting. Broker non-votes will not affect the outcome of the election of directors because brokers do not have discretion to cast votes on this proposal without instruction from the beneficial owner of the shares.

THE BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" ELECTION OF THE DIRECTOR NOMINEES

PROPOSAL 2

RATIFICATION OF THE APPOINTMENT OF GBH CPAs, PC

The audit committee has appointed GBH CPAs, PC as our independent registered public accounting firm to audit the consolidated financial statements of Actinium Pharmaceuticals, Inc. and its subsidiaries for the fiscal year ending December 31, 2017. Representatives of GBH CPAs, PC will be present at the annual meeting and will have an opportunity to make a statement or to respond to appropriate questions from stockholders. Although stockholder ratification of the appointment of our independent auditor is not required by our Bylaws or otherwise, we are submitting the selection of GBH CPAs, PC to our stockholders for ratification to permit stockholders to participate in this important corporate decision. If not ratified, the audit committee will reconsider the selection, although the audit committee will not be required to select a different independent auditor for our company.

Vote Required

The ratification of the appointment of GBH CPAs, PC as our independent registered public accounting firm will be approved if there is a quorum and the votes cast "FOR" the proposal exceeds those cast against the proposal.

THE BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" RATIFICATION OF GBH CPAs, PC AS THE INDEPENDENT REGISTERED ACCOUNTING FIRM OF ACTINIUM PHARMACEUTICALS, INC.

PROPOSAL 3

APPROVAL OF AMENDMENT OF THE 2013 AMENDED AND RESTATED STOCK PLAN, AS AMENDED, TO INCREASE THE NUMBER OF SHARES OF COMMON STOCK AUTHORIZED FOR ISSUANCE UNDER THE PLAN BY 5 MILLION SHARES FROM 12,750,000 TO 17,750,000 TO SUPPORT PLANNED HIRING EFFORTS AS THE COMPANY GROWS

Description of Proposed Amendment

On October 23, 2017, the Board unanimously approved an amendment (the “Plan Amendment”) to the Company’s 2013 Amended and Restated Stock Plan, as amended (the “Plan”), subject to stockholder approval, to increase the number of shares of Common Stock authorized for issuance under the Plan by 5 million shares from 12,750,000 to 17,750,000 to support planned hiring efforts as the company grows.

The full text of the proposed Plan Amendment is set out in Annex A to this Proxy Statement. The text of the proposed Plan Amendment is subject to modification to include such changes as the Board deems necessary and advisable to affect the increase in the number of shares of Common Stock reserved and available for issuance under the Plan. Stockholders are being asked to approve the Plan Amendment.

Vote Required and Recommendation

The approval of the Plan Amendment will be made upon the affirmative vote of the majority of shares cast on the proposal. Abstentions and broker non-votes will have no direct effect on the outcome of this proposal. If the proposal is not approved by the stockholders, the Plan Amendment will not be effective and the proposal will not be implemented.

Reasons for the Plan Amendment

Existing Plan

Our Plan is currently comprised of 12,750,000 shares of Common Stock.

The purpose of the Plan is to provide a means through which we may attract and retain key personnel and to provide a means whereby directors, officers, managers, employees, consultants and advisors (and prospective directors, officers, managers, employees, consultants and advisors) can acquire and maintain an equity interest in our Company, or be paid incentive compensation, which may (but need not) be measured by reference to the value of common shares, thereby strengthening their commitment to the welfare of our Company and aligning their interests with those of our stockholders.

Increase in Size of Plan

As of September 30, 2017, outstanding awards (consisting of options to purchase shares of common stock) issued under the Plan totaled 6,209,029 million shares of common stock, leaving 3,670,709 shares available for issuance.

Our Board determined to increase the number of shares of common stock reserved and available for issuance under the Plan by 5 million shares because it believes that the current number is insufficient for the purposes of the Plan for future issuances. The market for quality personnel is competitive, and the ability to obtain and retain competent personnel is of great importance to our business operations.

Effects of the Plan Amendment

As a result of the Plan Amendment, there will be an increase in the total number of shares of common stock reserved for issuance under the Plan. This will provide us with the ability to grant more awards than are currently available under the Plan to eligible recipients including employees, directors, consultants and advisors. The issuance in the future of awards under the Plan consisting of full value awards and options to purchase shares of common stock may have the effect of diluting the earnings per share and book value per share, as well as the stock ownership and voting rights, of the holders of the currently outstanding shares of common stock. The effective increase in the number of authorized but unissued shares of common stock which may be issued as awards under the Plan may be construed as

having an anti-takeover effect by permitting the issuance of shares to purchasers who might oppose a hostile takeover bid or oppose any efforts to amend or repeal certain provisions of our Certificate of Incorporation or Bylaws. Holders of our common stock have no preemptive or other subscription rights. There are no other material differences to the Plan as a result of the Plan Amendment.

Material Terms of the Plan

Purpose. The purposes of the 2013 Stock Plan, as amended, 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 our business.

Administration. The Plan shall be administered by our Board or a committee, or a combination thereof, as determined by our 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.

Powers of the Administrator. The specific duties delegated by our Board to the committee, the administrator shall have the authority, in its discretion:

- to determine the fair market value of the common stock, provided that such determination shall be applied consistently with respect to participants under the Plan;
- to select the employees, directors and consultants to whom Plan awards may from time to time be granted;
- to determine whether and to what extent Plan awards are granted;
- to determine the number of shares of common stock to be covered by each award granted;
- to approve the form(s) of agreement(s) used under the Plan;
- 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;
- 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 us;
- 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
- 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.

Eligibility. 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. Each option shall be designated in the option agreement as either an

Incentive Stock Option or a Nonstatutory Stock Option. 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 exceeds \$100,000, such excess options shall be treated as Nonstatutory Stock Options.

Term of Plan. The Plan shall become effective upon its adoption by our Board. It shall continue in effect for a term of ten (10) years.

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 holder of ten percent or more of our outstanding shares, 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.

Option Exercise Price and Consideration. 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:

In the case of an Incentive Stock Option

(A) granted to an employee who at the time of grant is a holder of ten percent or more of our outstanding shares, 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.

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 Internal Revenue Code.

Exercise of Option. 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).

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.

Termination of Employment or Consulting Relationship. Except as otherwise set forth in the plan 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.

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:

- *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.
- *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 Internal

Revenue 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.

- *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.
- *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.

Stock Purchase Rights. 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.

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.

Taxes. 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 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.

Non-Transferability of Options and Stock Purchase Rights. Except as set forth in the Plan, 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. Notwithstanding anything else, 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.

Adjustments Upon Changes in Capitalization, Merger or Certain Other Transactions.

Change of Control. In the event of a Change of Control, (i) each outstanding option shall become immediately vested and exercisable, and (ii) any outstanding restricted stock shall become immediately vested and any repurchase option with respect to such restricted stock shall immediately lapse, in each case effective immediately prior to the Change of Control.”

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 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.”

Dissolution or Liquidation. In the event of the dissolution or liquidation of our Company, each option and stock purchase right will terminate immediately prior to the consummation of such action, unless otherwise determined by the administrator.

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 in consideration for a cash payment to the participant (on the date of the Corporate Transaction), with respect to each such option, equal to the excess, if any, of the fair market value of the Common Stock subject to such option over the exercise price of such option.

Amendment and Termination of the Plan. The board may at any time amend, alter, suspend or discontinue the Plan, but no amendment, alteration, suspension or discontinuation 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. 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.

Securities Authorized for Issuance Under Equity Compensation Plans As of September 30, 2017

| Plan category | Number of securities to be issued upon exercise of options, warrants and rights (a) | Weighted- average exercise price of outstanding options, warrants and rights (b) | Number of securities remaining available for future issuance (c) |
|--|---|--|--|
| Equity compensation plans approved by security holders | 6,156,361 | \$ 2.62 | 5,991,975 |
| Equity compensation plans not approved by security holders | — | — | — |
| Total | 6,156,361 | \$ 2.62 | 5,991,975 |
| Recommendation of the Board of Directors | | | |

THE BOARD RECOMMENDS THAT THE STOCKHOLDERS VOTE “FOR” TO APPROVE AN AMENDMENT TO THE COMPANY’S 2013 AMENDED AND RESTATED STOCK PLAN, AS AMENDED, TO INCREASE THE NUMBER OF SHARES OF COMMON STOCK AUTHORIZED FOR ISSUANCE UNDER THE PLAN FROM 12,750,000 TO 17,750,000.

PROPOSAL 4

TO APPROVE AN AMENDMENT TO OUR CERTIFICATE OF INCORPORATION TO INCREASE THE NUMBER OF SHARES THE CORPORATION IS AUTHORIZED TO ISSUE TO 400,000,000 SHARES OF COMMON STOCK, PAR VALUE \$0.001 PER SHARE

Shareholders are being asked to approve an amendment to the Company's Certificate of Incorporation (the "Certificate") to increase the number of authorized shares of Company common stock from two hundred million shares (200,000,000) to four hundred million shares (400,000,000). At its meeting held on October 23, 2017, the Board of Directors approved this amendment, subject to shareholder approval, and directed that this amendment be submitted to a vote of the Company's shareholders at this Annual Meeting of Shareholders. The Board has determined that this amendment is in the best interests of the Company and its shareholders and recommends approval by the shareholders.

The Certificate currently authorizes the issuance of (i) up to 200,000,000 shares of Company common stock, each with a par value of \$0.001 per share, and (ii) up to 50,000,000 shares of Company preferred stock, each with a par value of \$0.001 per share. As of the close of business on November 8, 2017, 80,025,073 shares of common stock were outstanding and no shares of preferred stock were outstanding. In addition, as of the close of business on November 8, 2017, the Company had 6,156,361 shares of common stock subject to outstanding stock options and 5,991,975 shares reserved for issuance pursuant to future grants under the Company's current stock incentive plans. The Company also had 222,908 shares reserved subject to the vesting of restricted stock. The Company also had 27,220,388 shares reserved subject to the exercise of outstanding warrants. This means that as of November 8, 2017, the Company had just 80,383,295 shares of common stock available for corporate purposes, including, among other things, the issuance of shares for potential financings.

Purpose of Amendment

The Board believes it is in the best interest of our Company to increase the number of authorized shares of common stock in order to give us greater flexibility in considering and planning for future potential business needs.

We have no current plan, commitment, arrangement, understanding or agreement regarding the issuance of the additional shares of common stock resulting from the proposed increase in authorized shares. The additional shares of common stock will be available for issuance by our Board for various corporate purposes, including but not limited to, stock splits, stock dividends, grants under employee stock plans, financings, potential strategic transactions, including mergers, acquisitions, strategic partnerships, joint ventures, divestitures, and business combinations, as well as other general corporate transactions.

Having this additional authorized common stock available for future use will allow us to issue additional shares of common stock without the expense and delay of arranging a special meeting of shareholders.

Possible Effects of the Amendment and Additional Anti-takeover Consideration

If the amendment to the Certificate is approved, the additional authorized shares would be available for issuance at the discretion of our Board and without further shareholder approval, except as may be required by law. The additional shares of authorized common stock would have the same rights and privileges as the shares of common stock currently issued and outstanding. There are currently no shares of preferred stock outstanding. The adoption of the amendment would not have any immediate dilutive effect on the proportionate voting power or other rights of existing shareholders. Shares of common stock issued otherwise than for a stock split may decrease existing shareholders' percentage equity ownership and, depending on the price at which they are issued, could be dilutive to the voting rights of existing shareholders and have a negative effect on the market price of the common stock. Current shareholders have no preemptive or similar rights.

We cannot provide assurances that any such transactions will be consummated on favorable terms or at all, that they will enhance shareholder value or that they will not adversely affect our business or the trading price of our stock.

We have not proposed the increase in the number of authorized shares of common stock with the intention of using the additional authorized shares for anti-takeover purposes, but we would be able to use the additional shares to oppose a hostile takeover attempt or delay or prevent changes in control or management. For example, without further shareholder approval, our Board could sell shares of common stock in a private transaction to purchasers

who would oppose a takeover or favor our current Board. Although this proposal to increase the authorized number of shares of common stock has been prompted by business and financial considerations and not by the threat of any known or threatened hostile takeover attempt, shareholders should be aware that approval of this proposal could facilitate future efforts by us to oppose changes in control of our Company and perpetuate our management, including transactions in which the shareholders might otherwise receive a premium for their shares over then current market prices.

If our shareholders approve the increase in the number of authorized shares of common stock to 400,000,000, the Board will have authority to file with the Secretary of State of Delaware an amendment to our Certificate, effectively increasing our authorized shares by an additional 200,000,000 shares of common stock. Upon approval and following such filing with the Secretary of State of the State of Delaware, the amendment will become effective on the date it is filed. The amendment proposed by us to the Article FOURTH of our Certificate is attached to this proxy statement as Appendix B.

Neither Delaware law, our Certificate, nor our by-laws provides for appraisal or other similar rights for dissenting shareholders in connection with this proposal. Accordingly, our shareholders will have no right to dissent and obtain payment for their shares.

THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS A VOTE FOR THE AMENDMENT OF THE COMPANY'S CERTIFICATE OF INCORPORATION TO INCREASE THE NUMBER OF AUTHORIZED SHARES.

OTHER MATTERS

As of the date hereof, there are no other matters that we intend to present, or have reason to believe others will present, at the annual meeting. If, however, other matters properly come before the annual meeting, the accompanying proxy authorizes the person named as proxy or his substitute to vote on such matters as he determines appropriate.

ANNUAL REPORT ON FORM 10-K

As required, we filed our 2016 Form 10-K, as amended, with the SEC. Stockholders may obtain, free of charge, a copy of the 2016 Form 10-K by writing to us at Actinium Pharmaceuticals, Inc., 275 Madison Avenue, 7th Floor, New York NY 10016, Attention: Corporate Secretary, or from our website, www.actiniumpharma.com under the heading “Investor Relations” and the subheading “Company Financial Reports.”

HOUSEHOLDING OF PROXY MATERIALS

SEC rules concerning the delivery of annual disclosure documents allow us or your broker to send a single Notice or, if applicable, a single set of our proxy materials to any household at which two or more of our stockholders reside, if we or your broker believe that the stockholders are members of the same family. This practice, referred to as “householding,” benefits both you and us. It reduces the volume of duplicate information received at your household and helps us to reduce our expenses. The rule applies to our Notices, annual reports, proxy statements and information statements. Once you receive notice from your broker or from us that communications to your address will be “household,” the practice will continue until you are otherwise notified or until you revoke your consent to the practice. Stockholders who participate in householding will continue to have access to and utilize separate proxy voting instructions.

If your household received a single Notice or, if applicable, a single set of proxy materials this year, but you would prefer to receive your own copy, please contact Broadridge Financial Solutions, Inc., by calling their toll free number, 1-866-540-7095.

If you do not wish to participate in “householding” and would like to receive your own Notice or, if applicable, set of our annual disclosure documents in future years, follow the instructions described below. Conversely, if you share an address with another holder of our Common Stock or Preferred Stock and together both of you would like to receive only a single Notice or, if applicable, set of our annual disclosure documents, follow these instructions:

- If your shares are registered in your own name, please contact Broadridge Financial Solutions, Inc., and inform them of your request by calling them at 1-866-540-7095 or writing them at 51 Mercedes Way, Edgewood, New York 11717.
- If a broker, bank or other nominee holds your shares, please contact the broker, bank or other nominee directly and inform them of your request. Be sure to include your name, the name of your brokerage firm and your account number.

Electronic Delivery of Company Stockholder Communications

Most stockholders can elect to view future proxy statements and annual reports over the Internet instead of receiving paper copies in the mail.

You can choose this option and save the cost of producing and mailing these documents by:

- following the instructions provided on your Notice or proxy card;
- following the instructions provided when you submit a proxy to vote over the Internet; or
- going to www.proxyvote.com and following the instructions provided.

IMPORTANT NOTICE REGARDING THE AVAILABILITY OF PROXY MATERIALS FOR THE STOCKHOLDER MEETING TO BE HELD ON DECEMBER 20, 2017

This proxy statement and our 2016 Form 10-K to stockholders are available for viewing, printing and downloading at www.proxyvote.com. To view these materials, please have your 12-digit control number(s) available that appears on your Notice or proxy card. On this website, you can also elect to receive future distributions of our proxy statements and annual reports to stockholders by electronic delivery.

Additionally, you can find a copy of our Annual Report on Form 10-K, which includes our financial statements, for the fiscal year ended December 31, 2016 on the website of the Securities and Exchange Commission, or the SEC, at www.sec.gov, or in the “SEC Filings” section of the “Investors & Media” section of our website at www.actiniumpharma.com. You may also obtain a printed copy of our Annual Report on Form 10-K, including our financial statements, free of charge, from us by sending a written request to: Actinium Pharmaceuticals, Inc., 275 Madison Avenue, 7th Floor, New York, NY 10016, attention: Principal Financial Officer. Exhibits will be provided upon written request and payment of an appropriate processing fee.

PROPOSALS OF STOCKHOLDERS

Stockholders may present proposals intended for inclusion in our proxy statement for our 2018 Annual Meeting of Stockholders provided that such proposals are received by the Secretary of the Company in accordance with the time schedules set forth in, and otherwise in compliance with, applicable SEC regulations, and the Company’s Amended and Restated Bylaws, as applicable. Proposals submitted not in accordance with such regulations will be deemed untimely or otherwise deficient; however, the Company will have discretionary authority to include such proposals in the 2018 Proxy Statement.

WHERE YOU CAN FIND MORE INFORMATION

This proxy statement refers to certain documents that are not presented herein or delivered herewith. Such documents are available to any person, including any beneficial owner of our shares, to whom this proxy statement is delivered upon oral or written request, without charge. Requests for such documents should be directed to Principal Financial Officer, Actinium Pharmaceuticals, Inc., 275 Madison Avenue, 7th Floor, New York, NY 10016, (646) 677-3875. Please note that additional information can be obtained from our website at www.actiniumpharma.com.

We file annual and special reports and other information with the SEC. Certain of our SEC filings are available over the Internet at the SEC’s web site at <http://www.sec.gov>. You may also read and copy any document we file with the SEC at its public reference facilities:

Edgar Filing: Actinium Pharmaceuticals, Inc. - Form DEF 14A

Public Reference Room Office 100 F Street, N.E.
Room 1580
Washington, D.C. 20549

You may also obtain copies of the documents at prescribed rates by writing to the Public Reference Section of the SEC at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. Callers in the United States can also call 1-202-551-8090 for further information on the operations of the public reference facilities.

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Annex A

AMENDMENT NO. 5

TO

ACTINIUM PHARMACEUTICALS, INC. 2013 AMENDED AND RESTATED STOCK PLAN

Pursuant to Section 14 of the 2013 Amended and Restated Stock Plan, as amended (the “Plan”) of Actinium Pharmaceuticals, Inc. (the “Company”), the Board of Directors of the Company has duly adopted a resolution, conditioned upon approval by the stockholders of the Company, approving this Amendment No. 5 to the Plan to increase the total number of shares of common stock, par value \$.001 per share, of the Company (the “Common Stock”) reserved and available for issuance under the Plan as follows:

1. Section 3 of the Plan is hereby amended to read in its entirety as follows:

“Subject to the provisions of Section 14 of the Plan, the maximum aggregate number of Shares reserved for issuance to Participants under the Plan is 17,750,000, and the maximum aggregate number of Shares that may be granted in the form of Incentive Stock Options is 17,750,000. 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.”

2. All other terms and provisions of the Plan shall remain unchanged and in full force and effect as written.

3. A majority in voting interest of the stockholders present in person or by proxy and entitled to vote at the meeting of stockholders at which this Amendment No. 5 was considered, has duly approved this Amendment No. 5 to the Plan.

IN WITNESS WHEREOF, this Amendment No. 5 to the Plan is made effective this day of , 2017.

ACTINIUM PHARMACEUTICALS, INC.

By:

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

Actinium Pharmaceuticals, Inc., a Delaware corporation, hereby certifies that:

1. The Certificate of Incorporation is amended (a) by replacing Article FOURTH thereof to read in its entirety as follows:

Article FOURTH

“FOURTH: The amount of the total stock this Corporation is authorized to issue is 450,000,000 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 400,000,000 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.”

2. This Certificate of Amendment has been duly adopted in accordance with Section 242 of the General Corporation Law of the State of Delaware (the “DGCL”), including approval by the stockholders of the corporation upon notice in accordance with Section 222 of the DGCL, at the annual meeting of the stockholders on the Corporation held on December 20, 2017.

IN WITNESS WHEREOF, the corporation has caused this certificate to be signed by its duly authorized officer this ___ day of December, 2017.

Sandesh Seth, Chairman and Chief Executive Officer

