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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 ☒

Filed by a Party other than the Registrant ☐

Check the appropriate box:

- ☐ Preliminary Proxy Statement  
☐ 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)

Payment of Filing Fee (Check the appropriate box):

- ☒ No fee required.
- ☐ Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.

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|----|---|-------|
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| 3. | Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (Set forth the amount on which the filing fee is calculated and state how it was determined): | _____ |
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☐ Fee paid previously with preliminary materials.

☐ Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.

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| 1. | Amount Previously Paid:                       | _____ |
| 2. | Form, Schedule or Registration Statement No.: | _____ |
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## 2019 Shareholder Letter

November 25, 2019

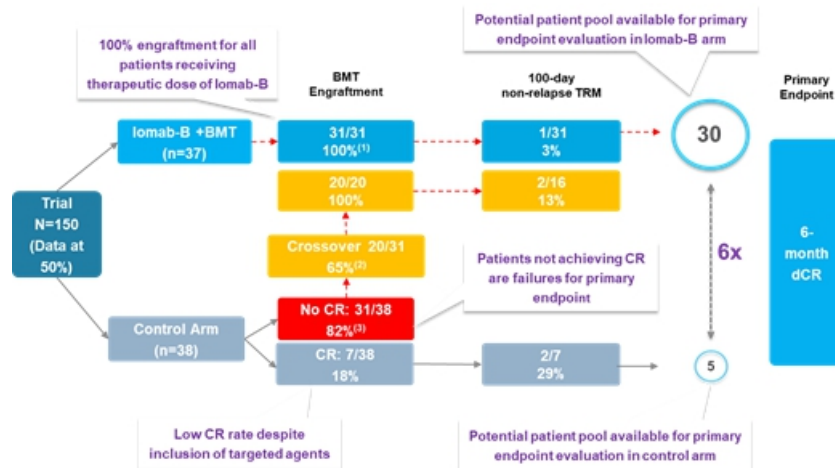
Dear Fellow Shareholders:

I am pleased to report that this has been a year where your company has made valuable progress executing the strategy that was crafted in 2018, namely to focus on value creation in targeted conditioning and combination trials with our ARCs, or Antibody Radiation Conjugates. Both our CD45 program and CD33 program have yielded highly promising interim clinical trial data in both of these areas. These data indicate that our programs have the potential to deliver tremendous value to patients, caregivers and as a consequence, to you, our shareholders.

On behalf of the entire team at Actinium, I would like to thank you for your continued support that has facilitated our exciting progress this year, which I would like to highlight for you.

Our CD45 targeted conditioning program is progressing well. Positive interim results from the first fifty percent of patients enrolled on the pivotal Phase 3 SIERRA trial for Iomab-B were recently highlighted on a webinar with Dr. Sergio Giralt, Chief Attending Physician, Adult Bone Marrow Transplant Service and Chair, Myeloma Service at Memorial Sloan Kettering Cancer Center. The results from fifty percent enrollment solidified the safety and feasibility findings from twenty-five percent enrollment that were presented at the 2018 American Society of Hematology Annual Meeting (ASH) and the 2019 Transplant & Cellular Therapy Conference. The results look promising with *all patients receiving a therapeutic dose of Iomab-B being able to successfully get a Bone Marrow Transplant, or BMT and over eighty percent failing the control arm despite being eligible to be treated with the targeted therapies that were recently approved since 2017.*

### SIERRA Trial – Key Highlights from 50% Enrollment Interim Results



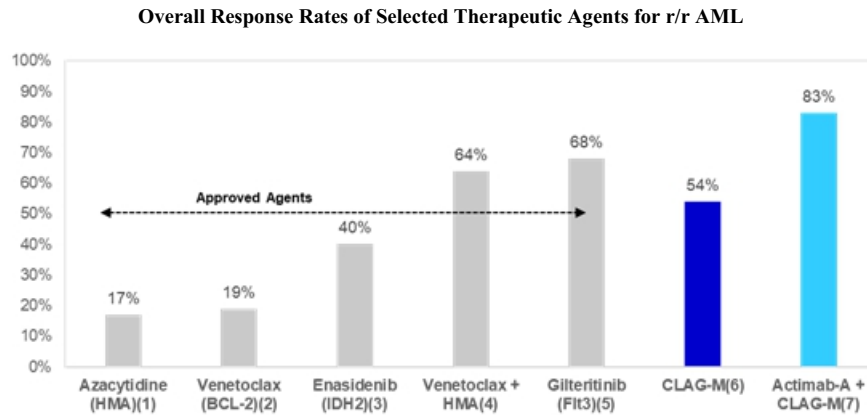


*The opportunity for Iomab-B remains as compelling as ever, as patients with active disease can get this agent, go directly and rapidly to a BMT and successfully transplant. These results are not achievable with any other agent, approved or not, and there is no other clinical trial with this value proposition available for these patients. Bolstering the value proposition for Iomab-B, is the data we presented at the 2019 American Society of Clinical Oncology (ASCO) Annual Meeting, which showed that Iomab-B is an induction and conditioning regimen combined that can rapidly reduce disease burden as a single agent and simultaneously wipe out diseased bone marrow.*

We are working diligently and urgently to get the messages related to Iomab-B's value proposition out to the broader transplant and hematologist community, aided by our multi-disciplinary team comprised of transplant physicians, hematologists, and nuclear medicine and nursing professionals. We are enthused by the promising interim results and our progress with our lead program and expect our hard work to bear fruit as we work to complete this trial next year.

Equally exciting are the results we were able to show with the ARC combinations approach in our CD33 program. Here we are attempting to produce superior clinical results by combining very low doses of our ARCs with established drugs or drug regimens in AML, or Acute Myeloid Leukemia. Our ARCs deliver powerful alpha-particle radiation in a very targeted and safe manner to AML cells and have the promise of improving upon the efficacy of the drug or drug regimen it is being combined with through their synergistic mechanisms of action.

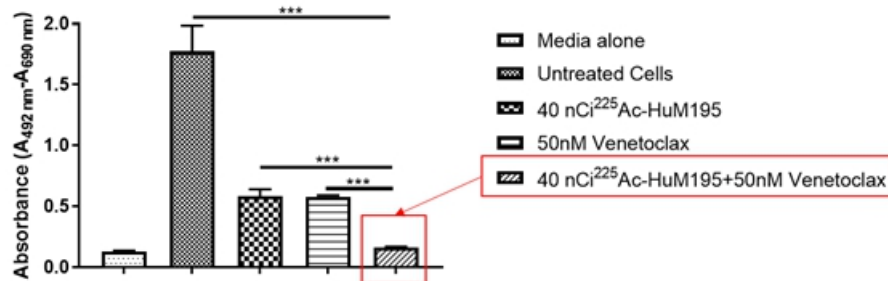
We expect to elaborate further at ASH this year about the exciting results we are seeing, including the dose-ranging portion of our Actimab-A plus CLAG-M Phase 1 trial. The early results show an ORR, or Overall Response Rate of 83% in relapsed or refractory AML patients treated with Actimab-A plus CLAG-M, which is a 54% improvement over what is seen with CLAG-M alone. The safety profile in these patients was also tolerable. As can be seen from the graph below, this combination has best-in-class response rates compared to the approved agents, including venetoclax combinations and the targeted agents.





Earlier in the year, we also presented preclinical data from another potentially high-value combination we are pursuing with Actimab-A plus venetoclax, the blockbuster Bcl-2 inhibitor developed and owned by Abbvie and Roche. As seen in the figure below, there is a synergistic effect when these two agents are used in combination and we look forward to clinical trial data from the Phase 1 trial next year, which is being led by Dr. Gary Schiller, Professor, Hematology-Oncology and Director, Hematologic Malignancy/Stem Cell Transplant Program at UCLA Medical Center, as well as being conducted at other sites.

**Synergy of Actimab-A and Venetoclax**



We continue to make good progress on the AWE platform with several key IP filings contributing to our now over 110 patent estate. We have also filed patents around our lymphodepletion technology, new ARCs and ARC combinations which are expected to drive or support partnering activity as our clinical trials yield data that bears out the promise of our programs. Our partnership with Astellas continues and we will be continuing to seek partners for the AWE platform and our programs as the data sets from the clinical trials mature. Targeted conditioning is becoming an area of increasing interest to companies as they seek new areas of opportunity. We believe that Iomab-B, as well as our other programs in this area, like Actimab-MDS and Iomab-ACT, which provide additional value, will attract increasing levels of attention as they progress. Similarly, the CD33 ARC combinations are also expected to be attractive to the growing universe of companies developing therapies for patients with AML as they seek to differentiate in this increasingly crowded area.

We are encouraged by the progress we have made across our portfolio, which has yielded positive interim results from SIERRA for Iomab-B, validating clinical data for our ARC combination strategy, strengthened IP and promising preclinical data supporting our AWE platform. We also note that targeted radiation therapy companies are continuing to draw the attention of strategic buyers/companies and investors, both value-focused and otherwise. With several exciting milestones and potentially transformative opportunities ahead for our company next year and beyond, we expect that Actinium can only gather more of such interest. We wish to be able to deliver value to our shareholders based on these milestones and therefore, the Board of Directors is recommending several proposals in the proxy statement that require your support which will enable you, our shareholders, to better position the company to reap the benefits of such interest.



As 2019 draws to a close, the team at Actinium will be busy at ASH and other events as we work hard to set the stage for a successful 2020. Though early, I do wish all of you, our shareholders, a good holiday season and also a reminder to take the time to vote affirmatively for the proposals as recommended by your Board.

On behalf of the team at Actinium,

Sincerely,

A handwritten signature in blue ink, appearing to read "Sandesh Seth", is written over a horizontal line.

Sandesh Seth

Chairman and Chief Executive Officer

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### **Key Achievements in 2019**

- ✓ Completed first module of collaborative research program with Astellas
- ✓ Advanced to 2<sup>nd</sup> dosing cohort in Actimab-A CLAG-M combination trial
- ✓ Filed key patents for Iomab-ACT program for lymphodepletion for CAR-T and cell therapies
- ✓ 25% SIERRA interim results selected as late breaking oral presentation at TCT 2019
- ✓ Supportive Actimab-A + venetoclax combination data presented at AACR annual meeting
- ✓ Completed second module of collaborative research program with Astellas
- ✓ Presented positive Iomab-B single-agent data at ASCO annual meeting
- ✓ Iomab-B's positive safety profile to caregivers presented at Health Physics Society meeting
- ✓ Achieved 50% enrollment in the pivotal Phase 3 SIERRA trial for Iomab-B
- ✓ Iomab-B single-agent data selected for Honorable Distinction award at SOHO annual meeting
- ✓ Reported continued positive results at 50% enrollment in pivotal Phase 3 SIERRA trial
- ✓ Positive results from Actimab-A CLAG-M combination trial accepted for presentation at ASH

### **Key Milestones for 2020**

<b>Milestone</b>	<b>Timing</b>
Enroll 110 <sup>th</sup> patient in SIERRA, initiating 6-month follow up for potential ad hoc efficacy analysis	1H:2020
Achieve 75% enrollment in the SIERRA trial	1H:2020
Initiate and complete 3 <sup>rd</sup> and final dose cohort in Actimab-A CLAG-M study	1H:2020
Present first-in-human data with Actimab-A + venetoclax combination	1H:2020
Approach FDA to discuss pivotal trial pathway for Actimab-A + CLAG-M	2H:2020
Present proof-of-concept data from Actimab-MDS Phase 1 trial	2H:2020
Approach FDA to discuss pivotal trial pathway for Actimab-A + venetoclax	2H:2020
Initiate pivotal trial for Actimab-A + CLAG-M combination	2H:2020
Initiate pivotal trial for Actimab-A + venetoclax combination	2H:2020
Advance Actimab-MDS pivotal trial per our interactions with the FDA	2H:2020
Complete patient enrollment of the pivotal Phase 3 SIERRA trial	2H:2020
Potential ad hoc interim efficacy analysis from 110 patients on SIERRA	2H:2020

### **Useful Links to More Information**

Webcast with Dr. Giralt highlighting 50% interim results from pivotal Phase 3 SIERRA trial: <https://platform.cinchcast.com/ses/kSO55A9SLNGFoAvv1hgHpg~~>

Investor presentation, posters and past webcasts: <https://ir.actiniumpharma.com/presentations-webinars>

**ACTINIUM PHARMACEUTICALS, INC.**  
**275 Madison Avenue, 7<sup>th</sup> Floor**  
**New York, New York 10016**

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**NOTICE OF ANNUAL MEETING OF STOCKHOLDERS**

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To Our Stockholders:

NOTICE IS HEREBY GIVEN that the 2019 Annual Meeting of Stockholders of Actinium Pharmaceuticals, Inc. (the “Company”) will be held on Wednesday, December 18, 2019, at 9:30 a.m. (Eastern Time) at The Garden City Hotel, 45 Seventh St, Garden City, NY 11530.

We are holding the meeting for the following purposes, which are more fully described in the accompanying proxy statement:

1. To elect Ajit S. Shetty as a Class III director to serve for a three-year term that expires at the 2022 Annual Meeting of Stockholders, or until his successor is elected and qualified or until his earlier resignation or removal; and
2. To ratify the appointment of Marcum LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2019; and
3. To approve the Actinium Pharmaceuticals, Inc. 2019 Stock Plan, that may be implemented at the discretion of our Board of Directors before December 18, 2020 without further approval or authorization of our stockholders, to issue 10,000,000 shares of common stock available for issuance thereunder (Options and Restricted Stock or other awards) to attract and retain the best available personnel and to support planned hiring efforts as the company grows; and
4. To ensure that we are able to maintain compliance with the listing standards of the NYSE AMERICAN exchange we are seeking authorization for the Board of Directors, subject to their discretion, to effect a reverse stock split or alternately abandon such action depending on the stock price. The NYSE AMERICAN listing standards require that an issuers stock not fall below \$0.20 on a 30-day average and include an automatic delisting, which would occur immediately if such stock trades at or below \$0.06 at any time. While our stock is not at these levels, to prevent such an occurrence, we seek approval to amend our certificate of incorporation for our Board of Directors to be authorized to effect a reverse stock split at a ratio not greater than 1-for-75 at its discretion.

The exact ratio is to be set at the discretion of our Board of Directors before December 18, 2020 without further approval or authorization of our stockholders. If the Board of Directors effects the reverse split, they will take into consideration the price of our common stock at that time to determine the exact ratio so that the price of our common stock be above a certain share price threshold such as \$1.00 per share, which is a price level many institutional investors cannot invest below or above \$5.00 per share, which, if below, is considered a “Penny Stock” that precludes many brokerage firms and institutional investors from investing. The Board of Directors may alternatively elect to abandon such proposed amendment and not effect the reverse stock split authorized by stockholders, in its sole discretion; and

5. To approve an amendment to our Certificate of Incorporation to increase the number of shares of common stock, par value \$0.001 per share, the corporation is authorized to issue by 400,000,000; and
6. To hold a non-binding advisory vote on the compensation of our named executive officers; and.
7. To hold a non-binding advisory vote to determine the frequency of future advisory votes on the compensation of the named executive officers.

In addition, stockholders may be asked to consider and vote upon such other business as may properly come before the meeting or any adjournment or postponement thereof.

Only stockholders of record as of November 15, 2019 are entitled to notice of, and to vote at, the meeting and any adjournments thereof. For ten calendar days prior to the meeting, a complete list of the stockholders entitled to vote at the meeting will be available during ordinary business hours at our principal executive offices for examination by any stockholder for any purpose relating to the meeting.

Your vote as a Actinium Pharmaceutical stockholder is very important. With respect to all matters that will come before the meeting, each holder of shares of common stock is entitled to one vote for each share of common stock held as of November 15, 2019, the record date. For questions regarding your stock ownership, if you are a registered holder, you can contact our transfer agent, Action Stock Transfer by phone at (801) 274-1088.

By Order of our Board of Directors,

/s/ Sandesh Seth  
*Chairman and Chief Executive Officer*

New York, NY  
November 25, 2019

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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 18, 2019 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 of our stockholders on or about November 25, 2019.

**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 Ajit S. Shetty as a Class III director to serve for a three-year term that expires at the 2022 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 Marcum LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2019; and

Proposal 3: To approve the Actinium Pharmaceuticals, Inc. 2019 Stock Plan, that may be implemented at the discretion of our Board of Directors before December 18, 2020 without further approval or authorization of our stockholders, to issue 10,000,000 shares of common stock available for issuance thereunder (Options and Restricted Stock or other awards) to attract and retain the best available personnel and to support planned hiring efforts as the company grows; and

Proposal 4: To ensure that we are able to maintain compliance with the listing standards of the NYSE AMERICAN exchange we are seeking authorization for the Board of Directors, subject to their discretion, to effect a reverse stock split or alternately abandon such action depending on the stock price. The NYSE AMERICAN listing standards require that an issuers stock not fall below \$0.20 on a 30-day average and include an automatic delisting, which would occur immediately if such stock trades at or below \$0.06 at any time. While our stock is not at these levels, to prevent such an occurrence, we seek approval to amend our certificate of incorporation for our Board of Directors to be authorized to effect a reverse stock split at a ratio not greater than 1-for-75 at its discretion.

The exact ratio is to be set at the discretion of our Board of Directors before December 18, 2020 without further approval or authorization of our stockholders. If the Board of Directors effects the reverse split, they will take into consideration the price of our common stock at that time to determine the exact ratio so that the price of our common stock be above a certain share price threshold such as \$1.00 per share, which is a price level many institutional investors cannot invest below or above \$5.00 per share, which, if below, is considered a "Penny Stock" that precludes many brokerage firms and institutional investors from investing. The Board of Directors may alternatively elect to abandon such proposed amendment and not effect the reverse stock split authorized by stockholders, in its sole discretion; and

Proposal 5: To approve an amendment to our Certificate of Incorporation to increase the number of shares of common stock, par value \$0.001 per share, the corporation is authorized to issue by 400,000,000 shares; and

Proposal 6: To hold a non-binding advisory vote on the compensation of our named executive officers; and

Proposal 7: To hold a non-binding advisory vote to determine the frequency of future advisory votes on the compensation of the named executive officers.

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" proposals 1, 2, 3, 4, 5 and 6 and vote for "THREE YEARS" for proposal 7 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 our Actinium Pharmaceuticals, Inc. 2019 Stock Plan; should be voted for, against or abstained with respect to approving the reverse stock split; 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 by 400,000,000 shares; should be voted for, against or abstained with respect to approving the non-binding advisory vote on the compensation of our named executive officers; and should be voted for one, two, three years or abstain with respect to the frequency of future non-binding advisory votes on the compensation of the named executive officers. Voting by proxy will not affect your right to attend the annual meeting. If your shares are 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 11, 2019, by e-mail to [soloughlin@actiniumpharma.com](mailto:soloughlin@actiniumpharma.com), mail to Actinium Pharmaceuticals, Inc., 275 Madison Avenue, 7<sup>th</sup> 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 17, 2019.

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 approval of our 2019 stock plan, the reverse stock split, approving an amendment to our certificate of incorporation to increase our authorized shares, the non-binding advisory vote on the compensation of our named executive officers, and the frequency of future advisory votes on the compensation of the named executive officers, 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 Marcum LLP as our independent registered public accounting firm, Proposal 4 — the reverse stock split, and Proposal 5 — 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, 4 and 5. **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 Ajit Shetty as a member to our Board, Proposal 3 — the approval of our 2019 stock plan, Proposal 6 — the non-binding advisory vote on the compensation of our named executive officers, and Proposal 7 — the frequency of future advisory votes on the compensation of the named executive officers. **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 15, 2019, the Record Date for determining which stockholders are entitled to vote, there were 164,701,167 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 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, 7<sup>th</sup> 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 2018 Annual Report on Form 10-K?***

This proxy statement and our 2018 annual report to stockholders are available for viewing, printing and downloading at [www.proxyvote.com](http://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, 2018 on the website of the SEC, at [www.sec.gov](http://www.sec.gov), or in the "All SEC Filings" section of the "Investors" section of our website at [www.actiniumpharma.com](http://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, 7<sup>th</sup> 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 six proposals?***

The proposal to ratify the appointment of Marcum LLP 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 our 2019 stock 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 for the reverse stock split 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. 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.

The advisory vote to approve the compensation of named executive officers will be approved if there is a quorum and the votes cast "FOR" the proposal exceeds those cast against the proposal. The advisory vote to determine the frequency of future advisory votes on the compensation of named executive officers requires the affirmative vote of the holders of the majority of the votes cast by the holders of the Company's common stock at the annual meeting. Stockholders may either vote "ONE YEAR," "TWO YEARS," "THREE YEARS," or "ABSTAIN." If none of the alternatives receives the majority of votes cast, the Company will consider the alternative that receives the highest number of votes cast by stockholders to be the frequency selected by the stockholders. The approval of the advisory vote to approve the compensation of named executive officers and the approval of the advisory vote to determine the frequency of future advisory votes on the compensation of named executive officers are non-binding advisory votes.

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?***

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, 7<sup>th</sup> 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, 7<sup>th</sup> Floor  
New York, NY 10016  
Email: [soloughlin@actiniumpharma.com](mailto: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 29.

### 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 consists of two directors, 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 2019 Annual Meeting, if elected)
David Nicholson	Class I	1 years
Richard I Steinhart	Class I	2 years
Sandesh Seth	Class II	2 years
Jeffrey W. Chell	Class II	2 years
Ajit S. Shetty	Class III	3 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 serves a one year term from the date of the 2019 Annual Shareholders Meeting; Class II serves a two year term from the date of the 2019 Annual Shareholders Meeting; and Class III serves a three year term from the date the date of the 2019 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 American 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;

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, Jeffrey W. Chell, 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 2018, our Board held nine meetings and did not act by unanimous written consent. Each director attended all of the meetings of our Board and of any committees of which he was a member during the year ended December 31, 2018. 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 2018.

## 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](http://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.

## 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, 7<sup>th</sup> 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, 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

Under Section 16(a) of the Exchange Act, our directors and certain of our officers, and persons holding more than 10 percent of our common stock are required to file forms reporting their beneficial ownership of our common stock and subsequent changes in that ownership with the United States Securities and Exchange Commission.

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 December 31, 2018, our executive officers and directors have complied on a timely basis with all Section 16(a) filing requirements, except as has been previously disclosed.

## 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*
Jeffrey W. Chell	Jeffrey W. Chell	David Nicholson
Ajit S. Shetty	Ajit S. Shetty	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. The board of directors has determined that Mr. Steinhart is an “audit committee financial expert” as defined in Item 407(d)(5)(ii) of Regulation S-K. 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 AMERICAN. Richard I. Steinhart is the chairman of the audit committee. The Audit Committee met four times during 2018. Each member of the Audit Committee was present at all of the Audit Committee meetings held during such director’s tenure as a member of the Audit Committee.

### ***Compensation Committee***

Our compensation committee, which currently consists of three directors, establishes executive compensation policies consistent with the company’s objectives and stockholder interests. The compensation committee met one time during 2018. Our compensation committee also reviews the performance of our executive officers and establishes, adjusts and awards compensation, including incentive-based compensation, as more fully discussed below. In addition, our compensation committee generally is responsible for:

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

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***

Corporate Governance Committee, which currently consists of three directors, monitors our corporate governance system. The Corporate Governance Committee met one time during 2018.

### ***Nomination of Directors***

Board of Director nominations are selected, or recommended for the Board’s selection, by a majority of the independent directors. Our independent directors include Jeffrey W. Chell, David Nicholson, Richard I. Steinhart and Ajit S. Shetty. 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 American. Our independent directors use criteria by which it will seek to evaluate candidates to serve on our board of directors. 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 2018 fiscal year:

Name	Fees Earned or Paid in Cash	Stock Awards	Option Awards (1)	All Other Compensation	Total
Jeffrey W. Chell (2)	\$ 34,607	-	\$ 59,366	-	\$ 93,973
David Nicholson	\$ 63,500	-	\$ 41,194	-	\$ 104,694
Ajit J. Shetty	\$ 58,500	-	\$ 41,194	-	\$ 99,694
Richard Steinhart	\$ 66,091	-	\$ 41,194	-	\$ 107,285

(1) At the end of December 31, 2018, the aggregate number of option awards outstanding for each director was as follows: (i) for Dr. Chell, 150,000, (ii) for Dr. Nicholson, 349,900, (iii) for Dr. Shetty, 150,000, and (iv) for Mr. Steinhart, 299,950.

(2) Mr. Chell was appointed a director on April 27, 2018.

In accordance with SEC rules, the amounts shown reflect the aggregate grant date fair value of option awards granted to Non-Employee Directors during 2018, 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. Dr. Nicholson as Lead Director receives an additional annual fee of \$10,000. Board committee members receive the following compensation:

BOD Committee	Chairman	Member
Audit	\$ 20,000	\$ 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 2018.

With respect to the fiscal year ended December 31, 2018, in addition to its other work, the Audit Committee:

Reviewed and discussed with management our audited consolidated financial statements as of December 31, 2018 and for the year then ended; and

Discussed with Marcum LLP 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 2018 audited consolidated financial statements in the 2018 Form 10-K for the fiscal year ended December 31, 2018 for filing with the SEC.

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

Richard I. Steinhart, Chairman  
Jeffrey W. Chell  
Ajit S. Shetty

#### Information About Our Auditors

Our Audit Committee of our Board appointed Marcum LLP as the independent registered public accounting firm to conduct the audit of our consolidated financial statements for the 2018 fiscal year and to report on our consolidated balance sheets, statements of income and other related statements. Marcum LLP served as our independent registered public accounting firm since December 2012. In August 2018, we appointed Marcum LLP as our independent registered public accounting firm due to a merger between GBH CPAs, PC (who served as our independent registered public accounting firm since December 2012) and Marcum LLP. 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 2018 fiscal year were pre-approved by our Audit Committee.

#### Fees and Services

The table below shows the aggregate fees billed for professional services for the audits and audit-related fees of the Company's annual financial statements included in Form 10-K for the time periods of August 9, 2018 through December 31, 2018 by Marcum LLP, or Marcum, and for January 1, 2018 through August 8, 2018 by GBH CPAs PC, or GBH, and for the year ended December 31, 2017 by GBH. GBH resigned as the Company's auditors as a result of combining its practice with Marcum effective July 1, 2018.

	Year Ended December 31, 2018	Year Ended December 31, 2017
Audit Fees	\$ 113,000	\$ 116,500
Audit – Related Fees	28,800	60,800
Tax Fees	-	-
All Other Fees	-	-
<b>Total</b>	<b>\$ 141,800</b>	<b>\$ 177,300</b>

#### Pre-Approval Policy

In 2015, the 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 the 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.

## 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/ Jeffrey W. Chell

/s/ Ajit S. Shetty

\* 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 five 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; (4) Dale Ludwig, our Chief Scientific Officer, and (5) Anil Kapur, our Chief Commercial Officer.

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.

## **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 of directors 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 of directors 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 of directors 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 of directors (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 have provided contractual severance and/or change in control benefits to several employees including our Executive 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 severances 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. 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.

### *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 StreeterWyatt-prepared data for below-executive level personnel, which data focuses on biotechnology companies that can be considered peers in terms of numerous variables including phase of development, size, therapeutic and technological focus among others. 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 of directors. 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 of directors 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 board of director 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*

Annually, at a meeting of our board of directors 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 of directors. 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 of directors, 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 \$10,000 during the year ended December 31, 2018. 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 15, 2019, are as follows:

Name	Age	Position
Sandesh Seth	55	Chairman and Chief Executive Officer
Mark S. Berger, M.D.	65	Chief Medical Officer
Anil Kapur	50	Chief Commercial Officer
Dale L. Ludwig, Ph.D.	57	Chief Scientific Officer
Steve O'Loughlin	34	Principal Financial Officer (Principal Financial and Accounting Officer)
Jeffrey W. Chell M.D.	65	Director
David Nicholson, Ph.D.	64	Lead Independent Director
Richard I. Steinhart	62	Director
Ajit S. Shetty, Ph.D.	73	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 the board of directors and serve at the discretion of the board.

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

### Background of Executive Officers and Directors

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

#### Sandesh Seth, MS, MBA, 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 has 25+ years of experience in investment banking (Laidlaw & Co (UK) Ltd., 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, operational 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.

**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 obatoclax, a pan Bcl-2 inhibitor. Based on the results of a randomized Phase 2 clinical trial of obatoclax, 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.

**Anil Kapur, Chief Commercial Officer**

Mr. Kapur joined Actinium in February 2018 from Bristol-Myers Squibb, where he was the Vice President, Head of Early Assets, Biomarkers & External Innovation within the Worldwide Oncology Commercialization organization and helped advance the company's leading Immuno-Oncology portfolio. Prior to this position, he was the Vice President & Global Head, Oncology Commercial Portfolio & Product Strategy at Baxalta and a member of the Oncology Leadership Team. In this role, Mr. Kapur also led the Joint Strategic Committees responsible for advancing the early Immuno-Oncology partnerships with Symphogen and the allogeneic CAR-T partnership with Precision Bio-Sciences.

Mr. Kapur built a distinguished career spanning 15 years at Johnson & Johnson where in his last role, he served as the Vice President, Commercial Leader for the Hematology Franchise with responsibility for the development and execution of global commercial strategy and launch plans for all Hematology in-market, late-stage development, and early pipeline assets. He is credited with significantly shaping the clinical development plans and successful launch and growth of multiple Oncology blockbuster products including IMBRUVICA®, DARZALEX®, and VELCADE®.

At J&J, he led the IMBRUVICA® Joint Commercial Committee (JCC), established between J&J and Pharmacyclics, and built and led the global team that launched DARZALEX®, the first biologic for Multiple Myeloma. Anil also held leadership roles of increasing complexity and responsibility in US Marketing, US Regional Sales, and within the Asia-Pacific Regional Oncology organization covering 14 markets including Japan, China, Australia and Korea.

Mr. Kapur has an MBA from the Fuqua School of Business at Duke University, a MS in Industrial Engineering from Louisiana Tech University, and a Bachelor of Engineering from the Birla Institute of Technology, India.

**Dale L. Ludwig, Ph.D., Chief Scientific Officer**

Dr. Ludwig joined Actinium in January 2018. Dr. Ludwig has worked for 20 years in oncology antibody drug discovery and development at Eli Lilly and Company and at ImClone Systems, Inc., until its acquisition by Eli Lilly where he supported the development and successful launch of several biologic oncology drugs including Erbitux®, Cyramza™, Portrazza®, and Lartruvo™ as well as the clinical advancement of 10 additional therapeutic antibodies. Most recently, Dr. Ludwig served Chief Scientific Officer/Vice President of Oncology Discovery Research - Biologics Technology. In this role he was responsible for directing antibody discovery and development for oncology biologics and contributed to key strategic and project advancement efforts. Dr. Ludwig was a member of the Oncology Research Senior Leadership Team and directed the empowered antibody drug discovery programs that included collaborations with Immunogen and Zymeworks.

Prior to the acquisition of Imclone by Eli Lilly and Company, Dr. Ludwig served as Head of Molecular & Cellular Engineering at IMClone Systems Incorporated. In this capacity, Dr. Ludwig served as core team leader for several IND filings and phase 1 advancements for novel antibodies. In addition, he directed and oversaw the full spectrum of drug development including antibody discovery, screening, selection, engineering, optimization, cloning and expression. He was also tasked with establishing meaningful preclinical collaborations with key academic investigators and industry leaders. Post-acquisition he was the research representative to the ImClone-Lilly Transition Team.

Before his work in the biotechnology industry, Dr. Ludwig trained as a postdoctoral associate in the DNA Damage and Repair Group of the Los Alamos National Laboratory and as a postdoctoral fellow in the Department of Molecular Genetics, Biochemistry and Microbiology at the University of Cincinnati College of Medicine. Dr. Ludwig has a B.S. in biology with a concentration in microbiology from James Madison University and received his Ph.D. in Microbiology from East Carolina University.

**Steve O’Loughlin, 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.

**Jeffrey W. Chell, M.D., Director**

Dr. Chell has been a director of the Company since April 2018. Dr. Chell is also a member of our Audit Committee and Compensation Committee. He has been the Chief Executive Officer Emeritus of the National Marrow Donor Program (NMDP) since 2017 having served as its CEO since 2000. Dr. Chell has led the NMDP through transformational growth as its Be The Match Registry tripled to more than 12 million donors, the number of transplants facilitated has grown five fold to over 6,400 annually, and revenue more than tripled to nearly \$400 million per year. He is also the co-founder and has served as Executive Director of the Center For International Blood & Marrow Transplant Research since 2004, a leading research program in the field contributing over 70 research publications per year in peer-reviewed journals. Dr. Chell also currently serves as chair of CLR Insurance, a captive insurance company domiciled in the Cayman Islands. From 2014 to 2016, Dr. Chell served as co-chair of Bone Marrow Donors Worldwide (BMDW) during its IT transformation project, improving revenues and reducing costs.

Prior to joining the NMDP, he served as President, Allina Medical Clinics, a 450 physician multi-specialty medical group from 1994 to 1999. Prior to that he practiced Internal Medicine in Minneapolis and in the U.S. Air Force Medical Corps.

Dr. Chell received his M.D. from the University of Minnesota and his training in Internal Medicine at the University of Wisconsin, Madison. Dr. Chell is a diplomate of the American Board of Internal Medicine, a member of the American Society of Hematology and a member of the American Society of Blood and Marrow Transplantation.

He has received multiple honors including the 2018 Public Service award of the American Society For Blood and Marrow Transplantation, 2017 Most Admired CEO by the Minneapolis/St. Paul Business Journal, 2010 Healthcare Executive of the Year by the Minneapolis/St. Paul Business Journal, and the 2017 Bone Marrow Foundation Service Award.

**David Nicholson, Ph.D., Director**

David Nicholson has been a Director of the Company since 2008. Dr. Nicholson is also a member of our 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-Wülfling 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, Ph.D., 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, 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 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 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 August 2018, we amended and restated Mr. Seth's, our Chairman and Chief Executive Officer, August 6, 2015 Executive Chairman Agreement (the "Prior CEO Agreement"), as amended. This new agreement sets forth the terms related to his position as Chief Executive Officer and Chairman of the Board of the Company while retaining and adapting material provisions of the Prior CEO Agreement to that of his role of Chief Executive Officer. Mr. Seth is currently paid an annual base salary of \$561,350. The Board reviews the amount of his base salary and performance bonus and determines the appropriate adjustments to each component of his compensation each calendar year, and he may be entitled to a cash bonus in an amount to be determined by the board with a target of 50% of the base salary.

The Chairman and CEO shall also be awarded stock options 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.

### Chief Medical Officer Agreement

In December 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. Dr. Berger's employment with the Company is on an "at will" basis, meaning that either Dr. Berger 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.

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

- Dr. Berger's current annual base salary is \$405,000 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.
- Dr. Berger is also eligible to participate in the Company's benefit plans that are generally provided for executive employees.

### Principal Financial Officer Compensation

In August 2018, we amended and restated Mr. O'Loughlin's, our Principal Financial Officer, September 17, 2015 Employment Agreement (the "Prior CFO Agreement"), as amended. This new agreement (the "CFO Employment Agreement") sets forth the terms related to his position as Principal Financial Officer of the Company while retaining and adapting material provisions of the Prior CFO Agreement to that of his role of 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. Mr. O'Loughlin is entitled to the following compensation and benefits:

- Mr. O'Loughlin's current annual base salary is \$293,550 per year, and Mr. O'Loughlin 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.
- From time to time the Board may grant him options or restricted stock to purchase common shares of the Company.
- Mr. O'Loughlin is eligible to receive all standard benefits that Company employees are eligible to receive.

#### **Chief Scientific Officer Compensation**

The Company and Dr. Dale Ludwig, effective January 2018, entered into an Offer Letter pursuant to which Dr. Ludwig is the Company's Chief Scientific Officer. Dr. Ludwig's employment with the Company is on an "at will" basis, meaning that either Dr. Ludwig 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. Pursuant to the employment agreement, Dr. Ludwig is entitled to the following compensation and benefits:

- Dr. Ludwig's current annual base salary is \$334,750 per year, and Dr. Ludwig 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.
- From time to time the Board may grant him options or restricted stock to purchase common shares of the Company.
- Dr. Ludwig is eligible to receive all standard benefits that Company employees are eligible to receive.

#### **Chief Commercial Officer Compensation**

In January 2018 the Company and Anil Kapur entered into an Offer Letter pursuant to which Mr. Kapur is the Company's Chief Commercial Officer. Mr. Kapur's employment with the Company is on an "at will" basis, meaning that either Dr. Kapur 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. Pursuant to the employment agreement, Mr. Kapur is entitled to the following compensation and benefits:

- Mr. Kapur's current annual base salary is \$355,000 per year, and he may be entitled to a cash bonus in an amount to be determined by the board with a target of 35% of the base salary.
- From time to time the Board may grant him options or restricted stock to purchase common shares of the Company.
- Mr. Kapur is eligible to receive all standard benefits that Company employees are eligible to receive.

## Summary Compensation Table

The following table provides information regarding the compensation earned during the fiscal years ended December 31, 2018 and 2017 for our named executive officers.

Name/Position	Year	Salary	Bonus (1)	Option Awards	All Other Compensation	Total
Sandesh Seth (2)	2018	\$ 545,000	\$ 280,000	\$ 549,253	\$ -	\$ 1,374,253
	2017	\$ 306,250	\$ -	\$ -	\$ -	\$ 306,250
Kaushik J. Dave, Former CEO (3)	2018					
	2017	\$ 577,942	\$ 110,000	\$ 244,766	\$ -	\$ 932,708
Mark Berger	2018	\$ 400,000	\$ 75,000	\$ 137,313	\$ -	\$ 612,313
	2017	\$ 343,750	\$ -	\$ 234,695	\$ -	\$ 578,445
Dragan Cicic, Former COO (4)	2018					
	2017	\$ 389,125	\$ 45,000	\$ 73,430	\$ -	\$ 507,555
Anil Kapur	2018	\$ 294,402	\$ -	\$ 211,261	\$ -	\$ 505,663
Dale Ludwig	2018	\$ 323,769	\$ -	\$ 100,926	\$ -	\$ 424,695
Nitya Ray Former Executive Vice President (5)	2018	\$ 323,331	\$ 35,000	\$ 41,194	\$ -	\$ 399,525
	2017	\$ 177,273	\$ -	\$ 198,896	\$ -	\$ 376,169
Steve O'Loughlin	2018	\$ 285,000	\$ 75,000	\$ 145,552	\$ -	\$ 505,552
	2017	\$ 235,152	\$ 50,000	\$ 97,907	\$ -	\$ 383,059

- (1) The bonus disclosed in this column relates to performance in the prior year, but was contingent upon board approval, and was paid in the year disclosed.
- (2) Mr. Seth was appointed Chief Executive Officer on June 5, 2017. Prior to this, Mr. Seth was Executive Chairman and was paid an annual consulting fee and bonus. In March 2017, Mr. Seth was awarded stock options to purchase 750,000 shares for \$1.39, having an option award value of \$734,301 and in April 2017, Mr. Seth received a bonus as Executive Chairman of \$215,000.
- (3) Dr. Dave resigned from the company on May 12, 2017. His 2017 salary includes a severance of \$410,000.
- (4) Dr. Cicic resigned from the company on May 12, 2017. His 2017 salary includes a severance of \$283,000.
- (5) Dr. Ray resigned from the company on December 21, 2018.

# Outstanding Equity Awards at Fiscal Year-End Table

## OUTSTANDING EQUITY AWARDS AT FISCAL YEAR-END - 2018

The following table sets forth all unexercised options that have been awarded to our named executives by the Company that were outstanding as of December 31, 2018.

Name (a)	Option Awards					Stock Awards			
	Number of Securities Underlying Unexercised Options (#) (b)	Number of Securities Underlying Unexercised Options (#) (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 Unearned 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)
Sandesh Seth	24,975	-	-	1.50	8/30/2022	-	-	-	-
	24,975	-	-	1.50	12/19/2022	-	-	-	-
	280,000	-	-	6.13	9/23/2024	-	-	-	-
	138,000	12,000	-	3.58	2/15/2025	-	-	-	-
	320,000	180,000	-	1.99	4/15/2026	-	-	-	-
	373,000	377,000	-	1.39	3/14/2027	-	-	-	-
	100,000	900,000	-	0.7829	7/13/2028	-	-	-	-
Mark Berger	162,500	162,500	-	1.04	1/17/2027	-	-	-	-
	25,000	225,000	-	0.7829	7/13/2028	-	-	-	-
Anil Kapur	-	475,000	-	0.6369	2/06/2028	-	-	-	-
Dale Ludwig	-	200,000	-	0.723	1/08/2028	-	-	-	-
Nitya Ray	100,000	-	-	1.15	3/21/2019	-	-	-	-
	7,500	-	-	0.7829	3/21/2019	-	-	-	-
Steve O'Loughlin	80,000	20,000	-	1.79	9/28/2025	-	-	-	-
	32,000	18,000	-	1.99	4/15/2026	-	-	-	-
	56,500	43,500	-	1.39	3/14/2027	-	-	-	-
	26,500	238,500	-	0.7829	7/13/2028	-	-	-	-

### 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 30, 2019 and (ii) the stock price was \$0.2300, which was the closing market price of our common stock on September 30, 2019, 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 (\$)
<b>Sandesh Seth</b>		
Cash Payment	\$ 1,122,700	\$ 1,403,375
<b>Total Cash and Benefits</b>	<b>\$ 1,122,700</b>	<b>\$ 1,403,375</b>

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
- (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 1, 2019 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 1, 2019, are deemed outstanding and beneficially owned by the person holding such options or warrants for purposes of computing the number of shares and percentage beneficially owned by such person, but are not deemed outstanding for purposes of computing the percentage beneficially owned by any other person. Except as indicated in the footnotes to this table, the persons or entities named have sole voting and investment power with respect to all shares of our Common Stock shown as beneficially owned by them.

The percentages below are based on fully diluted shares of our Common Stock equivalents as of November 1, 2019. 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 Beneficially Owned	Percentage of Ownership <sup>(a)</sup>
<b>Executive Officers and Directors</b>		
Sandesh Seth	2,361,359(1)	1.4%
Steve O'Loughlin	389,600(2)	*0%
Mark Berger, M.D.	398,500(3)	*0%
Anil Kapur	308,000(4)	*0%
Dale Ludwig, Ph.D.	150,000(5)	*0%
Jeffrey W. Chell, M.D.	83,500(6)	*0%
David Nicholson, Ph.D.	303,897(7)	*0%
Ajit S. Shetty, Ph.D.	125,730(8)	*0%
Richard I. Steinhart	255,700(9)	*0%
<b>All Directors and Officers as a Group (9 persons)</b>	4,376,286(10)	2.6%
<b>All other 5% holders</b>		
Sabby Volatility Warrant Master Fund, Ltd. c/o Ogier Fiduciary Services (Cayman) Limited 89 Nexus Way, Camana Bay Grand Cayman KY1-9007 Cayman Islands	12,987,012	7.9%
Sabby Management, LLC 10 Mountainview Road, Suite 205 Upper Saddle River, New Jersey 07458		
Hal Mintz c/o Sabby Management, LLC 10 Mountainview Road, Suite 205 Upper Saddle River, New Jersey 07458		
Michael Bigger 175 W. Carver Street Huntington, NY 11743	8,321,721	5.1%

\* less than 1%

(a) Based on 164,701,167 shares of Common Stock outstanding as of November 1, 2019

- (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 \$0.88 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. 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 an option to purchase 280,000 shares with an exercise price of \$6.13 per share. On February 18, 2015, Mr. Seth was granted an option to purchase 150,000 shares with an exercise price of \$3.58 per share. On April 15, 2016, Mr. Seth was granted an option to purchase 500,000 shares 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. On July 13, 2018, Mr. Seth was granted an option to purchase 1,000,000 shares at an exercise price of \$0.7829 per share. On July 12, 2019, Mr. Seth was granted an option to purchase 1,500,000 shares at an exercise price of \$0.232 per share. All options are subject to vesting. Within 60 days of November 1, 2019, 1,938,950 options will have vested. Includes 161,458 shares of Common Stock and 39,375 March 2018 Series B Warrants.
- (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 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 100,000 shares of Common Stock at an exercise price of \$1.39 per share. On July 13, 2018, Mr. O'Loughlin was granted an option to purchase 265,000 shares of Common Stock at an exercise price of \$0.7829 per share. On July 12, 2019, Mr. O'Loughlin was granted an option to purchase 400,000 shares at an exercise price of \$0.232 per share. All options are subject to vesting. Within 60 days of November 1, 2019, 346,600 options will have vested. Includes 35,500 shares of Common Stock and 7,500 March 2018 Series B Warrants.
- (3) On January 17, 2017, Dr. Berger was granted an option to purchase 325,000 shares with an exercise price of \$1.04 per share. On July 13, 2018, Dr. Berger was granted an option to purchase 250,000 shares at an exercise price of \$0.7829 per share. On July 12, 2019, Dr. Berger was granted an option to purchase 400,000 shares at an exercise price of \$0.232 per share. All options are subject to vesting. Within 60 days of November 1, 2019, 365,500 options will have vested. Includes 22,500 shares of Common Stock and 10,500 March 2018 Series B Warrants.
- (4) On February 6, 2018, Mr. Kapur was granted an option to purchase 475,000 shares with an exercise price of \$0.64 per share. On July 12, 2019, Mr. Kapur was granted an option to purchase 400,000 shares at an exercise price of \$0.232 per share. All options are subject to vesting. Within 60 days of November 1, 2019, 268,000 options will have vested. Includes 40,000 shares of Common Stock.
- (5) On January 8, 2018, Dr. Ludwig was granted an option to purchase 200,000 shares with an exercise price of \$0.72 per share. On July 12, 2019, Dr. Ludwig was granted an option to purchase 400,000 shares at an exercise price of \$0.232 per share. All options are subject to vesting. Within 60 days of November 1, 2019, 140,000 options will have vested. Includes 10,000 shares of Common Stock.
- (6) On April 27, 2018, Dr. Chell was granted an option to purchase 75,000 shares with an exercise price of \$0.347 per share. On July 13, 2018, Dr. Chell was granted an option to purchase 75,000 shares at an exercise price of \$0.7829 per share. On July 12, 2019, Dr. Chell was granted an option to purchase 250,000 shares at an exercise price of \$0.232 per share. All options are subject to vesting. Within 60 days of November 1, 2019, 83,500 options will have vested.
- (7) On February 12, 2012, Dr. Nicholson was granted an option to purchase 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 at an exercise price of \$1.50 per share. On February 18, 2015, Dr. Nicholson was granted an option to purchase 25,000 shares with an exercise price of \$3.58 per share. On April 15, 2016, Dr. Nicholson was granted an option to purchase 75,000 shares at an exercise price of \$1.99 per share. On March 14, 2017, Dr. Nicholson was granted an option to purchase 75,000 shares at an exercise price of \$1.39 per share. On July 13, 2018, Dr. Nicholson was granted an option to purchase 75,000 shares at an exercise price of \$0.7829 per share. On July 12, 2019, Dr. Nicholson was granted an option to purchase 250,000 shares at an exercise price of \$0.232 per share. All options are subject to vesting. Within 60 days of November 1, 2019 293,897 options will have vested. Includes 10,000 shares of Common Stock.
- (8) On March 28, 2017, Dr. Shetty was granted an option to purchase 75,000 shares of Common Stock with an exercise price of \$1.58 per share. On July 13, 2018, Dr. Shetty was granted an option to purchase 75,000 shares at an exercise price of \$0.7829 per share. On July 12, 2019, Dr. Shetty was granted an option to purchase 250,000 shares at an exercise price of \$0.232 per share. All options are subject to vesting. Within 60 days of November 1, 2019, 103,000 shares will have vested. Includes 22,730 shares of Common Stock.
- (9) On December 16, 2013 Mr. Steinhart was granted an option to purchase 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 at an exercise price of \$3.58 per share. On April 15, 2016, Mr. Steinhart was granted an option to purchase 75,000 shares at an exercise price of \$1.99 per share. On March 14, 2017, Mr. Steinhart was granted an option to purchase 75,000 shares at an exercise price of \$1.39 per share. On July 13, 2018, Mr Steinhart was granted an option to purchase 75,000 shares at an exercise price of \$0.7829 per share. On July 12, 2019, Mr. Steinhart was granted an option to purchase 250,000 shares at an exercise price of \$0.232 per share. All options are subject to vesting. Within 60 days of November 1, 2019, 240,950 options will have vested. Includes 9,500 shares of Common Stock and 5,250 March 2018 Series B Warrants.
- (10) Includes warrants to purchase 284,201 shares of Common Stock, vested options to purchase 3,780,397 shares of Common Stock and 311,688 shares of Common Stock.

## **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**

None.

### **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 five 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 2020 Annual Meeting; the term of office for each Class II director expires at the 2021 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 director due for election at the 2019 Annual meeting is Ajit Shetty (Class III).

The Board of Directors proposes the election of the following individual 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 nominee is current board members Mr. Ajit Shetty. 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 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 five directors. The term of each director is set forth below or until their successors are duly elected:

Director	Class	Term (from 2019 Annual Meeting, if elected)
David Nicholson	Class I	1 years
Richard I Steinhart	Class I	1 years
Jeffrey W. Chell	Class II	2 years
Sandesh Seth	Class II	2 years
Ajit S. Shetty	Class III	3 years

Directors elected at each annual meeting 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.

The following is information about the nominee, including biographical data for at least the last five years. Should the nominee 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.

#### **Ajit S. Shetty, Ph.D., 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.

**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 NOMINEE***



## **PROPOSAL 2**

### **RATIFICATION OF THE APPOINTMENT OF MARCUM LLP**

The audit committee has appointed Marcum LLP 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, 2019. Representatives of Marcum LLP 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 Marcum LLP 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 Marcum LLP 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 MARCUM LLP AS THE INDEPENDENT REGISTERED ACCOUNTING FIRM OF ACTINIUM PHARMACEUTICALS, INC.***

### **PROPOSAL 3**

APPROVAL OF THE ACTINIUM PHARMACEUTICALS, INC. 2019 STOCK PLAN, THAT MAY BE IMPLEMENTED AT THE DISCRETION OF OUR BOARD OF DIRECTORS BEFORE DECEMBER 18, 2020 WITHOUT FURTHER APPROVAL OR AUTHORIZATION OF OUR STOCKHOLDERS, TO ISSUE 10,000,000 SHARES OF COMMON STOCK AVAILABLE FOR ISSUANCE THEREUNDER (OPTIONS AND RESTRICTED STOCK OR OTHER AWARDS) TO ATTRACT AND RETAIN THE BEST AVAILABLE PERSONNEL AND TO SUPPORT PLANNED HIRING EFFORTS AS THE COMPANY GROWS

#### **Description of Proposed Stock Plan**

On October 18, 2019, the Board unanimously approved the 2019 Stock Plan (the “Plan”), subject to stockholder approval, that may be implemented at the discretion of our Board of Directors before December 18, 2020 without further approval or authorization of our stockholders, to issue 10,000,000 shares of common stock available for issuance thereunder (Options and Restricted Stock or other awards) to attract and retain the best available personnel and to support planned hiring efforts as the company grows.

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

#### **Vote Required and Recommendation**

The approval of the Plan 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 will not be effective and the proposal will not be implemented.

#### **Reasons for the Plan**

##### *Existing Plan*

Our Amended and Restated 2013 stock plan (the “2013 Plan”) is currently comprised of 22,750,000 shares of Common Stock.

As of September 30, 2019, outstanding awards (consisting of options to purchase shares of common stock) issued under the 2013 Plan totaled 11,931,801 shares of common stock, leaving 11,007,471 shares available for issuance.

##### *Adoption of 2019 Plan*

The purpose of the 2019 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.

Our Board determined to approve a new 2019 plan that will increase the number of shares of common stock reserved and available for issuance by an additional 10 million shares because it believes that the current number is insufficient for the purposes of the 2013 Plan 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 2019 Plan**

As a result of the 2019 Plan, there will be an increase in the total number of shares of common stock reserved for issuance under our stock plans. This will provide us with the ability to grant more awards than are currently available under the 2013 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 material differences to the 2019 Plan as compared to our existing 2013 Plan.

## Material Terms of the Plan

*Purpose.* The purposes of the new 2019 Plan is 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 2019 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 2019 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 2019 Plan;
- to select the employees, directors and consultants to whom 2019 Plan awards may from time to time be granted;
- to determine whether and to what extent 2019 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 2019 Plan;
- to determine the terms and conditions, not inconsistent with the terms of the 2019 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 2019 Plan and awards granted under the 2019 Plan, which constructions, interpretations and decisions shall be final and binding on all participants; and
- in order to fulfill the purposes of the 2019 Plan and without amending the 2019 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 2019 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 2019 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 2019 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 2019 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 2019 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 2019 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, 2019**

<b>Plan category</b>	<b>Number of securities to be issued upon exercise of outstanding options, warrants and rights</b>	<b>Weighted-average exercise price of outstanding options, warrants and rights</b>	<b>Number of securities remaining available for future issuance</b>
	<b>(a)</b>	<b>(b)</b>	<b>(c)</b>
Equity compensation plans approved by security holders	11,931,801	\$ 1.14	11,007,471
Equity compensation plans not approved by security holders	—	—	—
<b>Total</b>	<b>11,931,801</b>	<b>\$ 1.14</b>	<b>11,007,471</b>

**Recommendation of the Board of Directors**

**THE BOARD RECOMMENDS THAT THE STOCKHOLDERS VOTE “FOR” TO APPROVE**

THE ACTINIUM PHARMACEUTICALS, INC. 2019 STOCK PLAN, THAT MAY BE IMPLEMENTED AT THE DISCRETION OF OUR BOARD OF DIRECTORS BEFORE DECEMBER 18, 2020 WITHOUT FURTHER APPROVAL OR AUTHORIZATION OF OUR STOCKHOLDERS, TO ISSUE 10,000,000 OPTIONS AND RESTRICTED STOCK TO ATTRACT AND RETAIN THE BEST AVAILABLE PERSONNEL AND TO SUPPORT PLANNED HIRING EFFORTS AS THE COMPANY GROWS

## PROPOSAL NO. 4

### TO APPROVE AN AMENDMENT TO OUR CERTIFICATE OF INCORPORATION TO EFFECT A REVERSE STOCK SPLIT

#### General

On October 18, 2019, our Board of Directors unanimously approved, subject to stockholder approval, an amendment to our certificate of incorporation to effect a reverse stock split of our outstanding common stock by combining outstanding shares of common stock into a lesser number of outstanding shares of common stock by a ratio of not more than 1-for-75 prior to December 18, 2020, with the exact ratio to be set within this range by our Board of Directors at its sole discretion. The Board of Directors may alternatively elect to abandon such proposed amendment and not effect the reverse stock split authorized by stockholders, in its sole discretion. Upon the effectiveness of the amendment to our certificate of incorporation effecting the reverse stock split, the outstanding shares of our common stock will be reclassified and combined into a lesser number of shares such that one share of our common stock will be issued for a specified number of shares.

If this Proposal No. 4 is approved by our stockholders as proposed, irrespective of whether Proposal No. 5 is approved by our stockholders, our Board of Directors would have the sole discretion to effect the amendment and reverse stock split, and to fix the specific ratio for the reverse stock split, provided that the ratio would be not be more than 1-for-75. We believe that enabling our Board of Directors to fix the specific ratio of the reverse stock split within the stated range will provide us with the flexibility to implement the split in a manner designed to maximize the anticipated benefits for our stockholders. The determination of the ratio of the reverse stock split will be based on a number of factors, described further below under the heading “—Criteria to be Used for Decision to Apply the Reverse Stock Split.”

The reverse stock split, if approved by our stockholders, would become effective upon the filing of an amendment to our certificate of incorporation with the Secretary of State of the State of Delaware, or at the later time set forth in the amendment. The exact timing of the amendment will be determined by our Board of Directors based on its evaluation as to when such action will be the most advantageous to us and our stockholders. In addition, our Board of Directors reserves the right, notwithstanding stockholder approval and without further action by our stockholders, to abandon the amendment and the reverse stock split if, at any time prior to the effectiveness of the filing of the amendment with the Secretary of State, our Board of Directors, in its sole discretion, determines that it is no longer in our best interest and the best interests of our stockholders to proceed.

To ensure that we are able to maintain compliance with the listing standards of the NYSE AMERICAN exchange we are seeking authorization for the Board of Directors, subject to their discretion, to effect a reverse stock split or alternately abandon such action depending on the stock price. The NYSE AMERICAN listing standards require that an issuers stock not fall below \$0.20 on a 30-day average and include an automatic delisting, which would occur immediately if such stock trades at or below \$0.06 at any time. While our stock is not at these levels, to prevent such an occurrence, we seek approval to amend our certificate of incorporation for our Board of Directors to be authorized to effect a reverse stock split at a ratio not greater than 1-for-75 at its discretion.

The exact ratio is to be set at the discretion of our Board of Directors before December 18, 2020 without further approval or authorization of our stockholders. If the Board of Directors effects the reverse split, they will take into consideration the price of our common stock at that time to determine the exact ratio so that the price of our common stock be above a certain share price threshold such as \$1.00 per share, which is a price level many institutional investors cannot invest below or above \$5.00 per share, which, if below, is considered a “Penny Stock” that precludes many brokerage firms and institutional investors from investing. The Board of Directors may alternatively elect to abandon such proposed amendment and not effect the reverse stock split authorized by stockholders, in its sole discretion;

Other purposes for effecting the reverse stock split is to increase the per share trading price of our common stock so as to:

- broaden the pool of investors that may be interested in investing in our company by attracting new investors who would prefer not to invest in shares that trade at lower share prices;
- make our common stock a more attractive investment to institutional investors;
- better enable us to raise funds to finance planned operations; and
- maintain the listing of the Company’s common stock and avoid a delisting of the Company’s common stock from the NYSE American in the future.

Our Board of Directors further believes that an increased stock price may encourage investor interest and improve the marketability of our common stock to a broader range of investors, and thus improve liquidity and lower average transaction costs. Because of the trading volatility often associated with low-priced stocks, many brokerage firms and institutional investors have internal policies and practices that either prohibit them from investing in low-priced stocks or tend to discourage individual brokers from recommending low-priced stocks to their customers. Our Board of Directors believes that the anticipated higher market price resulting from a reverse stock split would enable institutional investors and brokerage firms with policies and practices such as those described above to invest in our common stock.

At present, other than allowing for granting equity incentives for our employees as described in the 2019 Plan Proposal (Proposal No. 3), our Board of Directors has no immediate plans, arrangements or understandings to issue the additional shares of common stock. However, we desire to have the shares available to provide additional flexibility to use our common stock for business and financial purposes in the future as well to have sufficient shares available to provide appropriate equity incentives for our employees.

In evaluating the reverse stock split, our Board of Directors will take into consideration negative factors associated with reverse stock splits. These factors include the negative perception of reverse stock splits held by many investors, analysts and other stock market participants, as well as the fact that the stock price of some companies that have effected reverse stock splits has subsequently declined back to pre-reverse stock split levels. Our Board of Directors, however, may determine that these potential negative factors are outweighed by the potential benefits, and may believe that by increasing the per share market price of our common stock as a result of the reverse stock split would encourage greater interest in our common stock and enhance the acceptability and marketability of our common stock to the financial community and investing public, as well as promote greater liquidity for our stockholders.

The form of the proposed amendment to our certificate of incorporation to effect the reverse stock split is attached as Appendix B to this proxy statement. Any amendment to our certificate of incorporation to effect the reverse stock split will include the reverse stock split ratio fixed by our Board of Directors, within the range approved by our stockholders.

#### **Criteria to be Used for Decision to Apply the Reverse Stock Split**

If our stockholders approve the reverse stock split, our Board of Directors will be authorized to proceed with the reverse stock split. In determining whether to proceed with the reverse stock split and setting the exact amount of split, if any, our Board of Directors will consider a number of factors, including results from our ongoing clinical trials, market conditions, and existing and expected trading prices of our common stock.

#### **Effect of the Reverse Stock Split**

The reverse stock split, if approved and effected, would be effected simultaneously for all outstanding shares of our common stock. The reverse stock split would affect all of our stockholders uniformly and will not affect any stockholder's percentage ownership interest in our company, except to the extent that the reverse stock split results in any of our stockholders owning a fractional share. The reverse stock split would not change the terms of our common stock. After a reverse stock split, all shares of common stock would have the same voting rights and rights to dividends and distributions and will be identical in all other respects to the common stock now authorized, which is not entitled to preemptive or subscription rights, and is not subject to conversion, redemption or sinking fund provisions. The post-reverse stock split common stock would remain fully paid and non-assessable. The reverse stock split would not be intended as, and would not have the effect of, a "going private transaction" covered by Rule 13e-3 of the Exchange Act. Following any reverse stock split, we will continue to be subject to the periodic reporting requirements of the Exchange Act.

As of the effective time of the reverse stock split, if any, we would adjust and proportionately decrease the number of shares of our common stock reserved for issuance upon exercise of, and adjust and proportionately increase the exercise price of, all options and warrants and other rights to acquire our common stock. In addition, as of the effective time of a reverse stock split, we would adjust and proportionately decrease the total number of shares of our common stock that may be the subject of the future grants under our stock plans.

Assuming reverse stock split ratios of 1-for-10, 1-for-50 and 1-for-75, which reflect the low end, middle and high end of the range that our stockholders are being asked to approve, the following table sets forth (i) the number of shares of our common stock that would be issued and outstanding, (ii) the number of shares of our common stock that would be reserved for issuance pursuant to outstanding warrants and options and (iii) the weighted-average exercise price of outstanding options and warrants, each giving effect to the reverse stock split and based on securities outstanding as of November 15, 2019.



	Number of Shares Before Reverse Stock Split	Reverse Stock Split Ratio of 1-for-10	Reverse Stock Split Ratio of 1-for-50	Reverse Stock Split Ratio of 1-for-75
Number of Shares of Common Stock Issued and Outstanding	164,701,167	16,470,116	3,294,023	2,196,015
Number of Shares of Common Stock Reserved for Issuance	98,267,514	9,826,751	1,965,350	1,310,233
Weighted Average Exercise Price of Options.	\$ 1.14	\$ 11.40	\$ 57.00	\$ 85.50
Weighted Average Exercise Price of Warrants.	\$ 0.69	\$ 6.90	\$ 34.50	\$ 51.75

If this reverse split proposal (Proposal No. 4) is approved and our Board of Directors elects to effect the reverse stock split, the number of outstanding shares of common stock will be reduced in proportion to the ratio of the split chosen by our Board of Directors. Accordingly, if a reverse stock split is effected, the number of authorized but unissued shares of common stock will be proportionally increased.

Additionally, if this reverse split proposal (Proposal No. 4) is approved and our Board of Directors elects to effect the reverse stock split, we would communicate to the public, prior to the effective date of the stock split, additional details regarding the reverse stock split, including the specific ratio selected by our Board of Directors. If the board of directors does not implement the reverse stock split at any time prior to December 18, 2020, the authority granted in this proposal to implement the reverse stock split will terminate.

Our directors and executive officers have no substantial interests, directly or indirectly, in the matters set forth in this proposed amendment, except to the extent of their ownership in shares of our common stock and securities convertible or exercisable for common stock.

#### **Certain Risks and Potential Disadvantages Associated with the Reverse Stock Split**

The effect of the reverse stock split upon the market prices for our common stock cannot be accurately predicted, and the history of similar reverse stock split combinations for companies in like circumstances is varied. If the reverse stock split is implemented, the post-split market price of our common stock may be less than the pre-split price multiplied by the reverse stock split ratio.

In addition, a reduction in number of shares outstanding may impair the liquidity for our common stock, which may reduce the value of our common stock. Also, some stockholders may consequently own less than one hundred shares of our common stock. A purchase or sale of less than one hundred shares may result in incrementally higher trading costs through certain brokers, particularly “full service” brokers. Therefore, those stockholders who own less than one hundred shares following the reverse stock split may be required to pay modestly higher transaction costs should they then determine to sell their shares.

#### **Procedure for Effecting the Reverse Stock Split and Exchange of Stock Certificates**

If our stockholders approve the proposal to effect the reverse stock split, and if our Board of Directors still believes that a reverse stock split is in the best interests of us and our stockholders, our Board of Directors will determine the ratio of the reverse stock split to be implemented and we will file the certificate of amendment with the Secretary of State of the State of Delaware. As soon as practicable after the effective date of the reverse stock split, stockholders will be notified that the reverse stock split has been effected.

**Beneficial Owners of Common Stock.** Upon the implementation of the reverse stock split, we intend to treat shares held by stockholders in “street name” (i.e., through a bank, broker, custodian or other nominee), in the same manner as registered stockholders whose shares are registered in their names. Banks, brokers, custodians or other nominees will be instructed to effect the reverse stock split for their beneficial holders holding our common stock in street name. However, these banks, brokers, custodians or other nominees may have different procedures than registered stockholders for processing the reverse stock split and making payment for fractional shares. If a stockholder holds shares of our common stock with a bank, broker, custodian or other nominee and has any questions in this regard, stockholders are encouraged to contact their bank, broker, custodian or other nominee.

**Registered Holders of Common Stock.** Certain of our registered holders of common stock hold some or all of their shares electronically in book-entry form with our transfer agent, Action Stock Transfer. These stockholders do not hold physical stock certificates evidencing their ownership of our common stock. However, they are provided with a statement reflecting the number of shares of our common stock registered in their accounts. If a stockholder holds registered shares in book-entry form with our transfer agent, no action needs to be taken to receive post-reverse stock split shares or payment in lieu of fractional shares, if applicable. If a stockholder is entitled to post-reverse stock split shares, a transaction statement will automatically be sent to the stockholder’s address of record indicating the number of shares of our common stock held following the reverse stock split.

**Holders of Certificated Shares of Common Stock.** As of the date of this proxy statement, certain of our shares of common stock were held in certificated form. Stockholders of record at the time of the reverse stock split who hold shares of our common stock in certificated form will be sent a transmittal letter by the transfer agent after the effective time that will contain the necessary materials and instructions on how a stockholder should surrender his, her or its certificates, if any, representing shares of our common stock to the transfer agent.

#### **Fractional Shares**

We will not issue fractional shares in connection with the reverse stock split. Instead, stockholders who otherwise would be entitled to receive fractional shares because they hold a number of shares not evenly divisible by the reverse stock split ratio will be entitled, upon surrender to the exchange agent of certificates representing such shares, to a cash payment in lieu thereof at a price equal to the fraction to which the stockholder would otherwise be entitled multiplied by the closing price of the common stock, as reported on the NYSE American, on the last trading day prior to the effective date of the split. The ownership of a fractional interest will not give the holder thereof any voting, dividend or other rights except to receive payment therefor as described herein.

#### **No Appraisal Rights**

No action is proposed herein for which the laws of the State of Delaware, or our certificate of incorporation or bylaws, provide a right to our stockholders to dissent and obtain appraisal of, or payment for, such stockholders’ capital stock.

#### **Accounting Consequences**

The reverse stock split will not affect total assets, liabilities or stockholders’ equity. However, the per share net income or loss and net book value of the common stock will be retroactively increased for each period because there will be fewer shares of common stock outstanding.

#### **Federal Income Tax Consequences**

The following discussion is a summary of certain U.S. federal income tax consequences of a reverse stock split to us and to stockholders that hold shares of our common stock as capital assets for U.S. federal income tax purposes. This discussion is based upon current U.S. tax law, which is subject to change, possibly with retroactive effect, and differing interpretations. Any such change may cause the U.S. federal income tax consequences of a reverse stock split to vary substantially from the consequences summarized below.

This summary does not address all aspects of U.S. federal income taxation that may be relevant to stockholders in light of their particular circumstances or to stockholders who may be subject to special tax treatment under the Internal Revenue Code of 1986, as amended (the “*Code*”), including, without limitation, dealers in securities, commodities or foreign currency, persons who are treated as non-U.S. persons for U.S. federal income tax purposes, certain former citizens or long-term residents of the U.S., insurance companies, tax-exempt organizations, banks, financial institutions, small business investment companies, regulated investment companies, real estate investment trusts, retirement plans, persons whose functional currency is not the U.S. dollar, traders that mark-to-market their securities, persons subject to the alternative minimum tax or Medicare contribution tax on net investment income, persons who hold their shares of our common stock as part of a hedge, straddle, conversion or other risk reduction transaction, persons who hold their shares of our common stock as “qualified small business stock” under Section 1045 and/or 1202 of the Code, or who acquired their shares of our common stock pursuant to the exercise of compensatory stock options, the vesting of previously restricted shares of stock or otherwise as compensation.

The state and local tax consequences of a reverse stock split may vary as to each stockholder, depending on the jurisdiction in which such stockholder resides, and any state or local tax considerations are beyond the scope of this discussion. This discussion should not be considered as tax or investment advice, and the tax consequences of a reverse stock split may not be the same for all stockholders. Stockholders should consult their own tax advisors to understand their individual federal, state, local and foreign tax consequences.

***Tax Consequences to the Company.*** We believe that a reverse stock split will constitute a reorganization under Section 368(a)(1)(E) of the Code. Accordingly, we should not recognize taxable income, gain or loss in connection with a reverse stock split. In addition, we do not expect a reverse stock split to affect our ability to utilize our net operating loss carryforwards.

***Tax Consequences to Stockholders.*** Stockholders should not recognize any gain or loss for U.S. federal income tax purposes as a result of a reverse stock split, except to the extent of any cash received in lieu of a fractional share of our common stock. Each stockholder’s aggregate tax basis in shares of common stock received in a reverse stock split should equal the stockholder’s aggregate tax basis in the shares of common stock exchanged therefor, reduced by the amount of any tax basis allocable to a fractional share for which cash is received. In addition, each stockholder’s holding period for the shares of common stock it receives in a reverse stock split should include the stockholder’s holding period for the shares of common stock exchanged in the reverse stock split.

In general, a stockholder who receives cash in lieu of a fractional share of common stock pursuant to a reverse stock split should generally recognize capital gain or loss equal to the difference between the amount of cash received and the stockholder’s tax basis allocable to the fractional share. Any capital gain or loss will be treated as long term capital gain or loss if the stockholder’s holding period in the fractional share is greater than one year as of the effective date of the reverse stock split.

#### **Vote Required and Board of Directors Recommendation**

Pursuant to the Delaware General Corporation Law, this proposal must be approved by the affirmative vote of a majority of the outstanding shares of common stock of the Company entitled to vote on the proposal. Abstentions and broker non-votes with respect to this proposal will be counted for purposes of establishing a quorum and, if a quorum is present, will have the same practical effect as a vote against this proposal.

**OUR BOARD OF DIRECTORS RECOMMENDS THAT STOCKHOLDERS VOTE “FOR” THE AMENDMENT TO THE CERTIFICATE OF INCORPORATION TO EFFECT THE REVERSE STOCK SPLIT.**

## PROPOSAL 5

### **TO APPROVE AN AMENDMENT TO OUR CERTIFICATE OF INCORPORATION TO INCREASE THE NUMBER OF SHARES THE CORPORATION IS AUTHORIZED TO ISSUE TO 1,000,000,000 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 six hundred million shares (600,000,000) to one billion shares (1,000,000,000). At its meeting held on October 18, 2019, 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 600,000,000 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 1, 2019, 164,701,167 shares of common stock were outstanding and no shares of preferred stock were outstanding. In addition, as of the close of business on November 1, 2019, the Company had 11,931,801 shares of common stock subject to outstanding stock options and 252,598 shares reserved subject to the vesting of restricted stock, leaving 11,007,471 shares reserved for issuance pursuant to future grants under the Company's current stock incentive plans. The Company also had 86,335,713 shares reserved subject to the exercise of outstanding warrants. This means that as of November 1, 2019, the Company had just 325,771,250 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 1,000,000,000, 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 400,000,000 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 C.

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.***

## PROPOSAL 6

### ADVISORY VOTE ON OUR 2018 EXECUTIVE COMPENSATION

The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 requires public companies to provide stockholders with periodic advisory (non-binding) votes on executive compensation, also referred to as “say-on-pay” proposals.

Our executive compensation programs are designed to attract, motivate and retain our executive officers, who are critical to our success. Under these programs, our executive officers are rewarded for the achievement of annual, long-term and strategic goals, and corporate goals. Please read the “Executive Compensation” section beginning on page 21 for additional details about our executive compensation programs, including information about the fiscal year 2018 compensation of our CEO; Principal Financial Officer, Chief Medical Officer, Chief Scientific Officer, and Chief Commercial Officer (collectively, the “Named Executive Officers”).

We are asking our stockholders to indicate their support for our Named Executive Officers’ compensation as described in this Proxy Statement. This proposal gives our stockholders the opportunity to express their views on our Named Executive Officers’ compensation. This vote is not intended to address any specific item of compensation, but rather to address the overall compensation of our Named Executive Officers and the philosophy, policy and practices as described in this Proxy Statement. Accordingly, we will ask our stockholders to vote “FOR” the following resolution at the 2018 Annual Meeting:

**“RESOLVED, that the compensation paid to the Company’s Named Executive Officers for the fiscal year ended December 31, 2018, as disclosed pursuant to Item 402 of Regulation S-K, including the Compensation Discussion and Analysis, compensation tables and narrative discussion, is hereby approved.”**

Pursuant to the Exchange Act and the rules promulgated thereunder, this vote will not be binding on the Board or the Compensation Committee and may not be construed as overruling a decision by the Board or the Compensation Committee, creating or implying any change to the fiduciary duties of the Board or the Compensation Committee or any additional fiduciary duty by the Board or the Compensation Committee or restricting or limiting the ability of stockholders to make proposals for inclusion in proxy materials related to executive compensation. The Board and the Compensation Committee, however, may in their discretion take into account the outcome of the vote when considering future executive compensation arrangements.

#### Required Vote

In voting to approve the above resolution, stockholders may vote for the resolution, against the resolution or abstain from voting. This matter will be decided by the affirmative vote of a majority of the votes cast at the Meeting. Abstentions and broker non-votes will have no direct effect on the outcome of this proposal.

**THE BOARD RECOMMENDS A VOTE “FOR” APPROVAL OF THE COMPENSATION OF THE COMPANY’S NAMED EXECUTIVE OFFICERS AS DISCLOSED IN THIS PROXY STATEMENT.**

## **PROPOSAL 7**

### **ADVISORY VOTE TO DETERMINE THE FREQUENCY OF FUTURE ADVISORY VOTES ON THE COMPENSATION OF THE NAMED EXECUTIVE OFFICERS**

Under Section 14A of the Exchange Act, our stockholders are also allowed to vote, on a non-binding, advisory basis, for their preference as to how frequently we should seek future advisory votes on the compensation of our named executive officers as disclosed in accordance with the compensation disclosure rules of the SEC, which we refer to as an advisory vote to approve executive compensation. By voting with respect to this proposal, stockholders may indicate whether they would prefer that we conduct future advisory votes on executive compensation every one, two, or three years. Stockholders also may, if they wish, abstain from casting a vote on this proposal.

After careful consideration, the Board of Directors believes that submitting the advisory vote to approve executive compensation every three years is appropriate for the Company and its stockholders at this time. The Board of Directors believes that an advisory vote at this frequency will provide stockholders with sufficient time to evaluate the effectiveness of our overall compensation philosophy, policies and practices in the context of our long-term business results for the corresponding period. An advisory vote that occurs every three years will also permit the Company's stockholders to observe and evaluate the impact of any changes to its executive compensation policies and practices that have occurred since the last advisory vote to approve executive compensation. The Board of Directors is therefore recommending that stockholders vote for holding the advisory vote to approve executive compensation every three years.

The Company recognizes that the stockholders may have different views as to the best approach for the Company, and therefore we look forward to hearing from our stockholders as to their preference on the frequency of advisory votes to approve executive compensation.

This vote is advisory and not binding on the Company the Compensation Committee or our Board of Directors in any way. The Compensation Committee and the Board of Directors will take into account the outcome of the vote, however, when considering the frequency of future advisory votes to approve executive compensation. The Compensation Committee and the Board of Directors may decide that it is in the best interests of our stockholders and the Company to hold an advisory vote to approve executive compensation more or less frequently than the frequency selected by our stockholders.

The proxy card provides stockholders with the opportunity to choose among four options (holding the vote every one, two or three years, or abstaining) and, therefore, stockholders will not be voting to approve or disapprove the recommendation of the Board of Directors.

#### **Effects of Advisory Vote**

This vote is advisory and not binding on the Company, the Compensation Committee or our Board of Directors in any way. The Compensation Committee and the Board of Directors will take into account the outcome of the vote, however, when considering the frequency of future advisory votes to approve executive compensation. The Compensation Committee and the Board of the Directors may decide that it is in the best interests of our stockholders and the Company to hold an advisory vote to approve executive compensation more or less frequently than the frequency selected by our stockholders.

The proxy card provides stockholders with the opportunity to choose among four options (holding the vote every one, two or three years, or abstaining) and, therefore, stockholders will not be voting to approve or disapprove the recommendation of the Board of Directors.

#### **Vote Required**

The advisory vote to determine the frequency of future advisory votes on the compensation of named executive officers requires a quorum to be present and the affirmative vote of the holders of the majority of the votes cast by the holders of the Company's common stock at the annual meeting. This is a non-binding advisory vote.



**THE BOARD OF DIRECTORS RECOMMENDS A VOTE OF “THREE YEARS” AS THE FREQUENCY  
FOR FUTURE ADVISORY VOTES TO  
APPROVE THE COMPENSATION OF THE NAMED EXECUTIVE OFFICERS.**

**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 2018 Form 10-K, as amended, with the SEC. Stockholders may obtain, free of charge, a copy of the 2018 Form 10-K by writing to us at Actinium Pharmaceuticals, Inc., 275 Madison Avenue, 7<sup>th</sup> Floor, New York NY 10016, Attention: Principal Financial Officer, or from our website, [www.actiniumpharma.com](http://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 Alliance Advisors, by calling their toll free number, 1-877-777-2857.

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 Alliance Advisors, and inform them of your request by calling them at 1-877-777-2857 or writing them at 200 Broadacres Drive, 3rd Fl., Bloomfield, NJ 07003
- 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.AALvote.com/atnm.com](http://www.AALvote.com/atnm.com) and following the instructions provided.

**IMPORTANT NOTICE REGARDING THE AVAILABILITY OF PROXY MATERIALS FOR THE STOCKHOLDER MEETING TO BE HELD ON  
DECEMBER 18, 2019**

This proxy statement and our 2018 Form 10-K to stockholders are available for viewing, printing and downloading at <http://www.viewproxy.com/actiniumpharma/2018> or by email at: [requests@viewproxy.com](mailto:requests@viewproxy.com). To view these materials, please have your control number 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, 2018 on the website of the Securities and Exchange Commission, or the SEC, at [www.sec.gov](http://www.sec.gov), or in the "SEC Filings" section of the "Investors & Media" section of our website at [www.actiniumpharma.com](http://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, 7<sup>th</sup> 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 2019 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, 7<sup>th</sup> Floor, New York, NY 10016, (646) 677-3875. Please note that additional information can be obtained from our website at [www.actiniumpharma.com](http://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 <http://www.sec.gov>. You may also read and copy any document we file with the SEC at its public reference facilities:

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.

**ACTINIUM PHARMACEUTICALS, INC.**  
**2019 Stock Plan**

1. **Purposes of the Plan.** The purposes of this 2019 Stock Plan of the Company (the “Plan”) are to attract and retain the best available personnel for positions of substantial responsibility, to provide additional incentive to Employees, Directors and Consultants and to promote the success of the Company’s business. To achieve these purposes, the Company may grant Incentive Stock Options or Nonstatutory Stock Options, as determined by the Administrator at the time of grant of an option and subject to the applicable provisions of Section 422 of the Code and the regulations promulgated thereunder, or the Company may grant Stock Purchase Rights, all in accordance with the terms and conditions of the Plan.

The Plan was originally adopted by the Board on \_\_\_\_\_, 2019, and was approved by the stockholders of the Company on December 18, 2019.

The amendments made to the Plan shall affect only Option and Restricted Stock awards granted on or after the Effective Date. Awards granted prior to the Effective Date shall be governed by the terms of the Plan and the related Option Agreements or Restricted Stock Purchase Agreements as in effect prior to the Effective Date. In the event that the Plan is not approved by the stockholders of the Company, this Plan of the Company shall be null and void and of no force or effect, but the 2013 Amended and Restated Stock Plan then in effect and the Options and Stock Purchase Rights granted thereunder shall remain in full force and effect.

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

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

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

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

(d) **“Board”** means the Board of Directors of the Company.

(e) **“Change of Control”** means (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 a subsidiary of the Company; (ii) The “Incumbent Directors” (meaning those individuals who, on date the Plan is 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 subsidiary, (III) any acquisition which complies with clauses, (A), (B) and (C) of subsection (v) of this definition or (IV) in respect of an Option or any Restricted Stock 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 (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.

(f) “**Code**” means the Internal Revenue Code of 1986, as amended.

(g) “**Committee**” means one or more committees or subcommittees of the Board appointed by the Board to administer the Plan in accordance with Section 4 below.

(h) “**Common Stock**” means the Common Stock of the Company.

(i) “**Company**” means Actinium Pharmaceuticals, Inc., a Delaware corporation.

(j) “**Consultant**” means any person, including an advisor, who is engaged by the Company or any Parent, Subsidiary or Affiliate to render services and is compensated for such services, and any director of the Company whether compensated for such services or not.

(k) “**Continuous Service Status**” means the absence of any interruption or termination of service as an Employee or Consultant since the date of grant of the Option. Continuous Service Status as an Employee or Consultant shall not be considered interrupted in the case of: (i) sick leave; (ii) military leave; (iii) any other leave of absence approved by the Administrator, provided that such leave is for a period of not more than three (3) months, or if longer, so long as the individual’s right to reemployment is guaranteed by contract or statute; or (iv) in the case of transfers between locations of the Company or between the Company, its Parents, Subsidiaries, Affiliates or their respective successors. A change in status from an Employee to a Consultant or from a Consultant to an Employee will not constitute an interruption of Continuous Service.

(l) “**Corporate Transaction**” means a sale of all or substantially all of the Company’s assets, or a merger, consolidation or other capital reorganization or transaction of the Company with or into another corporation, entity or person, and includes a Change of Control.

(m) “**Director**” means a member of the Board.

(n) “**Effective Date**” means the date the Plan is approved by the stockholders of the Company.

(o) “**Employee**” means any person employed by the Company or any Parent, Subsidiary or Affiliate, with the status of employment determined based upon such factors as are deemed appropriate by the Administrator in its discretion, subject to any requirements of the Code or the Applicable Laws. The payment by the Company of a director’s fee to a Director shall not be sufficient to constitute “employment” of such Director by the Company.

(p) “**Exchange Act**” means the Securities Exchange Act of 1934, as amended.

(q) “**Fair Market Value**” means, as of any date, per share of Common Stock, the closing price on the business day immediately preceding such date for the Common Stock on the NYSE MKT or, if applicable, principal securities exchange on which the shares of Common Stock are then traded, or, if not traded, the price set by the Administrator.

(r) “**Incentive Stock Option**” means an Option intended to qualify as an incentive stock option within the meaning of Section 422 of the Code, as designated in the applicable Option Agreement.

(s) “**Nonstatutory Stock Option**” means an Option not intended to qualify as an Incentive Stock Option, as designated in the applicable Option Agreement, or that otherwise does not meet the requirements of an Incentive Stock Option.

(t) “**Option**” means a stock option granted pursuant to the Plan.

(u) “**Option Agreement**” means a written document, substantially in the form attached hereto as Attachment A, reflecting the terms of an Option granted under the Plan and includes any documents attached to or incorporated into such Option Agreement, including, but not limited to, a notice of stock option grant and a form of exercise notice.

(v) **Intentionally omitted.**

(w) “**Optioned Stock**” means the Common Stock subject to an Option.

(x) “**Optionee**” means an Employee, Director or Consultant who receives an Option.

(y) “**Parent**” means a “parent corporation,”, whether now or hereafter existing, as defined in Section 424(e) of the Code, or any successor provision.

(z) “**Participant**” means any holder of one or more Options or Stock Purchase Rights, or the Shares issuable or issued upon exercise of such awards, under the Plan.

(aa) “**Reporting Person**” means an officer, Director, or greater than ten percent stockholder of the Company within the meaning of Rule 16a-2 under the Exchange Act, who is required to file reports pursuant to Rule 16a-3 under the Exchange Act.

(bb) “**Restricted Stock**” means Shares of Common Stock acquired pursuant to a grant of a Stock Purchase Right under Section 11 below.

(cc) “**Restricted Stock Purchase Agreement**” means a written document, the form(s) of which shall be approved from time to time by the Administrator, reflecting the terms of a Stock Purchase Right granted under the Plan and includes any documents attached to such agreement.

(dd) “**Rule 16b-3**” means Rule 16b-3 promulgated under the Exchange Act, as amended from time to time, or any successor provision.

(ee) **“Share”** means a share of the Common Stock, as adjusted in accordance with Section 14 of the Plan.

(ff) **“Stock Exchange”** means any stock exchange or consolidated stock price reporting system on which prices for the Common Stock are quoted at any given time.

(gg) **“Stock Purchase Right”** means the right to purchase Common Stock pursuant to Section 11 below.

(hh) **“Subsidiary”** means a “subsidiary corporation,” whether now or hereafter existing, as defined in Section 424(f) of the Code, or any successor provision.

(ii) **“Ten Percent Holder”** means a person who owns stock representing more than ten percent (10%) of the voting power of all classes of stock of the Company or any Parent or Subsidiary.

3. **Stock Subject to the Plan.** Subject to the provisions of Section 14 of the Plan, the maximum aggregate number of Shares reserved for issuance to Participants under the Plan is 10,000,000, and the maximum aggregate number of Shares that may be granted in the form of Incentive Stock Options is 10,000,000. 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, the unpurchased Shares that were subject thereto shall, unless the Plan shall have been terminated, become available for future grant under the Plan. In addition, any Shares of Common Stock which are retained by the Company upon exercise of an award in order to satisfy the exercise or purchase price for such award or any withholding taxes due with respect to such exercise or purchase shall be treated as not issued and shall continue to be available under the Plan. Shares issued under the Plan and later repurchased by the Company pursuant to any repurchase right which the Company may have shall not be available for future grant under the Plan.

#### 4. **Administration of the Plan.**

(a) **General.** The Plan shall be administered by the Board or a Committee, or a combination thereof, as determined by the Board. The Plan may be administered by different administrative bodies with respect to different classes of Participants and, if permitted by the Applicable Laws, the Board may authorize one or more officers to make awards under the Plan.

(b) **Committee Composition.** If a Committee has been appointed pursuant to this Section 4, such Committee shall continue to serve in its designated capacity until otherwise directed by the Board. From time to time the Board may increase the size of any Committee and appoint additional members thereof, remove members (with or without cause) and appoint new members in substitution therefor, fill vacancies (however caused) and remove all members of a Committee and thereafter directly administer the Plan, all to the extent permitted by the Applicable Laws and, in the case of a Committee administering the Plan in accordance with the requirements of Rule 16b-3 or Section 162(m) of the Code, to the extent permitted or required by such provisions.

(c) **Powers of the Administrator.** Subject to the provisions of the Plan and in the case of a Committee, the specific duties delegated by the Board to such Committee, the Administrator shall have the authority, in its discretion:

(i) to determine the Fair Market Value of the Common Stock, in accordance with Section 2(q) of the Plan, provided that such determination shall be applied consistently with respect to Participants under the Plan;

(ii) to select the Employees, Directors and Consultants to whom Plan awards may from time to time be granted;

(iii) to determine whether and to what extent Plan awards are granted;

(iv) to determine the number of Shares of Common Stock to be covered by each award granted;

(v) to approve the form(s) of agreement(s) used under the Plan;

(vi) to determine the terms and conditions, not inconsistent with the terms of the Plan, of any award granted hereunder, which terms and conditions include but are not limited to the exercise or purchase price, the time or times when awards may be exercised (which may be based on performance criteria), any vesting acceleration or waiver of forfeiture restrictions, any pro-rata adjustment to vesting as a result of a Participant's transitioning from full- to part-time services (or vice versa), and any restriction or limitation regarding any Option, Optioned Stock, Stock Purchase Right or Restricted Stock, based in each case on such factors as the Administrator, in its sole discretion, shall determine;

(vii) intentionally omitted;

(viii) Intentionally omitted;

(ix) to adjust the vesting of an Option held by an Employee, Director or Consultant as a result of a change in the terms or conditions under which such person is providing services to the Company;

(x) to construe and interpret the terms of the Plan and awards granted under the Plan, which constructions, interpretations and decisions shall be final and binding on all Participants; and

(xi) in order to fulfill the purposes of the Plan and without amending the Plan, to modify grants of Options or Stock Purchase Rights to Participants who are foreign nationals or employed outside of the United States in order to recognize differences in local law, tax policies or customs.

#### 5. **Eligibility.**

(a) **Recipients of Grants.** Nonstatutory Stock Options and Stock Purchase Rights may be granted to Employees, Directors and Consultants. Incentive Stock Options may be granted only to Employees, provided that Employees of Affiliates shall not be eligible to receive Incentive Stock Options.



(b) **Type of Option.** Each Option shall be designated in the Option Agreement as either an Incentive Stock Option or a Nonstatutory Stock Option.

(c) **ISO \$100,000 Limitation.** Notwithstanding any designation under Section 5(b), to the extent that the aggregate Fair Market Value of Shares with respect to which Options designated as Incentive Stock Options are exercisable for the first time by any Optionee during any calendar year (under all plans of the Company or any Parent or Subsidiary) exceeds \$100,000, such excess Options shall be treated as Nonstatutory Stock Options. For purposes of this Section 5(c), Incentive Stock Options shall be taken into account in the order in which they were granted, and the Fair Market Value of the Shares subject to an Incentive Stock Option shall be determined as of the date of the grant of such Option.

(d) **No Employment Rights.** The Plan shall not confer upon any Participant any right with respect to continuation of an employment or consulting relationship with the Company, nor shall it interfere in any way with such Participant's right or the Company's right to terminate his or her employment or consulting relationship at any time or any reason.

6. **Term of Plan.** The Plan shall become effective upon the Effective Date. The duration of the Plan shall not exceed ten (10) years from the earlier of the date the plan is adopted by the Board of Directors or the date the Plan is approved by the stockholders of the Company and may be terminated earlier pursuant to Section 16 of the Plan.

7. **Term of Option.** The term of each Option shall be the term stated in the Option Agreement; provided that the term shall be no more than ten (10) years from the date of grant thereof or such shorter term as may be provided in the Option Agreement and provided further that, in the case of an Incentive Stock Option granted to a person who at the time of such grant is a Ten Percent Holder, the term of the Option shall be five (5) years from the date of grant thereof or such shorter term as may be provided in the Option Agreement.

8. **[Reserved.]**

9. **Option Exercise Price and Consideration.**

(a) **Exercise Price.** The per Share exercise price for the Shares to be issued pursuant to exercise of an Option shall be such price as is determined by the Administrator and set forth in the Option Agreement, but shall be subject to the following:

(i) In the case of an Incentive Stock Option

(A) granted to an Employee who at the time of grant is a Ten Percent Holder, the per Share exercise price shall be no less than 110% of the Fair Market Value per Share on the date of grant; or

(B) granted to any other Employee, the per Share exercise price shall be no less than 100% of the Fair Market Value per Share on the date of grant.

(ii) In the case of a Nonstatutory Stock Option, the exercise price shall be no less than 100% of the Fair Market Value per Share on the date of grant.

(b) **Permissible Consideration.** The consideration to be paid for the Shares to be issued upon exercise of an Option, including the method of payment, shall be determined by the Administrator (and, in the case of an Incentive Stock Option, shall be determined at the time of grant) and may consist entirely of (1) cash; (2) check; (3) delivery of Optionee's promissory note with such recourse, interest, security and redemption provisions as the Administrator determines to be appropriate (subject to applicable provisions of Delaware law); (4) cancellation of indebtedness; (5) other Shares that have a Fair Market Value on the date of surrender equal to the aggregate exercise price of the Shares as to which the Option is exercised, provided that in the case of Shares acquired, directly or indirectly, from the Company, such Shares must have been owned by the Optionee for more than six (6) months on the date of surrender (or such other period as may be required to avoid the Company's incurring an adverse accounting charge); (6) delivery of a properly executed exercise notice together with such other documentation as the Administrator and a securities broker approved by the Company shall require to effect exercise of the Option and prompt delivery to the Company of the sale or loan proceeds required to pay the exercise price and any applicable withholding taxes; or (7) any combination of the foregoing methods of payment. In making its determination as to the type of consideration to accept, the Administrator shall consider if acceptance of such consideration may be reasonably expected to benefit the Company and the Administrator may, in its sole discretion, refuse to accept a particular form of consideration at the time of any Option exercise.

#### 10. **Exercise of Option.**

##### (a) **General.**

(i) **Exercisability.** Any Option granted hereunder shall be exercisable at such times and under such conditions as determined by the Administrator, consistent with the term of the Plan and reflected in the Option Agreement, including vesting requirements and/or performance criteria with respect to the Company and/or the Optionee. The Administrator shall have the discretion to determine whether and to what extent the vesting of Options shall be tolled during any unpaid leave of absence; provided however that in the absence of such determination, vesting of Options shall be tolled during any such leave (unless otherwise required by the Applicable Laws). In the event of military leave, vesting shall toll during any unpaid portion of such leave, provided that upon a Participant's return from military leave he or she will be given vesting credit with respect to awards to the same extent as would have applied had the Participant continued to provide services to the Company throughout the leave on the same terms as he or she was providing services immediately prior to the leave.

(ii) **Minimum Exercise Requirements.** An Option may not be exercised for a fraction of a Share. The Administrator may require that an Option be exercised as to a minimum number of Shares, provided that such requirement shall not prevent an Optionee from exercising the full number of Shares as to which the Option is then exercisable.

(iii) **Procedures for and Results of Exercise.** An Option shall be deemed exercised when written notice of such exercise has been given to the Company in accordance with the terms of the Option by the person entitled to exercise the Option and the Company has received full payment for the Shares with respect to which the Option is exercised. Full payment may, as authorized by the Administrator, consist of any consideration and method of payment allowable under Section 9(b) of the Plan, provided that the Administrator may, in its sole discretion, refuse to accept any form of consideration at the time of any Option exercise.

Exercise of an Option in any manner shall result in a decrease in the number of Shares that thereafter may be available, both for purposes of the Plan and for sale under the Option, by the number of Shares as to which the Option is exercised.

(iv) **Rights as Stockholder.** Until the issuance of the Shares (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), no right to vote or receive dividends or any other rights as a stockholder shall exist with respect to the Optioned Stock, notwithstanding the exercise of the Option. No adjustment will be made for a dividend or other right for which the record date is prior to the date the stock certificate is issued, except as provided in Section 14 of the Plan.

**(b) Termination of Employment or Consulting Relationship.**

(i) **Termination other than Upon Disability or Death.** In the event of termination of an Optionee's Continuous Service Status, such Optionee may exercise an Option within three (3) months following such termination to the extent the Optionee was vested in the Optioned Stock as of the date of such termination. No termination shall be deemed to occur and this Section 10(b)(i) shall not apply if (A) the Optionee is a Consultant who becomes an Employee, or (B) the Optionee is an Employee who becomes a Consultant.

(ii) **Disability of Optionee.** In the event of termination of an Optionee's Continuous Service Status as a result of his or her permanent and total disability within the meaning of Section 22(e)(3) of the Code, such Optionee may exercise an Option at any time within one (1) year following such termination to the extent the Optionee was vested in the Optioned Stock as of the date of such termination.

(iii) **Death of Optionee.** In the event of the death of an Optionee during the period of Continuous Service Status or within three (3) months following termination thereof, 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 one (1) year 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.

**11. Stock Purchase Rights.**

(a) **Rights to Purchase.** When the Administrator determines that it will offer Stock Purchase Rights under the Plan, it shall advise the offeree in writing of the terms, conditions and restrictions related to the offer, including the number of Shares that such person shall be entitled to purchase, the price to be paid, and the time within which such person must accept such offer. The offer to purchase Shares subject to Stock Purchase Rights shall be accepted by execution of a Restricted Stock Purchase Agreement in the form determined by the Administrator.

(b) **Repurchase Option.** 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 date as the Administrator may determine, as reflected in the Restricted Stock Purchase Agreement.

(c) **Other Provisions.** The Restricted Stock Purchase Agreement shall contain such other terms, provisions and conditions not inconsistent with the Plan as may be determined by the Administrator in its sole discretion. In addition, the provisions of Restricted Stock Purchase Agreements need not be the same with respect to each purchaser.

(d) **Rights as a Stockholder.** Once the Stock Purchase Right is exercised, the purchaser shall have the rights equivalent to those of a stockholder, and shall be a stockholder when his or her purchase is entered upon the records of the duly authorized transfer agent of the Company. No adjustment will be made for a dividend or other right for which the record date is prior to the date the Stock Purchase Right is exercised, except as provided in Section 14 of the Plan.

## 12. **Taxes.**

(a) As a condition of the exercise of an Option or Stock Purchase Right granted under the Plan, the Participant (or in the case of the Participant's death, the person exercising the Option or Stock Purchase Right) shall make such arrangements as the Administrator may require for the satisfaction of any applicable federal, state, local or foreign withholding tax obligations that may arise in connection with the exercise of the Option or Stock Purchase Right and the issuance of Shares. The Company shall not be required to issue any Shares under the Plan until such obligations are satisfied. If the Administrator allows the withholding or surrender of Shares to satisfy a Participant's tax withholding obligations under this Section 12 (whether pursuant to Section 12(c), (d) or (e), or otherwise), the Administrator shall not allow Shares to be withheld in an amount that exceeds the minimum statutory withholding rates for federal and state tax purposes, including payroll taxes.

(b) In the case of an Employee and in the absence of any other arrangement, the Employee shall be deemed to have directed the Company to withhold or collect from his or her compensation an amount sufficient to satisfy such tax obligations from the next payroll payment otherwise payable after the date of an exercise of the Option or Stock Purchase Right.

(c) In the case of Participant other than an Employee (or in the case of an Employee where the next payroll payment is not sufficient to satisfy such tax obligations, with respect to any remaining tax obligations), in the absence of any other arrangement and to the extent permitted under the Applicable Laws, the Participant shall be deemed to have elected to have the Company withhold from the Shares to be issued upon exercise of the Option or Stock Purchase Right that number of Shares having a Fair Market Value determined as of the applicable Tax Date (as defined below) equal to the amount required to be withheld. For purposes of this Section 12, the Fair Market Value of the Shares to be withheld shall be determined on the date that the amount of tax to be withheld is to be determined under the Applicable Laws (the "Tax Date").

(d) If permitted by the Administrator, in its discretion, a Participant may satisfy his or her tax withholding obligations upon exercise of an Option or Stock Purchase Right by surrendering to the Company Shares that have a Fair Market Value determined as of the applicable Tax Date equal to the amount required to be withheld. In the case of shares previously acquired from the Company that are surrendered under this Section 12(d), such Shares must have been owned by the Participant for more than six (6) months on the date of surrender (or such other period of time as is required for the Company to avoid adverse accounting charges).

(e) Any election or deemed election by a Participant to have Shares withheld to satisfy tax withholding obligations under Section 12(c) or (d) above shall be irrevocable as to the particular Shares as to which the election is made and shall be subject to the consent or disapproval of the Administrator. Any election by a Participant under Section 12(d) above must be made on or prior to the applicable Tax Date.

(f) In the event an election to have Shares withheld is made by a Participant and the Tax Date is deferred under Section 83 of the Code because no election is filed under Section 83(b) of the Code, the Participant shall receive the full number of Shares with respect to which the Option or Stock Purchase Right is exercised but such Participant shall be unconditionally obligated to tender back to the Company the proper number of Shares on the Tax Date.

### 13. **Non-Transferability of Options and Stock Purchase Rights**

(a) **General.** Except as set forth in this Section 13, Options and Stock Purchase Rights may not be sold, pledged, assigned, hypothecated, transferred or disposed of in any manner other than by will or by the laws of descent or distribution. The designation of a beneficiary by an Optionee will not constitute a transfer. An Option or Stock Purchase Right may be exercised, during the lifetime of the holder of an Option or Stock Purchase Right, only by such holder or a transferee permitted by this Section 13.

(b) **Limited Transferability Rights.** 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.

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

(a) **Changes in Capitalization.** Subject to any required action by the stockholders of the Company, the number of Shares of Common Stock covered by each outstanding Option or Stock Purchase Right, the number of Shares set forth in Sections 3 and 8 above and the number of Shares of Common Stock that have been authorized for issuance under the Plan but as to which no Options or Stock Purchase Rights have yet been granted or that have been returned to the Plan upon cancellation or expiration of an Option or Stock Purchase Right, as well as the price per Share of Common Stock covered by each such outstanding Option or Stock Purchase Right, shall be proportionately adjusted for any increase or decrease in the number of issued Shares of Common Stock resulting from a stock split, reverse stock split, stock dividend, combination, recapitalization or reclassification of the Common Stock, or any other increase or decrease in the number of issued Shares of Common Stock effected without receipt of consideration by the Company; provided, however, that conversion of any convertible securities of the Company shall not be deemed to have been "effected without receipt of consideration." Such adjustment shall be made by the Administrator, whose determination in that respect shall be final, binding and conclusive. Except as expressly provided herein, no issuance by the Company of shares of stock of any class, or securities convertible into shares of stock of any class, shall affect, and no adjustment by reason thereof shall be made with respect to, the number or price of Shares of Common Stock subject to an Option or Stock Purchase Right.

(b) **Dissolution or Liquidation.** In the event of the dissolution or liquidation of the Company, each Option and Stock Purchase Right will terminate immediately prior to the consummation of such action, unless otherwise determined by the Administrator.

(c) **Corporate Transaction.** In the event of a Corporate Transaction, each outstanding Option or Stock Purchase Right shall be assumed or an equivalent option or right shall be substituted by such successor corporation or a parent or subsidiary of such successor corporation (the "**Successor Corporation**"), unless the Successor Corporation does not agree to assume the award or to substitute an equivalent option or right, in which case such Option or Stock Purchase Right shall terminate upon the consummation of the transaction 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.

For purposes of this Section 14(c), an Option or a Stock Purchase Right shall be considered assumed, without limitation, if, at the time of issuance of the stock or other consideration upon a Corporate Transaction or a Change of Control, as the case may be, each holder of an Option or Stock Purchase Right would be entitled to receive upon exercise of the award the same number and kind of shares of stock or the same amount of property, cash or securities as such holder would have been entitled to receive upon the occurrence of the transaction if the holder had been, immediately prior to such transaction, the holder of the number of Shares of Common Stock covered by the award at such time (after giving effect to any adjustments in the number of Shares covered by the Option or Stock Purchase Right as provided for in this Section 14); provided that if such consideration received in the transaction is not solely common stock of the Successor Corporation, the Administrator may, with the consent of the Successor Corporation, provide for the consideration to be received upon exercise of the award to be solely common stock of the Successor Corporation equal to the Fair Market Value of the per Share consideration received by holders of Common Stock in the transaction.

(d) **Certain Distributions.** In the event of any distribution to the Company's stockholders of securities of any other entity or other assets (other than dividends payable in cash or stock of the Company) without receipt of consideration by the Company, the Administrator may, in its discretion, appropriately adjust the price per Share of Common Stock covered by each outstanding Option or Stock Purchase Right to reflect the effect of such distribution.

(e) **Change of Control.** Notwithstanding any provision of the Plan or any award agreement to the contrary, 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.

15. **Time of Granting Options and Stock Purchase Rights.** The date of grant of an Option or Stock Purchase Right shall, for all purposes, be the date on which the Administrator makes the determination granting such Option or Stock Purchase Right, or such other date as is determined by the Administrator, provided that in the case of any Incentive Stock Option, the grant date shall be the later of the date on which the Administrator makes the determination granting such Incentive Stock Option or the date of commencement of the Optionee's employment relationship with the Company. Notice of the determination shall be given to each Employee, Director or Consultant to whom an Option or Stock Purchase Right is so granted within a reasonable time after the date of such grant.

16. **Amendment and Termination of the Plan.**

(a) **Authority to Amend or Terminate.** The Board may at any time amend, alter, suspend or discontinue the Plan, but no amendment, alteration, suspension or discontinuation (other than an adjustment pursuant to Section 14 above) shall be made that would materially and adversely affect the rights of any Optionee or holder of Stock Purchase Rights under any outstanding grant, without his or her consent. In addition, to the extent necessary and desirable to comply with the Applicable Laws, the Company shall obtain stockholder approval of any Plan amendment in such a manner and to such a degree as required.

(b) **Effect of Amendment or Termination.** No amendment or termination of the Plan shall materially and adversely affect Options or Stock Purchase Rights already granted, unless mutually agreed otherwise between the Optionee or holder of the Stock Purchase Rights and the Administrator, which agreement must be in writing and signed by the Optionee or holder and the Company.

17. **Conditions Upon Issuance of Shares.** Notwithstanding any other provision of the Plan or any agreement entered into by the Company pursuant to the Plan, the Company shall not be obligated, and shall have no liability for failure, to issue or deliver any Shares under the Plan unless such issuance or delivery would comply with the Applicable Laws, with such compliance determined by the Company in consultation with its legal counsel. As a condition to the exercise of an Option or Stock Purchase Right, the Company may require the person exercising the award to represent and warrant at the time of any such exercise that the Shares are being purchased only for investment and without any present intention to sell or distribute such Shares if, in the opinion of counsel for the Company, such a representation is required by law.

18. **Reservation of Shares.** The Company, during the term of this Plan, will at all times reserve and keep available such number of Shares as shall be sufficient to satisfy the requirements of the Plan.

19. **Agreements.** Options and Stock Purchase Rights shall be evidenced by Option Agreements and Restricted Stock Purchase Agreements, respectively, in such form(s) as the Administrator shall from time to time approve.

20. **Stockholder Approval.** If required by the Applicable Laws, continuance of the Plan shall be subject to approval by the stockholders of the Company within twelve (12) months before or after the date the Plan is adopted. Such stockholder approval shall be obtained in the manner and to the degree required under the Applicable Laws.

21. **Information and Documents to Optionees and Purchasers.** If required by the Applicable Laws, the Company shall provide financial statements at least annually to each Optionee and to each individual who acquired Shares pursuant to the Plan, during the period such Optionee or purchaser has one or more Options or Stock Purchase Rights outstanding, and in the case of an individual who acquired Shares pursuant to the Plan, during the period such individual owns such Shares. The Company shall not be required to provide such information if the issuance of Options or Stock Purchase Rights under the Plan is limited to key employees whose duties in connection with the Company assure their access to equivalent information.

22. **Section 409A.** The Plan is intended to comply with Section 409A of the Code to the extent subject thereto, and, accordingly, to the maximum extent permitted, the Plan shall be interpreted and administered to be in compliance therewith. Any payments described in the Plan that are due within the “short-term deferral period” as defined in Section 409A of the Code shall not be treated as deferred compensation unless Applicable Laws require otherwise. Notwithstanding anything to the contrary in the Plan, to the extent required to avoid accelerated taxation and tax penalties under Section 409A of the Code, amounts that would otherwise be payable and benefits that would otherwise be provided pursuant to the Plan during the six (6) month period immediately following the Participant’s termination of Continuous Service Status shall instead be paid on the first payroll date after the six-month anniversary of the Participant’s separation from service (or the Participant’s death, if earlier). Notwithstanding the foregoing, neither the Company nor the Administrator shall have any obligation to take any action to prevent the assessment of any excise tax or penalty on any Participant under Section 409A of the Code and neither the Company nor the Administrator will have any liability to any Participant for such tax or penalty.



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

Actinium Pharmaceuticals, Inc. (the “*Corporation*”), a corporation duly organized and existing under the General Corporation Law of the State of Delaware (the “DGCL”), does hereby certify that:

1. The name of the corporation is Actinium Pharmaceuticals, Inc..
2. The following two paragraphs are hereby added to precede the first paragraph of Article Fourth of the Certificate of Incorporation of the Corporation (the “*Certificate*”):

“Contingent and effective upon the filing of this Certificate of Amendment to the Restated Certificate of Incorporation (the “Certificate of Amendment”), each [        ] ([        ]) shares of the Corporation’s Common Stock, par value \$0.001 per share (the “Common Stock”), issued and outstanding prior to the Effective Time shall, automatically and without any action on the part of the respective holders thereof, be combined and converted into one (1) share of Common Stock, par value \$0.001 per share, of the Corporation (the “Reverse Split”). No fractional share shall be issued in connection with the foregoing combination of the shares pursuant to the Reverse Split. The Corporation will pay in cash the fair value of such fractional shares, without interest and as determined in good faith by the Board of Directors of the Corporation when those entitled to receive such fractional shares are determined.

The Reverse Split shall occur automatically without any further action by the holders of Common Stock, and whether or not the certificates representing such shares have been surrendered to the Corporation; provided, however, that the Corporation shall not be obligated to issue certificates evidencing the shares of Common Stock issuable as a result of the Reverse Split unless the existing certificates evidencing the applicable shares of stock prior to the Reverse Split are either delivered to the Corporation, or the holder notifies the Corporation that such certificates have been lost, stolen or destroyed, and executes an agreement satisfactory to the Corporation to indemnify the Corporation from any loss incurred by it in connection with such certificates.”

3. The foregoing amendments to the Certificate have been duly approved by the Corporation’s Board of Directors in accordance with Section 242 of the DGCL.
4. The foregoing amendments to the Certificate have been duly approved by the Corporation’s stockholders in accordance with Sections 211 and 242 of the DGCL.
5. This Certificate of Amendment shall be effective upon filing.

IN WITNESS WHEREOF, the Corporation has caused this Certificate of Amendment to be signed by its President on this [    ] day of [        ].

**ACTINIUM PHARMACEUTICALS, INC.**

By: \_\_\_\_\_  
 Name: \_\_\_\_\_

**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 1,050,000,000 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 1,000,000,000 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 18, 2018.

IN WITNESS WHEREOF, the corporation has caused this certificate to be signed by its duly authorized officer this \_\_\_ day of December, 2019.

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Sandesh Seth, Chairman and Chief Executive Officer

## PROXY

### ANNUAL MEETING OF STOCKHOLDERS ACTINIUM PHARMACEUTICALS, INC. December 18, 2019

***This Proxy is solicited by the Board of Directors of Actinium Pharmaceuticals, Inc.,  
which recommends that you vote FOR proposals 1, 2, 3, 4, 5  
and 6 and to vote for "Three Years" on proposal 7.***

The undersigned hereby appoints Sandesh Seth (the "Proxy"), with power of substitution, to vote on the following matters, which may properly come before the Annual Meeting of Stockholders of Actinium Pharmaceuticals, Inc. to be held on Wednesday, December 18, 2019 at 9:30 a.m. EST at The Garden City Hotel, 45 Seventh Street, Garden City, NY 11530, and at any adjournment or postponement thereof. The Proxy shall cast votes according to the number of shares of common stock of the Company that the undersigned may be entitled to vote with respect to the matters set forth below, in accordance with the specification indicated, if any, and shall have all the powers which the undersigned would possess if personally present. The undersigned hereby revokes any prior proxy to vote at the Annual Meeting, and hereby ratifies and confirms all that said Proxy may lawfully do by virtue hereof and thereof.

**IMPORTANT - THIS PROXY MUST BE SIGNED AND DATED ON THE REVERSE SIDE.**

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▲ PLEASE DETACH ALONG PERFORATED LINE AND MAIL IN THE ENVELOPE PROVIDED. ▲

### **Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting of Stockholders:**

The 2018 Annual Report on Form 10-K and this Proxy Statement are available at  
<http://www.viewproxy.com/actiniumpharma/2019>.

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THE BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" PROPOSALS 1, 2, 3, 4, 5 AND 6 AND TO VOTE FOR "THREE YEARS" ON PROPOSAL 7.

**Proposal 1:** To elect one class III director to serve for a three-year term that expires at the 2022 Annual Meeting of Stockholders.

Nominee:  
T. Ajit S. Shetty

FOR ☐ AGAINST ☐ ABSTAIN ☐

**Proposal 2:** To ratify the appointment of Marcum LLP as our independent registered public accounting firm.

☐ FOR ☐ AGAINST ☐ ABSTAIN

**Proposal 3:** To approve the Actinium Pharmaceuticals, Inc. 2019 Stock Plan, that may be implemented at the discretion of our Board of Directors before December 18, 2020 without further approval or authorization of our stockholders, to issue 10,000,000 shares of common stock available for issuance thereunder (Options and Restricted Stock or other awards) to attract and retain the best available personnel and to support planned hiring efforts as the company grows.

☐ FOR ☐ AGAINST ☐ ABSTAIN

**Proposal 4:** To ensure that we are able to maintain compliance with the listing standards of the NYSE AMERICAN exchange we are seeking authorization for the Board of Directors, subject to their discretion, to effect a reverse stock split or alternately abandon such action depending on the stock price. The NYSE AMERICAN listing standards require that an issuer's stock not fall below \$0.20 on a 30-day average and include an automatic delisting, which would occur immediately if such stock trades at or below \$0.06 at any time. While our stock is not at these levels, to prevent such an occurrence, we seek approval to amend our certificate of incorporation for our Board of Directors to be authorized to effect a reverse stock split at a ratio not greater than 1-for-75 at its discretion.

The exact ratio is to be set at the discretion of our Board of Directors before December 18, 2020 without further approval or authorization of our stockholders. If the Board of Directors effects the reverse split, they will take into consideration the price of our common stock at that time to determine the exact ratio so that the price of our common stock be above a certain share price threshold such as \$1.00 per share, which is a price level many institutional investors cannot invest below or above \$5.00 per share, which, if below, is considered a "Penny Stock" that precludes many brokerage firms and institutional investors from investing. The Board of Directors may alternatively elect to abandon such proposed amendment and not effect the reverse stock split authorized by stockholders, in its sole discretion.

☐ FOR ☐ AGAINST ☐ ABSTAIN

**Proposal 5:** To approve an amendment to our Certificate of Incorporation to increase the number of shares of common stock, par value \$0.001 per share, the corporation is authorized to issue by 400,000,000.

☐ FOR ☐ AGAINST ☐ ABSTAIN

**Proposal 6:** To hold a non-binding advisory vote on the compensation of our named executive officers.

☐ FOR ☐ AGAINST ☐ ABSTAIN

**Proposal 7:** To hold a non-binding advisory vote to determine the frequency of future advisory votes on the compensation of the named executive officers.

☐ ONE YEAR ☐ TWO YEARS ☐ THREE YEARS ☐ ABSTAIN

THIS PROXY WHEN PROPERLY EXECUTED WILL BE VOTED IN THE MANNER DIRECTED HEREIN BY THE UNDERSIGNED STOCKHOLDER. UNLESS OTHERWISE SPECIFIED, THE SHARES WILL BE VOTED FOR ALL ITEMS UNDER PROPOSALS 1, 2, 3, 4, 5 AND 6 AND TO VOTE FOR "THREE YEARS" ON PROPOSAL 7.

Date: \_\_\_\_\_, 2019

Signature: \_\_\_\_\_

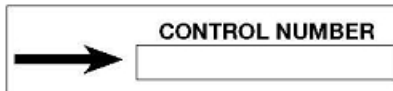
Signature (Joint Owners): \_\_\_\_\_

NOTE: Signature should agree with name on stock certificate as printed hereon. Executors, administrators, trustees and other fiduciaries should so indicate when signing.

PLEASE DATE, SIGN AND RETURN THIS PROXY PROMPTLY USING THE ENCLOSED POSTAGE PAID ENVELOPE. THANK YOU.



▲ PLEASE DETACH ALONG PERFORATED LINE AND MAIL IN THE ENVELOPE PROVIDED. ▲



## PROXY VOTING INSTRUCTIONS

Please have your 11 digit control number ready when voting by Internet or Telephone



**INTERNET**  
Vote Your Proxy on the Internet:  
Go to [www.AALvote.com/atnm](http://www.AALvote.com/atnm)  
Have your proxy card available when you access the above website. Follow the prompts to vote your shares.



**TELEPHONE**  
Vote Your Proxy by Phone:  
Call 1 (866) 804-9616  
Use any touch-tone telephone to vote your proxy. Have your proxy card available when you call. Follow the voting instructions to vote your shares.



**MAIL**  
Vote Your Proxy by Mail:  
Mark, sign, and date your proxy card, then detach it, and return it in the postage-paid envelope provided.