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

SCHEDULE 14A INFORMATION

Proxy Statement Pursuant to Section 14(a) of the Securities Exchange Act of 1934

Filed by the Registrant	<input checked="" type="checkbox"/>
Filed by a Party other than the Registrant	<input type="checkbox"/>

Check the appropriate box:

<input type="checkbox"/>	Preliminary Proxy Statement
<input type="checkbox"/>	Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))
<input checked="" type="checkbox"/>	Definitive Proxy Statement
<input type="checkbox"/>	Definitive Additional Materials
<input type="checkbox"/>	Soliciting Material under §240.14a-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 all boxes that apply):

<input checked="" type="checkbox"/>	No fee required.
<input type="checkbox"/>	Fee paid previously with preliminary materials.
<input type="checkbox"/>	Fee computed on table in exhibit required by Item 25(b) per Exchange Act Rules 14a-6(i)(1) and 0-11.

Dear Fellow Actinium Shareholder:

It is with great enthusiasm that we share the tremendous progress we have made in 2022. The success of our Iomab-B pivotal trial, the strong overall survival data from our earlier stage Actimab-A+CLAG-M trial and exciting pre-clinical data from our R&D collaborations, have laid a strong foundation for a bright future for the company. We believe the clinical data sets for Iomab-B and Actimab-A, which we expect to share in more detail by year-end, are the harbinger of a potential paradigm change in the treatment of relapsed/refractory AML (r/r AML), an area of high unmet need, as these patients have a very poor survival prognosis. We have also made significant strides in building our leadership team with key recent hires in core functional areas in anticipation of these key milestones and they are energized by this data and the opportunity to realize its full potential.

Investment dollars keep pouring into our niche radiotherapy sector. While the number of companies is growing, the majority feature undifferentiated, nascent, or at best very early-stage clinical programs. Actinium is truly differentiated by our clinical focus on late-stage, hematological malignancies, a growing number of earlier programs in solid tumors, a well-established supply chain into major oncology centers of excellence, and an industry leading intellectual property portfolio. We are at an inflection point in the Company's history with the opportunity to establish ourselves as a leader in the radiotherapeutics industry and are excited to provide you with this update on our Iomab-B and Actimab-A clinical programs, R&D, partnerships, and overall organizational development.

We were thrilled to announce highly positive topline results from the pivotal Phase 3 SIERRA trial for our lead asset Iomab-B last week. The SIERRA trial met its primary endpoint of durable Complete Remission (dCR) of 6 months post-initial remission after a bone marrow transplant (BMT) with high statistical significance ($p < 0.0001$) compared to the control arm. The trial was conducted in patients 55 years of age or older with r/r AML who typically cannot access a potentially lifesaving BMT as they are deemed unfit and thus unable to tolerate standard chemotherapy-based conditioning. Trial results showed that with Iomab-B conditioning, these patients have increased access to a BMT with a clinically meaningful duration of complete remission, along with a favorable safety profile, potentially establishing a new treatment option for the majority of the 10,000 r/r AML patients in the U.S. who are deemed unfit for BMT with current approaches. Driven by strong encouragement from SIERRA trial investigators who represent the leading transplant physicians at the largest volume transplant hospitals, we expect to present detailed SIERRA trial data at upcoming BMT focused medical conference(s). We look forward to unveiling this data in a setting that will maximize the impact of our trial results for our target audience of transplant physicians as our team works assiduously toward a Biologics License Application (BLA) filing and Early Access Program in 2023.

We strongly believe that based on these results and prior clinical data in over 12 trials and several hundred patients in other blood cancers, Iomab-B has the potential to establish a new standard of care and to increase access to BMT with improved patient outcomes not only in AML but in MDS, ALL, Hodgkin's and Non-Hodgkin's Lymphoma and Multiple Myeloma. These results from our well-controlled SIERRA trial will help drive development of the broader opportunity for the Iomab-B clinical program that includes label expansion and also for Iomab-ACT, a low dose version of the Iomab-B construct that is focused on lymphodepletion and reduced intensity conditioning prior to CAR-T and gene and cellular therapies. We look forward to sharing additional details on our Iomab-B expansion strategy and sharing more on our Iomab-ACT trial with Memorial Sloan Kettering and the broader development program next year.

We are also excited to report results from our industry leading Actinium-225 based radiotherapeutic program Actimab-A which has been tested in six trials and ~150 AML patients demonstrating high response rates and good tolerability as a single agent. Actimab-A is being developed in combination with other regimens to exploit mechanistic synergies with the objective of establishing it as a backbone therapy. The Actimab-A + CLAG-M Phase 1 trial was conducted in high-risk, r/r AML patients who had failed two or more lines of therapy, many of whom had TP53 mutations or have failed venetoclax, and consequently have dismal survival of approximately two months. Previously reported data showed an Overall Response Rate of 67%, 83% at the recommended Phase 2 dose, high rates of MRD negativity or undetectable AML, and a clear improvement in survival for this difficult to treat patient population.

We are elated to update these results and report a meaningful improvement in median Overall Survival of 53% and 32% at one and two years. These survival outcomes are exciting as they are as much as double the one- and two-year survival rates r/r AML patients can expect with current therapies. We are enthused by this compelling proof of

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concept data as it validates our strategy of developing Actimab-A as a backbone therapy and sets the foundation for advanced development. The full data set will be presented at the annual meeting of the American Society of Hematology in December, and we will provide a program update on future development in 2023.

R&D at Actinium is robust, differentiated and practical and given the competitive environment, we are glad that we made the strategic decision years ago to avoid programs with low competitive differentiation potential where multiple radiotherapy companies are focused. Our research collaborations with Astellas, AVEO Oncology and EpicentRx establish our work with immunotherapies and in solid tumors. Our R&D team has ably supported advancement of our Iomab-B and Actimab-A programs in hematology. The Iomab-ACT and Actimab-A combination strategy programs have been informed by their efforts. Solid tumor programs with partner Astellas and the HER3 targeted radiotherapy are novel and cutting edge, as is our work with daratumumab-Ac-225 and other radiotherapy combinations with the immunotherapy magrolimab-CD47 checkpoint inhibitor in both liquid and solid tumors. Underpinning these programs is our expanded patent portfolio of over 195 issued patents and pending patent applications worldwide. Our IP includes several patent families to manufacture Actinium-225 in a cyclotron, and valuable know-how. When appropriate, we are well-positioned to leverage this technology to produce Actinium-225. We look forward to sharing updates as these programs advance to the next phase.

Our balance sheet is strong with the \$111.8 million cash reported at the end of 3Q:2022 expected to fund us well into 2025 and enable us to achieve several more value creating milestones. Our partnership with Immedica Pharma AB to commercialize Iomab-B in the EUMENA region provided a \$35 million payment upfront and has the potential for up to \$452 million in milestone payments and mid-twenty percent royalties. The market potential is extremely compelling in the EU and approximately 50% larger with 15,000 patients with r/r AML and double the number of BMTs performed than in the US.

Our achievements this year provide a stellar foundation upon which we can execute on our corporate strategy as we continue the momentum into 2023. We are hyper focused on delivering a successful BLA filing to obtain approval for Iomab-B and building the capabilities for a successful commercial launch. We will continue to advance our clinical programs by focusing on the Iomab-B lifecycle management plan, Actimab-A combination trials and Iomab-ACT program in cell and gene therapies. We will continue to advance our R&D programs and partnerships into the next phases of development.

We have continued to bolster our leadership team this year to execute and deliver on our strategic plan. Despite the competitive hiring market in the industry, we have continued to attract key talent, including senior leaders across the clinical, commercial, manufacturing, and G&A functions. Additional details on the profiles of our expanded team are included in the Appendix. We will need to continue to hire great talent and in order to attract such individuals to drive value creation, we request that you support the options plan proposal recommended by your Board of Directors in the proxy statement. We ask for your much-needed support, which will enable us to deliver value to you, our shareholders.

As we race toward a very eventful end of year, we are energized to forge forward with the same intensity to prepare for a monumental year for the company in 2023. Your continued support has made this year possible, and TEAM Actinium thanks you for your unwavering support to helping us achieve our goal to bring innovative medicines to people who urgently need new treatment options.

Sincerely and on Behalf of TEAM ACTINIUM,



Sandesh Seth
Chairman and Chief Executive Officer

Appendix — Review and Outlook

In this section, we share our vision for building a leading specialty radiotherapeutics company, following a pivotal (pun intended) year for the Company with positive Phase 3 SIERRA trial results that could establish a new treatment paradigm for the difficult-to-treat r/r AML population. Iomab-B has the potential to greatly improve the patient journey and the way patients are being managed to provide them greater access to BMTs. Additional label enhancing and life cycle management studies are needed to further develop Iomab-B to establish it as a universal conditioning agent for various hematological malignancies. The compelling data from the Actimab-A + CLAG-M combination trial validates our strategy of developing Actimab-A as a backbone therapy in AML and other hematological malignancies, and we look forward to a comprehensive update on this program next year. Recent additions to our senior leadership team positions us well to execute seamlessly in the coming year, with details highlighted in their biographies.

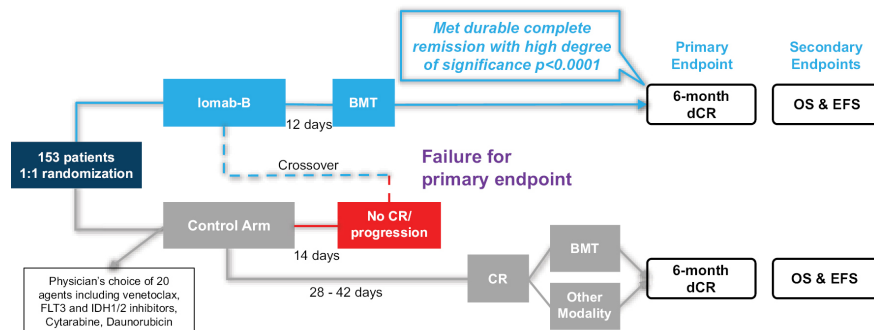
The Transformational Opportunity for Targeted Conditioning

Remissions in the r/r AML population are difficult to achieve. Preparation of the bone marrow for transplant requires conditioning with either high dose or reduced intensity chemotherapy and/or external radiation. Patients are often unable to achieve a remission or are not medically fit to tolerate current conditioning regimens — their prognosis is poor. This results in disease relapse or limited access to BMT, the only curative treatment option for the r/r AML population. Iomab-B represents a potential paradigm shift as patients with active disease can be effectively conditioned and access BMT with universal engraftment.

Of the nearly 21,000 patients diagnosed with AML each year, ~50% of patients will become relapsed or refractory, yet less than 500 r/r AML or just 4.5% of patients received a BMT. Typically, r/r AML patients are not transplanted as they are unfit and cannot withstand highly toxic chemotherapy-based conditioning regimens to myeloablate their bone marrow before receiving the hematopoietic stem cells. With survival of two to four months expected for this population without a potentially lifesaving BMT, our focus is on increasing patient access to a BMT and improving their outcomes via Iomab-B, which is well tolerated due to its highly targeted nature. We believe that Iomab-B can address this initial market of ~10,000 r/r AML patients who do not have access to potentially curative BMT with existing treatment approaches.

The recently announced topline results from the SIERRA (Study of Iomab-B in Elderly Relapsed or Refractory AML) trial showed that Iomab-B met the primary endpoint of durable complete remission (dCR) of 6-months following initial complete remission after HCT with a high degree of significance ($p < 0.0001$) compared to the control arm. The SIERRA trial is a randomized, multi-center, controlled study which compared Iomab-B as a conditioning regimen prior to a BMT versus a control arm which allowed all current means of conventional care with the intent to transplant these patients. Iomab-B improved BMT access, and produced a statistically higher number of durable remissions, a major clinical benefit, in patients not considered eligible for BMT.

Pivotal Phase 3 SIERRA Results: Primary Endpoint Achieved



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The positive Iomab-B Phase 3 SIERRA trial results support continued expansion of targeted conditioning for BMT in other blood cancers, cellular therapy and gene therapy indications. We plan to leverage this clinical data, alongside our prior clinical experience in multiple r/r hematological malignancies to disrupt today's conditioning regimens, with a potential game-changer that can improve access and outcomes for hard-to-treat patients who have no options. We believe leveraging our experience developing Iomab-B and prior clinical data to expand our conditioning program into cell and gene therapy indications, an evolving and high-growth area of treatment innovation, can significantly expand the number of patients who could benefit from Iomab-B or Iomab-ACT. We intend to continue to develop the Iomab-ACT program as a low-dose version of Iomab-B designed specifically for use prior to CAR-T and gene therapies, ultimately with the same value proposition as Iomab-B — to improve overall access and outcomes for patients who need cellular or gene therapies.

With the highly positive topline data in hand and strong investigator support, we look forward to highlighting additional SIERRA data at upcoming BMT focused conferences to convey Iomab-B's value proposition to our target physician community. Our team is hard at work and focused on submitting a BLA in 2023, with the intent of securing what we hope will be the first of many approved indications for Iomab-B. We are also progressing our efforts to initiate an Early Access Program that will broaden the real-world experience with Iomab-B. In 2023, we are excited to build upon the promise of Iomab-B by further developing the lifecycle plan and continue to make progress on Iomab-ACT.

Discovering High Potential of Actimab-A in r/r AML

Our Actimab-A program demonstrates our leadership in the clinical development of Ac225 therapeutics, as we focus this industry leading alpha-isotope based radiotherapy program as a backbone therapy for novel combinations in r/r AML. Actimab-A is the first radiotherapeutic for r/r AML and has the unique value proposition of broad applicability, a differentiated mechanism of action, and targeted precision that is well-tolerated with minimal toxicity. Specifically, Actimab-A targets CD33, which is expressed in virtually all AML patients regardless of cytogenetics or mutations and enables potent alpha radiation to be directed against radiosensitive AML cells that have no known resistance or repair mechanism when hit with the Ac-225 isotope payload that causes double stranded breaks in DNA.

We believe that Actimab-A in combination with chemotherapy, targeted agents or immunotherapy, in r/r AML as a backbone therapy, represents a significant opportunity to improve patient outcomes in AML based on the data being generated thus far. We have demonstrated preclinically that combinations of Actimab-A and venetoclax, a BCL-2 inhibitor, have mechanistic synergies. Overexpression of MCL-1, an anti-apoptotic protein, is associated with resistance to venetoclax in AML. Actimab-A kills tumor cells with DNA double-strand breaks and downregulates MCL-1, which can (re-)sensitize AML cells or reduce tumor resistance to venetoclax. In our ongoing clinical trial with Actimab-A and venetoclax, we are exploring the optimal dose of Actimab-A, as well as the dosing regimen of the combination. The more advanced Actimab-A + CLAG-M clinical trial has yielded data that demonstrate favorable outcomes with improved survival when Actimab-A is combined with this intensive chemotherapy regimen. The scientific rationale for this combination is to use sequential administration of CLAG-M, a powerful chemotherapy regimen, followed by Actimab-A for its precision targeting ability that produces double-strand-DNA breaks that lead to cancer cell death to mop up residual disease.

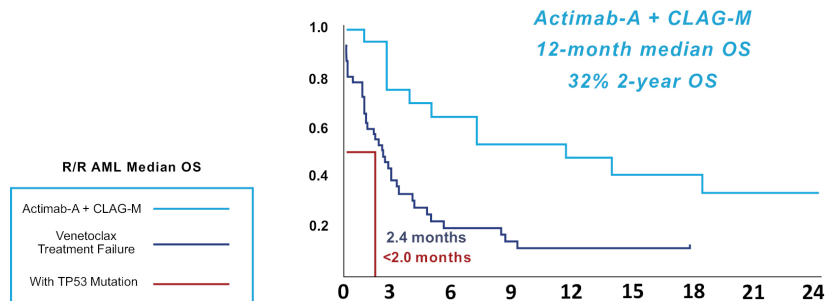
We are advancing Actimab-A in combination with CLAG-M in a phase I/II study, which has produced strong results in fit r/r AML patients. The data suggest a manageable safety profile and promising response rates. The study, enrolled patients with multiple prior treatments (Median 2 lines of prior therapy (range: 1 – 5)), including prior BMT and Venetoclax. The patient population represented a subset of patients who are extremely difficult to treat and have very poor outcomes on available therapies. Patients were a median age of 63 years and 57% had adverse cytogenetics with 52% having TP53 mutations. 55% of patients had failed prior BMT, 55% received prior Venetoclax therapy and 52% had secondary AML. As we reported earlier, the trial showed an Overall Response Rate (ORR) of 67% from all dose cohorts including subtherapeutic doses of Actimab-A and an 83% ORR at the recommended Phase 2 dose. Importantly, MRD negativity, which indicates a deep remission with no detectable disease, was 72% with Actimab-A + CLAG-M.

To provide context for this analysis, the median OS in patients who relapse post venetoclax is less than 3 months and the median OS in patients who relapse with a TP53 mutation is less than 2 months.

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We recently announced that Overall Survival (OS) data from the Actimab-A + CLAG-M combination trial has been accepted for oral presentation at the American Society of Hematology (ASH) Annual Meeting & Symposium in December. The ASH abstract reported a 12-month median OS among all patients, and a 1-year OS of 53% and 2-year OS of 32%, which are as much as double or more what can be expected with available therapies in this setting. Overall survival has been dismal in r/r AML patients, especially those who have adverse cytogenetics or failed venetoclax based treatment. These results are highly encouraging and show that the high rates of responses and MRD negativity are translating to a meaningful survival benefit as can be evidenced in the figure below.

Improved Survival Outcomes with Actimab-A + CLAG-M



Overall survival reported in abstract accepted for oral presentation at ASH adapted to include results in comparable patients from other studies

The complete data will be presented at ASH, and we look forward to sharing more on our plans for advanced development of this very promising treatment regimen next year.

Further Bolstering of Our Senior Leadership Team

Our people make the foundation to our success, and we are extremely proud that we continue to attract top talent to Actinium as we effectively navigate the challenges in the talent market. We are delighted to have welcomed the following key additions to our team in anticipation of expected positive news we have now received on both Iomab-B and Actimab-B as they will significantly enhance our ability to execute our corporate plan across key functions:

Leadership Position	Relevant Qualifications and Recent Accomplishments
Caroline Yarbrough Chief Commercial Officer	<ul style="list-style-type: none">Portfolio General Manager US Oncology at Novartis Innovative Medicines with full P&L responsibility for a \$1.5BN revenue group of oncology brands and development assetsLed the commercial team that successfully launched SCEMBLIX in CML. Led strategic account management during the launch of KYMRIA, the first approved CAR-T productHeld leadership roles in both Global and US businesses, across Oncology and specialty medicines at companies including GSK, BMS, Viropharma and Merck

Leadership Position	Relevant Qualifications and Recent Accomplishments
Jenny Hsieh Chief Strategy Officer	<ul style="list-style-type: none"> Nearly two decades of experience in leading and developing corporate strategies across the healthcare and life sciences industries Led Corporate Strategy at Immunomedics to help transform the clinical stage company into a commercial organization (acquired by Gilead for \$21BN following the FDA approval of Trodelvy® in triple-negative breast cancer) Advised payers, providers, and life sciences companies as a management consultant at several firms
Sunitha Lakshminarayanan SVP, CMC and Product Development	<ul style="list-style-type: none"> 20+ years of experience and technical expertise across biologics, biosimilars, vaccines and cell/gene therapy products. Previously responsible for global licensure of two autologous cell therapies, Breyanzi® and Abecma® as Executive Director, Global Process Engineering at BMS for Cell Therapy Led several BLA filings, including approvals for Breyanzi®, Abecma®, Releuko® and Fylnetra® Responsible for new cell therapy facility build-outs for network expansions, technology transfers, product life-cycle management, new technology commercialization, comparability, and Global MS&T labs Held leadership roles at Kashiv BioSciences, Progenics, Laureate Pharma and BioReliance
Akash Nahar, MD VP, Clinical Development	<ul style="list-style-type: none"> Over 15 years of hematology-oncology research and development experience in academia and industry Held positions of increasing responsibilities, most recently serving as Global Product Development Lead for hematology programs at Merck, leading a team of physicians responsible for the development of the Keytruda® in Hodgkin's lymphoma, and other developmental products for hematological malignancies, in addition to successfully filing two sBLA for Keytruda® Board-certified in pediatrics, hematology/oncology, and oncology. Faculty member at St. Christopher's Hospital for Children in Philadelphia and an Associate Professor in pediatrics at Drexel University
Madhuri Vusirikala, MD VP, Clinical Development, Bone Marrow Transplant and Cellular Therapies	<ul style="list-style-type: none"> Accomplished bone marrow transplant physician and hematologist with over 20 years of clinical experience and board-certified in internal medicine, hematology and oncology Professor of Internal Medicine in the Division of Hematology/Oncology and Medical Director of the Adult Allogeneic BMT Program at UT Southwestern Medical Center in Dallas. Primary investigator for most clinical trials at UT Southwestern related to BMT Member on the NCCN panels for Hematopoietic Cell Transplantation and Acute Lymphoblastic Leukemia committees

Leadership Position	Relevant Qualifications and Recent Accomplishments
Patrik Brodin, MSc, PhD VP, Radiation Sciences	<ul style="list-style-type: none"> • Board-certified Medical Physicist & American Board of Radiology Therapeutic Medical Physics Diplomate. Previously Assistant Professor/Senior Physicist at Montefiore/Einstein (Radiation Oncology) • Spearheaded development of new approaches in radiation-driven immunotherapy and solutions to reduce risk of severe treatment complications associated with high-dose radiation therapy • Authored over 60 peer-reviewed publications and presented at national and international meetings including oral presentations at ESTRO, ASTRO, AAPM and PTCOG
Steve Dressel VP, Strategic Finance and Analysis	<ul style="list-style-type: none"> • Nearly 20 years of corporate finance and commercial experience • Previously, was the Senior Director, FP&A at Dewpoint Therapeutics responsible for budgeting, long-term planning, and analyses • Held finance leadership roles at Akebia Therapeutics that developed and marketed Auryxia®, and spent 10 years at Regeneron in finance roles with increasing responsibility supporting Praluent and EYLEA • Began career at Bio-IB, a life science focused investment bank
Elaina Haeuber VP, Head of Clinical Operations	<ul style="list-style-type: none"> • Over 20 years of clinical research operations and project management experience • Previously, the Vice President, Operations at WCG, overseeing data safety monitoring boards and independent event adjudication for clinical studies • As Executive Director, Operations Management at Syneos Health, led regional and global project and clinical management teams of up to 300 staff for oncology and hematology trials • Supported programs in including Tecentriq for multiple indications, Zynteglo, the first cell-based gene therapy approved for beta-thalassemia, and Skysona, a gene therapy for early, active cerebral ALD

More about the company is available on our web site www.actiniumpharm.com in general and with investor related materials accessible at <https://ir.actiniumpharma.com>.



November 21, 2022

Dear Fellow Stockholders:

You are cordially invited to attend the Annual Meeting of Stockholders (the "Annual Meeting") of Actinium Pharmaceuticals, Inc. to be held at 9:30 a.m., Eastern Time, on December 8, 2022, at The Garden City Hotel, 45 Seventh St, Garden City, NY 11530.

Annual Meeting Details

Enclosed with this letter are your Notice of Annual Meeting of Stockholders (the "Notice of Annual Meeting"), proxy statement and proxy card. Also provided is the Company's 2021 Annual Report, which includes our annual report on [Form 10-K](#) for the fiscal year ended December 31, 2021. The proxy statement describes the business that will be acted upon at the Annual Meeting. Accordingly, we urge you to review the accompanying material carefully and to promptly return the enclosed proxy card or voting instruction form. Our proxy statement and the 2021 Annual Report are also available at www.viewproxy.com/actiniumpharma/2022.

While as of the date of this proxy statement we are intending to hold the Annual Meeting in a physical format, as part of our precautions regarding the coronavirus, or COVID-19, we reserve the right to reconsider the date, time, and/or means of convening the Annual Meeting, including holding the Annual Meeting by means of remote communications. If we take this step, we will announce the decision to do so as soon as practicable via a press release that will also be filed with the Securities and Exchange Commission (the "SEC") as proxy material, as well as by posting details on our website at <https://www.actiniumpharma.com/>. Please monitor our press releases and check our website regularly until the Annual Meeting for updated information.

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 November 28, 2022, by e-mail to investorrelations@actiniumpharma.com, mail to Actinium Pharmaceuticals, Inc., 275 Madison Avenue, 7th Floor, New York, New York 10016, or telephone at (646) 677-3875.

Your vote is very important, regardless of the number of shares of our voting securities that you own. Whether or not you expect to be present at the Annual Meeting, after receiving the Notice of Annual Meeting please vote as promptly as possible to ensure your representation and the presence of a quorum at the Annual Meeting. As an alternative to voting in person at the Annual Meeting, you may vote via the Internet, by telephone, or by signing, dating and returning the proxy card that is enclosed with the Notice of Annual Meeting. If your shares are held in the name of a broker, trust, bank or other nominee, and you receive these materials through your broker or through another intermediary, please complete and return the materials in accordance with the instructions provided to you by such broker or other intermediary or contact your broker directly in order to obtain a proxy issued to you by your nominee holder to attend the Annual Meeting and vote in person at the Annual Meeting. Failure to do so may result in your shares not being eligible to be voted by proxy at the Annual Meeting. On behalf of the Board of Directors, I urge you to submit your vote as soon as possible, even if you currently plan to attend the meeting in person.

On behalf of the team at Actinium,

Sincerely,

/s/ Sandesh Seth

Sandesh Seth

Chairman and Chief Executive Officer

ACTINIUM PHARMACEUTICALS, INC.
275 Madison Avenue, 7th Floor
New York, New York 10016

NOTICE OF ANNUAL MEETING OF STOCKHOLDERS

To Our Stockholders:

NOTICE IS HEREBY GIVEN that the 2022 Annual Meeting of Stockholders (the “Annual Meeting”) of Actinium Pharmaceuticals, Inc. (the “Company”) will be held on Thursday, December 8, 2022, at 9:30 a.m. (Eastern Time) at The Garden City Hotel, 45 Seventh St, Garden City, NY 11530. 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 November 28, 2022, by e-mail to investorrelations@actiniumpharma.com, mail to Actinium Pharmaceuticals, Inc., 275 Madison Avenue, 7th Floor, New York, New York 10016, or telephone at (646) 677-3875.

While as of the date of this proxy statement we are intending to hold the Annual Meeting in a physical format, as part of our precautions regarding the coronavirus, or COVID-19, we reserve the right to reconsider the date, time, and/or means of convening the Annual Meeting, including holding the Annual Meeting by means of remote communications. If we take this step, we will announce the decision to do so as soon as practicable via a press release that will also be filed with the SEC as proxy material, as well as by posting details on our website at <https://www.actiniumpharma.com/>. Please monitor our press releases and check our website regularly until the Annual Meeting for updated information.

We are holding the Annual 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 threeyear term that expires at the 2025 Annual Meeting of Stockholders, or until his successor is elected and qualified or until his earlier resignation or removal;
2. To approve an amendment to the Actinium Pharmaceuticals’ Inc. 2019 Plan to increase the total number of shares of common stock authorized for issuance under such plan from 5,833,333 by 3,500,000, to a total of 9,333,333 shares to attract and retain the best available personnel and to support planned hiring efforts as the Company grows;
3. To ratify the appointment of Marcum LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2022; and
4. To approve, on a non-binding advisory basis, the compensation of our named executive officers.

In addition, stockholders may be asked to consider and vote upon such other business as may properly come before the Annual Meeting or any adjournment or postponement thereof. After careful consideration, **the Board of Directors unanimously recommends a vote “FOR” Proposals 1, 2, 3 and 4.**

Only stockholders of record as of November 14, 2022 (the “Record Date”) are entitled to notice of, and to vote at, the Annual Meeting and any postponement or adjournment thereof. For ten calendar days prior to the Annual Meeting, a complete list of the stockholders entitled to vote at the Annual Meeting will be available during ordinary business hours at our principal executive offices for examination by any stockholder for any purpose relating to the Annual Meeting. If you want to inspect the stockholder list prior to the meeting, please contact us by e-mail to investorrelations@actiniumpharma.com or by mail to Actinium Pharmaceuticals, Inc., 275 Madison Avenue, 7th Floor, New York, New York 10016. The email should state the purpose of the request and provide proof of ownership of our voting securities as of the Record Date. Such list of the stockholders will also be available during the Annual Meeting.

Your vote as an Actinium Pharmaceutical, Inc. stockholder is very important. With respect to all matters that will come before the Annual Meeting, each holder of shares of common stock is entitled to one vote for each share of common stock held as of 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.

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If your shares are registered in your name, even if you plan to attend the Annual Meeting or any postponement or adjournment of the Annual Meeting in person, we request that you vote via the Internet, by telephone, or by signing, dating and returning the enclosed proxy card to ensure that your shares will be represented at the Annual Meeting.

If your shares are held in the name of a broker, trust, bank or other nominee, and you receive these materials through your broker or through another intermediary, please complete and return the materials in accordance with the instructions provided to you by such broker or other intermediary or contact your broker directly in order to obtain a proxy issued to you by your nominee holder to attend the Annual Meeting and vote in person. Failure to do so may result in your shares not being eligible to be voted by proxy at the Annual Meeting.

By Order of our Board of Directors,

/s/ Sandesh Seth

Chairman and Chief Executive Officer

New York, NY
November 21, 2022

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

**PROXY STATEMENT
FOR
ANNUAL MEETING OF STOCKHOLDERS**

GENERAL

Unless the context otherwise requires, references in this proxy statement to “we,” “us,” “our,” “the Company,” or “Actinium” refer to Actinium Pharmaceuticals, Inc., a Delaware corporation, and its subsidiaries as a whole. In addition, unless the context otherwise requires, references to “stockholders” are to the holders of our common stock, par value \$0.001 per share.

The enclosed proxy is solicited on behalf of the Board of Directors of Actinium Pharmaceuticals, Inc. (the “Board”) for use at our 2022 annual meeting of stockholders of the Company (the “Annual Meeting”) to be held on December 8, 2022, at the time and place and for the purposes set forth in the accompanying Notice of Annual Meeting of Stockholders and at any adjournment(s) or postponement(s) of the Annual Meeting. Voting materials, including this proxy statement and proxy card, are dated November 21, 2022 and are expected to be first made available to stockholders on or about November 21, 2022.

The executive offices of the Company are located at, and the mailing address of the Company is 275 Madison Avenue, 7th Floor, New York, New York 10016.

**IMPORTANT NOTICE REGARDING THE AVAILABILITY OF PROXY MATERIALS
FOR THE STOCKHOLDER MEETING TO BE HELD ON DECEMBER 8, 2022:**

This proxy statement, a form of the proxy card and our 2021 annual report to stockholders on Form 10K (the “Annual Report”) are available for viewing, printing and downloading at <http://www.viewproxy.com/actiniumpharma/2022> or by email at: requests@viewproxy.com. To view these materials, please have your control number available that appears on your 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, which includes our financial statements at www.sec.gov, or in the “SEC Filings” section of the “Investors” section of our website at www.actiniumpharma.com.

QUESTIONS AND ANSWERS

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

What is a proxy?

A proxy is another person that you legally designate to vote your stock. If you designate someone as your proxy in a written document, that document is also called a “proxy” or a “proxy card.” If you are a “street name” holder, you must obtain a proxy from your broker or nominee in order to vote your shares in person at the Annual Meeting.

What is a proxy statement?

A proxy statement is a document that regulations of the SEC require that we give to you when we ask you to sign a proxy card to vote your shares at the Annual Meeting.

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 threeyear term that expires at the 2025 Annual Meeting of Stockholders, or until his successor is elected and qualified or until his earlier resignation or removal;
- Proposal 2: To approve an amendment to the Actinium Pharmaceuticals’ Inc. 2019 Plan to increase the total number of shares of common stock authorized for issuance under such plan from 5,833,333 by 3,500,000, to a total of 9,333,333 shares to attract and retain the best available personnel and to support planned hiring efforts as the Company grows; and
- Proposal 3: To ratify the appointment of Marcum LLP (“Marcum”) as our independent registered public accounting firm for the fiscal year ending December 31, 2022.
- Proposal 4: To approve, on a non-binding advisory basis, the compensation of our named executive officers.

To consider and act upon any other business as may properly come before the Annual Meeting or any postponement or adjournment thereof.

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

Our Board unanimously recommends that the stockholders vote “FOR” Proposals 1, 2, 3 and 4 being put before our stockholders at the Annual Meeting.

What should I do if I receive more than one set of voting materials?

You may receive more than one set of the proxy materials (consisting of this proxy statement, the accompanying Notice, our 2021 Annual Report and the proxy card) or voting instruction card. For example, if you hold your shares in more than one brokerage account, you will receive a separate voting instruction card for each brokerage account in which you hold shares. Similarly, if you are a stockholder of record and also hold shares in a brokerage account, you will receive a copy of the proxy materials, including a proxy card, for shares held in your name and a voting instruction card for shares held in “street name.” Please complete, sign, date and return each proxy card and voting instruction card that you receive to ensure that all of your shares are voted.

What is the record date and what does it mean?

The record date to determine the stockholders entitled to notice of and to vote at the Annual Meeting is the close of business on November 14, 2022 (the “Record Date”). The Record Date is established by the Board as required by Delaware law. On the Record Date, 25,483,306 shares of common stock were issued and outstanding.

Who is entitled to vote at the Annual Meeting?

Holders of common stock at the close of business on the Record Date may vote at the Annual Meeting.

What are the voting rights of the stockholders?

Each holder of common stock is entitled to one vote per share of common stock on each matter to be acted upon at the Annual Meeting. Our Certificate of Incorporation, as amended (the “Charter”) does not provide for cumulative voting rights.

What happens if a change to the Annual Meeting is necessary due to exigent circumstances?

While as of the date of this proxy statement we are intending to hold the Annual Meeting in a physical format, as part of our precautions regarding the COVID-19, we reserve the right to reconsider the date, time, and/or means of convening the Annual Meeting, including holding the Annual Meeting by means of remote communications. If we take this step, we will announce the decision to do so as soon as practicable via a press release that will also be filed with the SEC as proxy material, as well as by posting details on our website at <https://www.actiniumpharma.com/>. Please monitor our press releases and check our website regularly until the Annual Meeting for updated information.

What is the difference between a stockholder of record and a “street name” holder?

If your shares are registered directly in your name with Action Stock Transfer Corporation, the Company’s stock transfer agent, you are considered the stockholder of record with respect to those shares. The Notice of Annual Meeting and the accompanying proxy materials have been sent directly to you by the Company.

If your shares are held in a stock brokerage account or by a bank or other nominee, the nominee is considered the record holder of those shares. You are considered the beneficial owner of these shares, and your shares are held in “street name.” The Notice of Annual Meeting and the accompanying proxy materials would have been forwarded to you by your nominee. As the beneficial owner, you have the right to direct your nominee concerning how to vote your shares by using the voting instructions the nominee included in the mailing or by following such nominee’s instructions for voting.

What is a broker non-vote?

Broker non-votes occur when shares are held indirectly through a broker, bank or other intermediary on behalf of a beneficial owner (referred to as held in “street name”) and the broker submits a proxy but does not vote for a matter because the broker has not received voting instructions from the beneficial owner and either (i) the broker does not have discretionary voting authority on the matter or (ii) the broker chooses not to vote on a matter for which it has discretionary voting authority. Under the rules of the New York Stock Exchange that govern how brokers may vote shares for which they have not received voting instructions from the beneficial owner, brokers are permitted to exercise discretionary voting authority only on “routine” matters when voting instructions have not been timely received from a beneficial owner. Proposal 3 is considered a “routine matter.” Therefore, if you do not provide voting instructions to your broker regarding such proposal, your broker will be permitted to exercise discretionary voting authority to vote your shares on such proposal. In the absence of specific instructions from you, your broker does not have discretionary authority to vote your shares with respect to Proposals 1, 2, and 4.

How do I vote?

If you are a record holder, you may vote your shares at the Annual Meeting in person or by proxy. 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, 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 nominees for director or should be voted for, against or abstained with respect to the amendment of the 2019 Plan and the ratification of the appointment of the Company’s independent

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registered public accountants. 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.* Stockholders may vote via the Internet at www.AALvote.com/atnm or by phone (as per instructions on the proxy card). You will need the control number included on your proxy card.
- *By mail.* If you received one or more printed 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.
- *In person at the Annual 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 November 28, 2022, by e-mail to investorrelations@actiniumpharma.com, mail to Actinium Pharmaceuticals, Inc., 275 Madison Avenue, 7th Floor, New York, New York 10016, or telephone at (646) 677-3875.

Telephone and Internet voting facilities for all stockholders of record will be available 24 hours a day and will close at 11:59 p.m., Eastern Standard Time, on December 7, 2022.

The proxy is fairly simple to complete, with specific instructions on the electronic ballot, telephone or proxy card. By completing and submitting it, you will direct the proxies to vote your shares at the Annual Meeting in accordance with your instructions. The Board has appointed Sandesh Seth to serve as the proxy for the Annual Meeting.

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 Annual 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 amendment of our 2019 Plan, the ratification of the appointment of our auditor and the advisory vote on the compensation of our 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 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 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. Proposal 3 — ratification of the appointment of Marcum as our independent registered public accounting firm is considered a routine matter, and thus your stockbroker, bank or other nominee may exercise their discretionary voting power with respect to Proposal 3. **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.” 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 S. Shetty as a member to our Board, Proposal 2 — the approval of the amendment to the 2019 Plan, and Proposal 4 — the advisory vote on the compensation of our 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 14, 2022, the Record Date for determining which stockholders are entitled to vote, there were 25,483,306 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 shares of common stock as of the Record Date must be present at the Annual Meeting (in person or represented by proxy) in order to hold the Annual 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 Annual Meeting or have properly submitted a proxy card or voted by fax, by phone or by using the Internet. Broker non-votes will be counted for purposes of determining whether a quorum is present.

Who counts the votes?

All votes will be tabulated by Gary Siegel, our Vice President, Controller, the inspector of election appointed for the Annual Meeting. Each proposal will be tabulated separately.

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 submit a notice of revocation to the Company addressed to Steve O’Loughlin, at the Company’s address above, which notice must be received before 5:00 p.m., Eastern Time, on November 28, 2022.

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 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 proxy statement to certain stockholders who share an address, unless otherwise requested. This practice, known as “householding.” If you share an address with another stockholder and have received only one proxy statement, you may write or call us to request to receive a separate proxy statement. Similarly, if you share an address with another stockholder and have received multiple copies of the proxy statement, you may write or call us at the address and phone number below to request delivery of a single copy of the proxy statement. For future annual meetings of stockholders, you may request separate proxy statements, or request that we send only one proxy statement to you if you are receiving multiple copies, by writing or calling us at:

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

Stockholders who own shares through a bank, broker or other intermediary can request householding by contacting the intermediary.

We hereby undertake to deliver promptly, upon written or oral request, a copy of the proxy statement to a stockholder at a shared address to which a single copy of the document was delivered. Requests should be directed to the address or phone number set forth above.

Who pays for the cost of this proxy solicitation?

Our Board is asking for your proxy, and 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. In addition, we have retained Alliance Advisors, LLC (“Alliance”) to assist in the solicitation of proxies for a fee of \$10,000 plus customary expenses.

Is this proxy statement the only way that proxies are being solicited?

No. In addition to the solicitation of proxies by use of the mail, officers and employees of the Company, as well as Alliance, the proxy solicitation firm hired by the Company, may solicit the return of proxies, either by mail, telephone, telecopy, e-mail or through personal contact. These officers and employees will not receive additional compensation for their efforts but will be reimbursed for out-of-pocket expenses. The fees of Alliance as well as the reimbursement of expenses of Alliance will be borne by the Company. Brokerage houses and other custodians, nominees and fiduciaries, in connection with shares of the common stock registered in their names, will be requested to forward solicitation material to the beneficial owners of shares of common stock.

How can I obtain a copy of Actinium Pharmaceuticals, Inc.’s Annual Report?

This proxy statement and the Annual Report are available for viewing, printing and downloading at www.viewproxy.com/actiniumpharma/2022. To view these materials, please have your 11-digit control number(s) available that appears on your 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, which includes our financial statements, for the fiscal year ended December 31, 2021 on the website of the SEC, at www.sec.gov, or in the “All SEC Filings” section of the “Investors” section of our website at www.actiniumpharma.com. You may also obtain a printed copy of our Annual Report, including our financial statements, free of charge, from us by sending a written request to: Actinium Pharmaceuticals, Inc., 275 Madison Avenue, 7th Floor, New York, NY 10016, attention: Chief Financial Officer.

What is the voting requirement to elect directors?

Assuming the presence of a quorum, 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 Annual Meeting. Abstentions or broker non-votes will not affect the outcome of the election of directors.

What is the voting requirement to approve Proposal 2?

Assuming the presence of a quorum, the proposal to approve the amendment to the 2019 Plan will require approval by a majority of votes cast, with abstentions counting as a vote cast. An abstention is not an “affirmative vote,” but it is considered as a vote cast pursuant to Section 711 of the NYSE American Company Guide. Accordingly, an abstention will have the effect of a vote against Proposal 2. Broker non-votes will have no effect on Proposal 2.

What is the voting requirement to approve Proposal 3?

Assuming the presence of a quorum, the proposal to ratify the appointment of Marcum as our independent registered public accounting firm will be approved if the affirmative vote of a majority of the shares represented in person or by proxy and entitled to vote thereon at the Annual Meeting is obtained. An abstention is not an “affirmative vote,” but an abstaining stockholder is considered “entitled to vote” at the Annual Meeting. Accordingly, an abstention will have the effect of a vote against Proposal 3. Brokers are considered “entitled to vote” because brokers have discretionary voting authority on Proposal 3. Because a broker non-vote is not an “affirmative vote,” a broker non-vote will have the effect of a vote against Proposal 3.

What is the voting requirement to approve Proposal 4?

Assuming the presence of a quorum, the advisory vote on the compensation of our named executive officers will be approved if the affirmative vote of a majority of the shares represented in person or by proxy and entitled to vote thereon at the Annual Meeting is obtained. An abstention is not an “affirmative vote,” but an abstaining stockholder is considered “entitled to vote” at the Annual Meeting. Accordingly, an abstention will have the effect of a vote against Proposal 4. Broker non-votes will have no effect on Proposal 4.

Do I Have Dissenters’ (Appraisal) Rights?

Appraisal rights are not available to our stockholders with any of the proposals described above to be brought before the Annual Meeting.

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 Chief Executive Officer. Stockholders can send communications by mail to:

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

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

WHO CAN HELP ANSWER YOUR QUESTIONS?

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

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

CORPORATE GOVERNANCE

Board of Directors

The Board 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 Chief Executive Officer, other key executives, and by reading the reports and other materials that we send them and by participating in Board and committee meetings. Biographical information about our directors is provided in the section “Directors and Executive Officers”.

Term of Office

Our directors are divided into three classes, designated Class I, Class II and Class III. Class I consists of two directors, Class II 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 Expiration
David Nicholson	Class I	2023 Annual Meeting
Richard I Steinhart	Class I	2023 Annual Meeting
Sandesh Seth	Class II	2024 Annual Meeting
Jeffrey W. Chell	Class II	2024 Annual Meeting
Ajit S. Shetty	Class III	2022 Annual Meeting

Directors elected at each annual meeting are elected for a three-year term. Notwithstanding the foregoing, each director shall serve until his successor is duly elected and qualified, or until his retirement, death, resignation or removal.

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 Section 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. Under the 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 and Role in Risk Oversight

Our Board currently consists of five directors, and the positions of Chairman of the Board and principal executive officer are filled by Mr. Sandesh Seth, coupled with a lead independent director position to further strengthen the leadership structure. The Board acknowledges that there are different leadership structures that could allow it to effectively oversee the management of the risks relating to the Company’s operations. However, our Board believes that having Mr. Seth as the Chairman of the Board and the Chief Executive Officer provides an efficient and effective leadership model for the Company, as such structure allows our independent directors to share responsibility in leading the Board, while allowing Mr. Seth to focus primarily on managing the operations of Company.

David Nicholson has been serving as our lead independent director (the “Lead Independent Director”) since September 2017. Our Lead Independent Director chairs the executive sessions of our Board meetings; provides feedback to the Chairman and Chief Executive Officer; if appropriate, and in coordination with executive management, is available for consultation and direct communication with major stockholders; and leads the Board’s evaluation of the Chairman and Chief Executive Officer. We have a separate chair for each committee of our Board, 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.

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Our Board is responsible for overseeing the Company's risk management processes. The Board receives reports from management concerning the Company's assessment of risks and considers the Company's risk profile. The Board focus on the most significant risks facing the Company and the Company's general risk management strategy. In addition, as part of its oversight of our Company's executive compensation program, the Board considers the impact of such program, and the incentives created by the compensation awards that it administers, on our Company's risk profile. In addition, the Board, based on the Compensation Committee's review of all of our compensation policies and procedures, considers the incentives that they create and factors that may reduce the likelihood of excessive risk taking and determines whether they present a significant risk to our Company. The Board has determined that, for all employees, our compensation programs do not encourage excessive risk and instead encourage behaviors that support sustainable value creation.

Board of Directors Meetings and Attendance

During 2021, our Board held fourteen meetings. 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, 2021. It is our policy that directors should make every effort to attend the annual meeting of stockholders. At our 2021 Annual Meeting of stockholders, the Company was represented by our Chief Financial Officer and Vice President, Controller with our Chairman and CEO participating by phone and no other directors in attendance as no shareholders registered to attend in advance of the meeting.

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. The Code of Business Conduct and Ethics addresses, among other things, competition and fair dealing, conflicts of interest, protection and proper use of Company assets, government relations, compliance with laws, rules and regulations and the process for reporting violations of the Code of Business Conduct and Ethics, employee misconduct, improper conflicts of interest or other violations. A copy of the Code of Business Conduct and Ethics is available on the Investor section of our website at www.actiniumpharma.com. We will post on our website any amendment to our Code of Business Conduct and Ethics or waivers of our Code of Business Conduct and Ethics for directors and executive officers.

Under our Code of Business Conduct and Ethics, no Corporate director, officer or other employee, agent or contractor may, directly or indirectly, sell any equity security, including derivatives, of the Corporation (1) if he or she does not own the security sold, or (2) if he or she owns the security, does not deliver it against such sale (a "short sale against the box") within twenty days thereafter, or does not within five days after such sale deposit it in the mails or other usual channels of transportation. No Corporate director, officer or other employee, agent or contractor may engage in short sales, which are defined as any transactions whereby one may benefit from a decline in the Corporation's stock price.

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 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 Chief Executive Officer of Actinium Pharmaceuticals, Inc., 275 Madison Avenue, 7th Floor, New York, NY 10016. Correspondence received that is addressed to the non-employee directors will be reviewed by our Chairman and Chief Executive Officer or his designee, who will regularly forward to the

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non-employee directors a summary of all such correspondence and copies of all correspondence that, deals with the functions of our Board 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 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 have been no material legal proceedings that would require disclosure under the federal securities laws that are material to an evaluation of the ability or integrity of our directors or executive officers, or in which any director, officer, nominee or principal stockholder, or any affiliate thereof, is a party adverse to us or has a material interest adverse to us.

BOARD COMMITTEES**Committees of the Board of Directors**

Our Board has formed three standing committees: Audit, Compensation and Nominating 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	Nominating and 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 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. The Audit Committee met four times during 2021. 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 three times during 2021. Each member of the Compensation Committee was present at the meeting held in 2021. 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. The Compensation Committee paid consultant fees to StreeterWyatt of \$22,000 during the year ended December 31, 2021. Streeter Wyatt was instructed to providing support and analyses to the compensation committee and their services included development of a peer group regarding executive and director compensation.

Nominating and Corporate Governance Committee

Our Nominating and Corporate Governance Committee, which currently consists of three directors, is charged with the responsibility of reviewing our corporate governance policies and proposing potential director nominees to the Board for consideration. Our Board has determined that each member of our Nominating and Corporate Governance Committee qualifies as an “independent” member of the Board as defined by the rules and regulations of the SEC and the NYSE American. The Nominating and Corporate Governance Committee was formed on November 4, 2021 and met one time during 2021.

Our Nominating and Corporate Governance Committee’s primary responsibilities and obligations include, among other things:

- overseeing the administration of our Code of Business Ethics and Conduct and related policies;
- leading the search for and recommending individuals qualified to become members of the Board, and selecting director nominees to be presented for election by the shareholders at each annual meeting;
- ensuring, in cooperation with the Compensation Committee, that no agreements or arrangements are made with directors or relatives of directors for providing professional or consulting services to us or our affiliate or individual officer or one of their affiliated, without appropriate review and evaluation for conflicts of interest;
- assessing the independence of directors annually and report to the Board;
- recommending to the Board for its approval, the leadership structure of the Board, including whether the Board should have an executive or non-executive Chairman, whether the roles of Chairman and Chief Executive Officer should be combined, and whether a Lead Director of the Board should be appointed; provided that such structure shall be subject to the bylaws of the Company then in effect;
- ensuring that Board members do not serve on more than six other for-profit public company boards that have a class of securities registered under the Exchange Act in addition to the Board;
- reviewing the Board’s committee structure and to recommend to the Board for its approval directors to serve as members of each committee as well as recommendations for committee chairs;
- reviewing and recommending changes to procedures whereby shareholders may communicate with the Board;
- reviewing recommendations received from shareholders for persons to be considered for nomination to the Board;
- monitoring compliance with our corporate governance guidelines;
- developing and implementing an annual self-evaluation of the Board, both individually and as a Board, and of its committees;

Our Nominating and Corporate Governance Committee considers all qualified candidates identified by members of the Board, by senior management and by stockholders. The Committee follows the same process and uses the same criteria for evaluating candidates proposed by stockholders, members of the Board and members of senior management. When evaluating a candidate to serve on our Board, the members of our Nominating and Corporate Governance Committee consider 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.

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Our Amended and Restated Bylaws, as amended (the “Bylaws”) contains provisions that address the process by which a stockholder may nominate an individual to stand for election to the Board at our annual meetings. To recommend a nominee for election to the Board, a stockholder must submit his or her recommendation to our Secretary at our corporate offices at 275 Madison Avenue, 7th Floor, New York, New York 10016. Such nomination must satisfy the notice, information and consent requirements set forth in our Bylaws and must be received by us prior to the date set forth under “Submission of Future Stockholder Proposals” below. A stockholder’s recommendation must be accompanied by the information with respect to stockholder nominees as specified in our Bylaws, including among other things, the name, age, address and occupation of the recommended person, the proposing stockholder’s name and address, the ownership interests of the proposing stockholder and any beneficial owner on whose behalf the nomination is being made (including the number of shares beneficially owned, any hedging, derivative, short or other economic interests and any rights to vote any shares) and any material monetary or other relationships between the recommended person and the proposing stockholder and/or the beneficial owners, if any, on whose behalf the nomination is being made.

Our approach toward Board diversity takes into consideration the overall composition and diversity of the Board and areas of expertise that director nominees may be able to offer, including business experience, knowledge, abilities, customer relationships and appropriate perspectives on environmental, social and governance matters. Generally, we strive to assemble and maintain a Board that brings to us a variety of perspectives and skills derived from business and professional experience as we may deem are in our and our stockholders’ best interests. In doing so, we also consider candidates with appropriate non-business backgrounds.

DIRECTOR COMPENSATION

The following table sets forth the compensation of our non-employee directors for 2021:

Name	Fees Earned or Paid in Cash	Stock Awards	Option Awards ⁽¹⁾	All Other Compensation	Total
Jeffrey W. Chell ⁽²⁾	\$ 51,000	—	\$ 76,338	—	\$ 127,338
David Nicholson	\$ 63,000	—	\$ 76,338	—	\$ 139,338
Ajit S. Shetty	\$ 58,500	—	\$ 76,338	—	\$ 134,838
Richard Steinhart	\$ 63,000	—	\$ 76,338	—	\$ 139,338

- (1) The dollar amounts in this column represent the aggregate grant date fair value of all option awards granted during the indicated year. These amounts have been calculated in accordance with Financial Accounting Standard Board (“FASB”) Accounting Standard Codification (“ASC”) Topic 718, using the Black-Scholes option-pricing model. For a discussion of valuation assumptions, see Note 6 to our financial statements in the Annual Report. These amounts do not necessarily correspond to the actual value that may be recognized from the option awards by the NEOs.
- (2) At December 31, 2021, the aggregate number of option awards outstanding for each director was as follows: (i) for Dr. Chell, 40,017, (ii) for Dr. Nicholson, 46,679, (iii) for Dr. Shetty, 40,017, and (iv) for Mr. Steinhart, 45,015.

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:

Board Committee	Chairman	Member
Audit	\$ 20,000	\$ 6,000
Compensation	\$ 10,000	\$ 5,000
Nominating and Corporate Governance	\$ 7,500	\$ 3,000

In 2021, we granted each non-employee director options to purchase 18,351 shares of our common stock with an exercise price of \$6.07 per share with a term of 10 years. Pursuant to the terms of the 2019 Plan, 2% of the options vest each month from the date of grant.

AUDIT COMMITTEE REPORT

Report of the Audit Committee of the Board of Directors

The Audit Committee provides assistance to the Board 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, 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 2021.

With respect to the fiscal year ended December 31, 2021, in addition to its other work, the Audit Committee:

- Reviewed and discussed with management our audited consolidated financial statements as of December 31, 2021 and for the year then ended;
- Discussed with Marcum the matters required to be discussed by the applicable requirements of the Public Company Accounting Oversight Board (“PCAOB”) and the SEC; and
- Received the written disclosures and the letter from Marcum required by the applicable requirements of the PCAOB regarding the independent accountant’s communications with the Audit Committee concerning independence and has discussed with Marcum its independence.

The Audit Committee recommended, based on the review and discussion summarized above, that the Board include the 2021 audited consolidated financial statements in the 2021 [Form 10-K](#) for the fiscal year ended December 31, 2021 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 as the independent registered public accounting firm to conduct the audit of our consolidated financial statements for the 2021 fiscal year and to report on our consolidated balance sheets, statements of income and other related statements.

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 years ending December 31, 2021 and 2020, respectively, by Marcum LLP (PCAOB ID Number 688).

	Year Ended December 31, 2021	Year Ended December 31, 2020
Audit Fees	\$ 128,400	\$ 130,004
Audit-Related Fees	20,600	83,630
Tax Fees	—	
All Other Fees	—	
Total	\$ 149,000	\$ 213,634

Audit Fees. This category includes the audit of our annual consolidated financial statements, reviews of our financial statements included in our Form 10-Qs and services that are normally provided by our independent registered public accounting firm in connection with its engagements for those years.

Audit-Related Fees. This category consists of assurance and related services by our independent registered public accounting firm that are reasonably related to the performance of the audit or review of our financial statements and are not reported above under "Audit Fees." The services for the fees disclosed under this category include consents regarding equity issuances.

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. Under the policies, the Audit Committee is required to pre-approve all audit services and permitted non-audit and tax services provided by the independent registered public accountants in order to ensure that the provision of such services does not impair the registered accountants' independence.

All of the services rendered by Marcum in 2021 were pre-approved by the Audit Committee.

DIRECTORS AND EXECUTIVE OFFICERS**Directors And Executive Officers**

The names, positions and ages of our directors and executive officers as of November 14, 2022, are as follows:

Name	Age	Position
Sandesh Seth	58	Chairman and Chief Executive Officer
Steve O'Loughlin	37	Chief Financial Officer and Corporate Secretary (Principal Financial and Accounting Officer)
Jeffrey W. Chell, M.D.	68	Director
David Nicholson, Ph.D.	67	Lead Independent Director
Richard I. Steinhart	65	Director
Ajit S. Shetty, Ph.D.	76	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 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 Chief Executive Officer

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 was chairman of Relmada Therapeutics Inc., a specialty pharma company focused on CNS therapeutics, which he helped co-found. 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 by the Regulatory Affairs Professionals Society which signifies proficiency with U.S. FDA regulations. He has several patents related to use of radiopharmaceuticals as conditioning agents for adoptive cell therapies and as therapeutic combinations.

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.

Steve O'Loughlin, Chief Financial Officer

Steve O'Loughlin has been our Chief Financial Officer since August 2020. Mr. O'Loughlin served as our Principal Financial Officer from May 2017 to August 2020. 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 chief executive officer 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 fivefold 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 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.

That Dr. Chell brings many years of experience with patient donor programs, knowledge of challenges related to bone marrow transplants, leadership of organizations and experience working in medical groups to our Board, led us to conclude that Dr. Chell should serve as a director.

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 our Nominating and Corporate Governance Committee. Since March 2015, Dr. Nicholson served as Executive Vice President and Chief R&D Officer of Allergan, which was acquired by Abbvie in May 2020. In August 2014, Dr. Nicholson joined Allergan (previously known as 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-Wülffing 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 U.S. 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 Nominating and Corporate Governance Committee. Dr. Shetty joined Janssen Pharmaceutical, Inc. (“Janssen”) 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, 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 chief executive officer 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 more than 30 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 Nominating and Corporate Governance Committee. Since October 2017 Mr. Steinhart has been the senior vice president and 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 chief financial officer at Remedy Pharmaceuticals, a privately-held, clinical stage pharmaceutical company. From January 2014 through September 2015 Mr. Steinhart worked as 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 its vice president, finance and chief financial officer, treasurer and secretary. In April 2012, Mr. Steinhart received a promotion to senior 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 more than 30 years of financial experience to our Board, having served in various executive-level financial 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.

The following table sets forth the names and positions of: (i) each person who served as our principal executive officer during the year ended December 31, 2021; (ii) our two most highly compensated executive officers, other than our principal executive officer, who was serving as an executive officer, as determined in accordance with the rules and regulations promulgated by the SEC, as of December 31, 2021, with compensation of \$100,000 or more, and (iii) two additional individuals for whom disclosure would have been provided pursuant to clause (ii) but for the fact that the individuals were not serving as our executive officers at December 31, 2021 (collectively our "Named Executive Officers"):

Name	Position
Sandesh Seth	Chairman and Chief Executive Officer
Steve O'Loughlin	Chief Financial Officer
Mark Berger*	Former Chief Medical Officer
Dale Ludwig**	Former Chief Scientific and Technology Officer

* On September 24, 2021, Dr. Berger resigned as the Chief Medical Officer.

** On July 26, 2021, Dr. Ludwig resigned as the Chief Scientific and Technology Officer.

Summary Compensation Table

The following table provides information regarding the compensation earned during the years ended December 31, 2021 and 2020 for our named executive officers.

Name/Position	Year	Salary	Bonus ⁽¹⁾	Option Awards ⁽²⁾	All Other Compensation	Total
Sandesh Seth	2021	\$ 615,000	\$ 430,000	\$ 1,290,323	\$ —	\$ 2,335,323
Chairman and Chief Executive Officer	2020	\$ 578,191	\$ 315,000	\$ 938,537	\$ —	\$ 1,831,728
Steve O'Loughlin	2021	\$ 370,000	\$ 150,000	\$ 447,034	\$ —	\$ 967,034
Chief Financial Officer	2020	\$ 330,000	\$ 90,000	\$ 398,640	\$ —	\$ 818,640
Mark Berger ⁽³⁾	2021	\$ 304,962	\$ —	\$ 279,395	\$ —	\$ 584,357
Former Chief Medical Officer	2020	\$ 415,000	\$ 100,000	\$ 314,958	\$ —	\$ 829,958
Dale Ludwig ⁽⁴⁾	2021	\$ 213,068	\$ —	\$ —	\$ —	\$ 213,068
Former Chief Scientific and Technology Officer	2020	\$ 375,000	\$ 105,000	\$ 337,453	\$ —	\$ 817,453

(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) The dollar amounts in this column represent the aggregate grant date fair value of all option awards granted during the indicated year. These amounts have been calculated in accordance with FASB ASC Topic 718, using the Black-Scholes option-pricing model. For a discussion of valuation assumptions, see Note 6 to our financial statements in the Annual Report. These amounts do not correspond to the value that may be recognized from the option awards.

On September 1, 2021, Mr. Seth was granted an option to purchase 310,182 shares of common stock and Mr. O'Loughlin was granted an option to purchase 107,463 shares of common stock. The options have an exercise price of \$6.07 per share and will expire on September 1, 2031. Pursuant to the terms of the Company's Amended and Restated 2019 Stock Plan, 2% of the options will vest each month from October 1, 2021 until fully vested.

Narrative Disclosure to Summary Compensation Table

Chief Executive Officer Compensation

On August 12, 2020, we and Mr. Seth entered into an employment agreement whereby Mr. Seth will serve as Chairman and Chief Executive Officer until February 24, 2024, unless terminated earlier as set forth in the employment agreement.

Under the terms of the employment agreement, Mr. Seth is entitled to (i) a base salary, which will be determined by the Board and adjusted to be competitively aligned to a range between the 25th and 75th percentile of the relevant market data of chief executive officer positions of similarly situated publicly companies, (ii) a performance bonus with a target of 50% of his annual base salary as well as other multipliers as determined by the Board and (iii) options to purchase shares of common stock of the Company as the Board may grant. For 2020, Mr. Seth's annual base salary was set at \$578,191, and for 2021, his annual base salary was set at \$615,000. When and if granted, options will have an exercise price equal to the closing price of the Company's common stock on the date of the approval, and 2% of the grant will vest each month from the grant date until fully vested, in accordance with the 2013 Stock Plan and 2019 Plan. The options will expire 10 years from the grant date, subject to Mr. Seth's continuing service with the Company. Mr. Seth also receives the standard benefits available to other similarly situated employees.

If Mr. Seth's employment as Chief Executive Officer or Chairman is terminated due to death or disability, Mr. Seth will be entitled to earned, but unpaid, salary, benefits and the Pro-Rated Bonus (as defined herein) for the year of termination. Upon termination of his employment for Cause (as defined in the employment agreement), or his resignation without Good Reason (as defined in the employment agreement), Mr. Seth will receive any accrued and unpaid base salary, the Pro-Rated Bonus and benefits through the date of termination.

If we terminate Mr. Seth's employment without Cause, or if Mr. Seth resigns for Good Reason, Mr. Seth will be entitled to (i) a single lump sum payment equal to the 24 months of his compensation, (ii) continued health benefits for 24 months, (iii) immediate vesting of all outstanding equity awards granted to Mr. Seth, and (iv) a single lump sum payment equal to his annual bonus subject to the achievement of the applicable goals, pro-rated based on the number of days in the Company's fiscal year through the date of termination (the "Pro-Rated Bonus").

In addition, if we terminate Mr. Seth's employment without Cause or if Mr. Seth resigns for Good Reason, or if we fail to renew his position as Chief Executive Officer and Chairman on February 21, 2024, in any case, within the 12-month period beginning on the date of a Change in Control (as defined in the 2013 Stock Plan and 2019 Plan), Mr. Seth will be entitled to (i) a single lump sum payment equal to 30 months of his compensation, (ii) continued health benefits for 30 months, (iii) immediate vesting of all outstanding equity awards granted to Mr. Seth, and (iv) a single lump sum payment equal to the Pro-Rated Bonus.

Chief Financial Officer/Principal Financial Officer Compensation

On August 12, 2020, we entered into an employment agreement with Mr. O'Loughlin, pursuant to which he serves as Chief Financial Officer of the Company. Under the terms of the employment agreement, Mr. O'Loughlin is entitled to (i) a base salary, which shall be determined by the Board, (ii) a performance bonus, which may be up to 30% of the annual base salary based upon the achievement of certain objectives such as the Board shall determine and (iii) options to purchase shares of common stock of the Company as the Board may grant. For 2020, Mr. O'Loughlin's annual base salary was set at \$330,000, and for 2021, his annual base salary was set at \$370,000.

When and if granted, options will have an exercise price equal to the closing price of the Company's common stock on the date of the approval, and 2% of the grant will vest each month from the grant date until fully vested, in accordance with the 2013 Stock Plan and 2019 Plan. The options will expire 10 years from the grant date, subject to Mr. O'Loughlin's continuing service with the Company. Mr. Loughlin will also receive the standard benefits available to other similarly situated employees.

In addition, if we terminate Mr. O'Loughlin's employment without Cause (as defined in the employment agreement) or if Mr. O'Loughlin resigns for Good Reason (as defined in the employment agreement), in either case, within the 12-month period beginning on the date of a Change in Control, Mr. O'Loughlin will be entitled to (i) a single lump sum payment equal to his annual base salary, (ii) continued health benefits for 12 months, and (iii) immediate vesting of all outstanding equity awards granted to Mr. O'Loughlin.

Former Chief Medical Officer Compensation

On September 24, 2021, Dr. Berger resigned as the Chief Medical Officer

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

Pursuant to the 2016 Berger Employment Agreement, Dr. Berger was entitled to the following compensation and benefits:

- Dr. Berger’s annual base salary was \$405,000 in 2019. Dr. Berger was also 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 was eligible to participate in the Company’s benefit plans that are generally provided for executive employees.
- From time to time, the Board granted him options to purchase shares of common stock of the Company.

On August 12, 2020, we entered into a new employment agreement with Dr. Berger, pursuant to which he served as Chief Medical Officer of the Company. Under the terms of the employment agreement, Dr. Berger was entitled to (i) a base salary, which shall be determined by the Board, (ii) a performance bonus, which may be up to 30% of the annual base salary based upon the achievement of certain objectives such as the Board shall determine and (iii) options to purchase shares of common stock of the Company as the Board may grant. For 2020, Dr. Berger’s annual base salary was set at \$415,000. When and if granted, the options would have an exercise price equal to the closing price of the Company’s common stock on the date of the approval, and 2% of the grant would vest each month from the grant date until fully vested, in accordance with the 2013 Stock Plan and 2019 Plan, as applicable. The options expire 10 years from the grant date, subject to Dr. Berger’s continuing service with the Company. Mr. Berger also received the standard benefits available to other similarly situated employees.

Former Chief Scientific and Technology Officer Compensation

On July 26, 2021, Mr. Ludwig resigned as the Company’s Chief Scientific and Technology Officer.

We and Dr. Dale Ludwig, effective January 2018, entered into an Offer Letter pursuant to which Dr. Ludwig served as the Company’s Chief Scientific Officer (the “Offer Letter”). Pursuant to the Offer Letter, Dr. Ludwig was entitled to the following compensation and benefits:

- Dr. Ludwig’s annual base salary was \$334,750 in 2019, and Dr. Ludwig was 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 granted him options to purchase shares of common stock of the Company.
- Dr. Ludwig was eligible to receive all standard benefits that Company employees are eligible to receive.

On August 12, 2020, we entered into a new employment agreement with Dr. Ludwig, pursuant to which he served as Chief Scientific and Technology Officer of the Company until his resignation. Under the terms of the employment agreement, Dr. Ludwig was entitled to (i) a base salary, which was determined by the Board, (ii) a performance bonus, which could have been up to 30% of the annual base salary based upon the achievement of certain objectives such as the Board shall have determined and (iii) options to purchase shares of common stock of the Company as the Board may grant. For 2020, Dr. Ludwig’s annual base salary was set at \$375,000. When and if granted, the options would have an exercise price equal to the closing price of the Company’s common stock on the date of the approval, and 2% of the grant would vest each month from the grant date until fully vested, in accordance with the 2013 Stock Plan and 2019 Plan, as applicable. The options would expire 10 years from the grant date, subject to Mr. Ludwig’s continuing service with the Company. Dr. Ludwig would also receive the standard benefits available to other similarly situated employees.

OUTSTANDING EQUITY AWARDS AT FISCAL YEAR-END — 2021

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, 2021.

Name (a)	Option Awards					Stock Awards			
	Number of Securities Underlying Unexercised Options (#) (Exercisable) (b)	Number of Securities Underlying Unexercised Options (#) (Unexercisable) (c)	Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned 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	832 ⁽¹⁾	—	—	45.05	8/30/2022	—	—	—	—
	832 ⁽¹⁾	—	—	45.05	12/19/2022	—	—	—	—
	9,333 ⁽¹⁾	—	—	183.90	9/23/2024	—	—	—	—
	5,000 ⁽¹⁾	—	—	107.40	2/15/2025	—	—	—	—
	16,666 ⁽¹⁾	—	—	59.70	4/15/2026	—	—	—	—
	24,998 ⁽¹⁾	—	—	41.70	3/14/2027	—	—	—	—
	27,333 ⁽²⁾	6,000	—	23.487	7/13/2028	—	—	—	—
	29,000 ⁽²⁾	21,000	—	6.96	7/12/2029	—	—	—	—
	44,496 ⁽²⁾	94,566	—	9.55	8/12/2030	—	—	—	—
	18,610 ⁽²⁾	291,572	—	6.07	9/01/2031	—	—	—	—
Steve O'Loughlin	3,333 ⁽¹⁾	—	—	53.70	9/28/2025	—	—	—	—
	1,666 ⁽¹⁾	—	—	59.70	4/15/2026	—	—	—	—
	3,333 ⁽¹⁾	—	—	41.70	3/14/2027	—	—	—	—
	7,243 ⁽²⁾	1,590	—	23.487	7/13/2028	—	—	—	—
	7,733 ⁽²⁾	5,600	—	6.96	7/12/2029	—	—	—	—
	18,896 ⁽²⁾	40,170	—	9.55	8/12/2030	—	—	—	—
	6,447 ⁽²⁾	101,016	—	6.07	9/01/2031	—	—	—	—
Mark Berger ⁽³⁾	—	—	—	—	—	—	—	—	—
Dale Ludwig ⁽⁴⁾	—	—	—	—	—	—	—	—	—

(1) Fully vested.

(2) Pursuant to the terms of the Company's 2019 Plan or 2013 Stock Plan, 2% of these options vest each month from the date of grant.

(3) Any options that were available for exercise at the time of Dr. Berger's resignation expired on December 23, 2021. Any unvested options unvested were forfeited upon Dr. Berger's resignation, effective September 24, 2021.

(4) Any options that were available for exercise at the time of Dr. Ludwig's resignation expired on October 24, 2021. Any unvested options unvested were forfeited upon Dr. Ludwig's resignation, effective July 26, 2021.

Securities Authorized for Issuance under Equity Compensation Plans

We currently have three equity compensation plans defined as follows:

The Company's 2019 Amended and Restated Stock Plan has an expiration date of October 18, 2029 and the number of shares of our common stock authorized under the plan for grant to employees, directors and consultants is 5,833,333 shares.

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The Company's 2013 Amended and Restated Stock Plan has an expiration date of September 9, 2023 and after a number of amendments approved by stockholders, the number of shares of our common stock authorized under the plan for grant to employees, directors and consultants is 758,333 shares.

The Company's 2013 Equity Incentive Plan has an expiration date of September 9, 2023 and the number of shares of our common stock authorized under the plan for grant to employees, directors and consultants under the plan is 33,333 shares.

The following table indicates shares of common stock authorized for issuance under our equity compensation plans as of December 31, 2021:

Plan category	Number of securities to be issued upon exercise of outstanding options	Weighted-average exercise price of outstanding options	Number of securities remaining available for future issuance
Equity compensation plans approved by security holders	1,361,825	\$ 12.45	5,243,242
Equity compensation plans not approved by security holders	—	—	—
Total	1,365,825	\$ 12.45	5,243,242

Potential Payments Under Termination or Change in Control Arrangements

We do not currently have any change-of-control or severance agreements with any of our executive officers or directors, other than as described under sections titled "Executive Compensation" and "Director Compensation" in this proxy statement. The table below sets forth potential payments payable to our executive officers or former executive officers in the event of a termination of employment arrangement under various circumstances. For purposes of calculating the potential payments set forth in the table below, we have assumed that the date of termination was June 30, 2022.

Name	Termination of Employment Other Than for Cause or Resignation for Good Reason (Not in Connection with a Change in Control). (\$)	Termination Following a Change in Control without Cause or Executive Resigns with Good Reason (\$)
Sandesh Seth	\$ 1,828,750	\$ 1,496,250
Steve O'Loughlin	—	400,000
Total Cash and Benefits	\$ 1,828,750	\$ 1,896,250

The term "Change in Control" has the meaning set forth in the Company's 2013 Stock Plan and 2019 Plan, as applicable. The cash component of any change of control payment would be structured as a one-time cash severance payment.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table shows the beneficial ownership of our common stock as of November 14, 2022 held by (i) each person known to us to be the beneficial owner of more than five percent (5%) of any class of our common stock; (ii) each director; (iii) each Named 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 14, 2022, are deemed outstanding and beneficially owned by the person holding such options or warrants for purposes of computing the number of shares and percentage beneficially owned by such person, but are not deemed outstanding for purposes of computing the percentage beneficially owned by any other person. Except as indicated in the footnotes to this table, the persons or entities named have sole voting and investment power with respect to all shares of our common stock shown as beneficially owned by them.

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

Named Beneficial Owner	Number of Shares of Common Stock Beneficially Owned	Percentage of Ownership ^(a)
Beneficial Owners of 5% or More of Our Common Stock		
Michael Bigger	1,314,106 ⁽¹⁾	5.2%
Name Executive Officers and Directors		
Sandesh Seth	715,901 ⁽²⁾	2.7%
Steve O'Loughlin	128,957 ⁽³⁾	*
Jeffrey W. Chell, M.D.	31,344 ⁽⁴⁾	*
David Nicholson, Ph.D.	35,010 ⁽⁵⁾	*
Ajit S. Shetty, Ph.D.	32,107 ⁽⁶⁾	*
Richard I. Steinhart	34,993 ⁽⁷⁾	*
Mark Berger	— ⁽⁸⁾	*
Dale Ludwig	— ⁽⁹⁾	*
All Directors and Officers as a Group (6 persons)	978,306⁽⁸⁾	3.7%

* less than 1%

(a) Based on 25,483,306 shares of common stock outstanding as of November 14, 2022.

- (1) The address of record is 2250 Red Springs Drive, Las Vegas, NV 89135. Based on the beneficial owner's Schedule 13G filed February 9, 2022, shares beneficially owned consist of 323,236 shares of Common Stock owned by Bigger Capital Fund, LP ("Bigger Capital"), 118,417 shares of Common Stock issuable upon exercise of Warrants owned by Bigger Capital, 513,099 shares of Common Stock owned by District 2 Capital Fund LP ("District 2 CF"), 160,475 shares of Common Stock issuable upon exercise of Warrants owned by District 2 CF, 150,000 shares of Common Stock held by Mr. Bigger through an IRA and another account, 107,771 shares of Common Stock through an IRA held by Patricia Winter, the spouse of Mr. Bigger and an aggregate of 220,000 shares of Common Stock through an IRA held by the sons of Mr. Bigger. The warrants are subject to a 4.99% beneficial ownership limit. The number of shares and percentage set forth above assume the no exercise of the warrants due to the beneficial ownership limit. Mr. Bigger disclaims beneficial ownership of these securities.
- (2) On December 19, 2012, Mr. Seth was granted an option to purchase 832 shares of common stock at an exercise price of \$45.05 per share. On September 23, 2014, Mr. Seth was granted an option to purchase 9,333 shares of common stock with an exercise price of \$183.90 per share. On February 18, 2015, Mr. Seth was granted an option to purchase 5,000 shares of common stock with an exercise price of \$107.40 per share. On April 15, 2016, Mr. Seth was granted an option to purchase 16,666 shares of common stock at an exercise price of \$59.70 per share. On March 14, 2017, Mr. Seth was granted options to purchase an aggregate of 24,998 shares of common stock at an exercise price of \$41.70 per share. On July 13, 2018, Mr. Seth was granted an option to purchase 33,333 shares of common stock at an exercise price of \$23.487 per share. On July 12, 2019, Mr. Seth was granted an option to purchase 50,000 shares of common stock at an exercise price of \$6.96 per share. On August 12, 2020, Mr. Seth was granted an option to purchase 139,062 shares of common stock at an exercise price of \$9.55 per share. On September 1, 2021, Mr. Seth was granted an option to purchase 310,182 shares of common

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- stock at an exercise price of \$6.07 per share. On July 1, 2022, Mr. Seth was granted an option to purchase 827,366 shares of common stock at an exercise price of \$4.96 per share. On August 17, 2022, Mr. Seth was granted restricted stock units for 300,000 shares of common stock. All options are subject to vesting. Within 60 days of November 14, 2022, options to purchase an aggregate of 410,520 shares of common stock will have vested. Includes 5,381 shares of common stock.
- (3) On October 1, 2015, Mr. O'Loughlin was granted options to purchase 3,333 shares of common stock with an exercise price of \$53.70 per share. On April 15, 2016, Mr. O'Loughlin was granted options to purchase of 1,666 shares of common stock at an exercise price of \$59.70 per share. On March 14, 2017, Mr. O'Loughlin was granted options to purchase 3,333 shares of common stock at an exercise price of \$41.70 per share. On July 13, 2018, Mr. O'Loughlin was granted an option to purchase 8,833 shares of common stock at an exercise price of \$23.487 per share. On July 12, 2019, Mr. O'Loughlin was granted an option to purchase 13,333 shares of common stock at an exercise price of \$6.96 per share. On August 12, 2020, Mr. O'Loughlin was granted an option to purchase 59,066 shares of common stock at an exercise price of \$9.55 per share. On September 1, 2021, Mr. O'Loughlin was granted an option to purchase 107,463 shares of common stock at an exercise price of \$6.07 per share. All options are subject to vesting. On July 1, 2022, Mr. O'Loughlin was granted an option to purchase 256,438 shares of common stock at an exercise price of \$4.96 per share. Within 60 days of November 14, 2022, options to purchase an aggregate of 127,774 shares of common stock will have vested. Includes 1,183 shares of common stock.
- (4) On April 27, 2018, Dr. Chell was granted an option to purchase 2,500 shares of common stock with an exercise price of \$10.41 per share. On July 13, 2018, Dr. Chell was granted an option to purchase 2,500 shares of common stock at an exercise price of \$23.487 per share. On July 12, 2019, Dr. Chell was granted an option to purchase 8,333 shares of common stock at an exercise price of \$6.96 per share. On August 12, 2020, Dr. Chell was granted an option to purchase 8,333 shares of common stock at an exercise price of \$9.55 per share. On September 1, 2021, Dr. Chell was granted an option to purchase 18,351 shares of common stock at an exercise price of \$6.07 per share. On July 1, 2022, Dr. Chell was granted an option to purchase 72,156 shares of common stock at an exercise price of \$4.96 per share. All options are subject to vesting. Within 60 days of November 14, 2022, options to purchase an aggregate of 31,334 shares of common stock will have vested.
- (5) On February 18, 2015, Dr. Nicholson was granted an option to purchase 833 shares of common stock with an exercise price of \$107.40 per share. On April 15, 2016, Dr. Nicholson was granted an option to purchase 2,500 shares of common stock at an exercise price of \$59.70 per share. On March 14, 2017, Dr. Nicholson was granted an option to purchase 2,500 shares of common stock at an exercise price of \$41.70 per share. On July 13, 2018, Dr. Nicholson was granted an option to purchase 2,500 shares of common stock at an exercise price of \$23.487 per share. On July 12, 2019, Dr. Nicholson was granted an option to purchase 8,333 shares of common stock at an exercise price of \$6.96 per share. On August 12, 2020, Dr. Nicholson was granted an option to purchase 8,333 shares of common stock at an exercise price of \$9.55 per share. On September 1, 2021, Dr. Nicholson was granted an option to purchase 18,351 shares of common stock at an exercise price of \$6.07 per share. On July 1, 2022, Dr. Nicholson was granted an option to purchase 72,156 shares at an exercise price of \$4.96 per share. All options are subject to vesting. Within 60 days of November 14, 2022, options to purchase an aggregate of 34,677 shares of common stock will have vested. Includes 333 shares of common stock.
- (6) On March 28, 2017, Dr. Shetty was granted an option to purchase 2,500 shares of common stock with an exercise price of \$47.40 per share. On July 13, 2018, Dr. Shetty was granted an option to purchase 2,500 shares of common stock at an exercise price of \$23.487 per share. On July 12, 2019, Dr. Shetty was granted an option to purchase 8,333 shares of common stock at an exercise price of \$6.96 per share. On August 12, 2020, Dr. Shetty was granted an option to purchase 8,333 shares of common stock at an exercise price of \$9.55 per share. On September 1, 2021, Dr. Shetty was granted an option to purchase 18,351 shares of common stock at an exercise price of \$6.07 per share. On July 1, 2022, Dr. Shetty was granted an option to purchase 72,156 shares at an exercise price of \$4.96 per share. All options are subject to vesting. Within 60 days of November 14, 2022, options to purchase an aggregate of 31,344 shares of common stock will have vested. Includes 757 shares of common stock.
- (7) On December 16, 2013 Mr. Steinhart was granted an option to purchase 1,665 shares of common stock at an exercise price of \$201.00 per share. On February 18, 2015, Mr. Steinhart was granted an option to purchase 833 shares of common stock at an exercise price of \$107.40 per share. On April 15, 2016, Mr. Steinhart was granted an option to purchase 2,500 shares of common stock at an exercise price of \$59.70 per share. On March 14, 2017, Mr. Steinhart was granted an option to purchase 2,500 shares of common stock at an exercise price of \$41.70 per share. On July 13, 2018, Mr. Steinhart was granted an option to purchase 2,500 shares of common stock at an exercise price of \$23.487 per share. On July 12, 2019, Mr. Steinhart was granted an option to purchase 8,333 shares of common stock at an exercise price of \$6.96 per share. On August 12, 2020, Mr. Steinhart was granted an option to purchase 8,333 shares of common stock at an exercise price of \$9.55 per share. On September 1, 2021, Mr. Steinhart was granted an option to purchase 18,351 shares of common stock at an exercise price of \$6.07 per share. On July 1, 2022, Mr. Steinhart was granted an option to purchase 72,156 shares at an exercise price of \$4.96 per share. All options are subject to vesting. Within 60 days of November 14, 2022, options to purchase an aggregate of 34,677 shares of common stock will have vested. Includes 316 shares of common stock.
- (8) Includes vested options to purchase 670,336 shares of common stock, restricted stock units of 300,000 shares and 7,970 shares of common stock.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

Transactions with related persons are governed by our Code of Business Conduct and Ethics, which apply to all of our directors, officers and employees. This code covers a wide range of potential activities, including, among others, conflicts of interest, self-dealing and related party transactions. Waiver of the policies set forth in this code may be made only by our Board, as a whole, or the Audit Committee. Such related party transactions must be promptly disclosed as required by applicable law or regulation. Absent such a review and approval process in conformity with the applicable guidelines relating to the particular transaction under consideration, such arrangements are not permitted. All related party transactions for which disclosure is required to be provided herein were approved in accordance with our Code of Business Conduct and Ethics.

Transactions with Related Persons

Other than compensation agreements and other arrangements which are described hereunder and as required under “Director Compensation” and “Executive Compensation,” since January 1, 2020, there has not been, and there is not currently proposed, any transaction or series of similar transactions to which we were or will be a party in which the amount involved exceeded or will exceed the lesser of \$120,000 or the average of our total assets at year-end for the last two completed fiscal years and in which any director, executive officer, holder of 5% or more of any class of our capital stock, or any member of their immediate family had or will have a direct or indirect material interest.

Warrant Amendment

On August 11, 2020, the Company entered into an amendment to its warrant (the “Amendment”) to purchase an aggregate of 1,907 shares of common stock at an exercise price of \$15.61515 per share issued to Sandesh Seth, the Company’s Chairman and Chief Executive Officer, on March 14, 2017 (the “Warrants”). The Amendment modified Section 10 of the Warrant, removing the anti-dilution provision thereto. Accordingly, pursuant to the Amendment, the exercise price of the Warrant will no longer be subject to a proportional adjustment if and when the Company issues any shares of its common stock for a consideration less than the exercise price of the Warrant. All other terms of the Warrant remained the same.

Non-Competition Agreements

Our executive officers have signed non-competition agreements, which provide that all inventions become the immediate property of us 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.

PROPOSAL 1**ELECTION OF DIRECTORS****Nominees for the Board of Directors**

The Company's Charter established a classified Board 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 2023 annual meeting of stockholders; the term of office for each Class II director expires at the 2024 annual meeting of stockholders; and the term of office for each Class III director expires at the Annual Meeting. Pursuant to the Charter, the director due for election at the Annual Meeting is Ajit S. Shetty.

At the Annual Meeting, our stockholders will consider and vote upon the reelection of Ajit S. Shetty to serve as Class III director for a term that continues pursuant to the director terms outlined below or until his successor is duly elected. In the event that a company 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 may recommend. The Board has no reason to believe that Dr. Shetty will be unable or unwilling to serve.

Following the Annual Meeting, the Board will consist of five directors. The term of each director is set forth below or until their successors are duly elected:

Director	Class	Term Expiration
David Nicholson	Class I	2023 Annual Meeting
Richard I Steinhart	Class I	2023 Annual Meeting
Jeffrey W. Chell	Class II	2024 Annual Meeting
Sandesh Seth	Class II	2024 Annual Meeting
Ajit S. Shetty	Class III	2022 Annual Meeting

Directors elected at each annual meeting shall be elected for a 3-year term. There are no family relationships between any of the executive officers, directors and or persons nominated or chosen by the Company to become a director or executive officer.

Please see the biography of Dr. Ajit S. Shetty in this proxy statement.

Vote Required

If a quorum is present, Dr. Shetty will be 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. If you hold your shares through a broker and you do not instruct the broker on how to vote for Dr. Shetty, your broker will not have the authority to vote your shares. Abstentions and broker non-votes will each be counted as present for purposes of determining the presence of a quorum but will not have any effect on the outcome of the vote.

***THE BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" ELECTION OF
THE COMPANY NOMINEE DR. AJIT S. SHETTY***

PROPOSAL 2

APPROVAL OF THE AMENDMENT TO THE ACTINIUM PHARMACEUTICALS, INC. 2019 PLAN

Our Board is seeking the approval of our stockholders of a fourth amendment to the 2019 Plan, which was adopted by our Board on September 23, 2022, subject to stockholder approval (the “Fourth Amendment”). The 2019 Plan was originally approved by our Board on October 18, 2019, and by our stockholders on December 18, 2019. Under the 2019 Plan as originally adopted, we reserved 10,000,000 shares of our common stock for issuance as awards. On August 10, 2020, the Company effected a 1-for-30 reverse stock split, such that after giving effect to the reverse stock split there were 333,333 shares of our common stock available for issuance under the 2019 Plan. Effective as of November 18, 2020, the 2019 Plan was amended by the First Amendment. The First Amendment increased the number of shares of our common stock available for issuance pursuant to awards under the 2019 Plan by an additional 2,750,000 shares, for a total of 3,083,333 shares of our common stock. Effective as of November 9, 2021 the 2019 Plan was amended by the Second Amendment. The Second Amendment increased the number of shares of our common stock available for issuance pursuant to awards under the 2019 Plan by an additional 2,750,000 shares, for a total of 5,833,333 shares of our common stock. The Third Amendment was approved by the Board on August 10, 2022. The Third Amendment amended the 2019 Plan to add restricted stock units (“RSUs”) as a type of equity award available for issuance under the Plan. The Fourth Amendment would further increase the number of shares of our common stock available for issuance pursuant to awards under the 2019 Plan by an additional 3,500,000 shares, for an aggregate of 9,333,333 shares.

We believe that operation of the 2019 Plan is a necessary and powerful tool in enabling us to attract and retain the best available personnel for positions of substantial responsibility; to provide additional incentive to our employees, consultants, and directors; and to promote the success of our business. The 2019 Plan is expected to provide flexibility to our compensation methods in order to adapt the compensation of our employees, consultants, and directors to a changing business environment, after giving due consideration to competitive conditions and the impact of federal tax laws. We have strived to use our 2019 Plan resources effectively and to maintain an appropriate balance between stockholder interests and the ability to recruit and retain valuable employees and service providers. However, we believe that there is an insufficient number of shares remaining under our 2019 Plan to meet our current and projected needs. Accordingly, it is the judgment of our Board that the Fourth Amendment is in the best interests of the Company and its stockholders. We believe that the Fourth Amendment, which increases the number of shares of our common stock available for issuance pursuant to awards under the 2019 Plan, reflects best practices in our industry and is appropriate to permit the grant of equity awards at expected levels for the future.

A copy of the Fourth Amendment and the 2019 Plan, as amended, are included as [Annex A](#) and [Annex B](#), respectively, to this proxy statement. Described below is a summary of certain key provisions of the 2019 Plan, which is qualified in its entirety by reference to the full text of the 2019 Plan.

The Board recommends that the stockholders vote “FOR” the approval of the Fourth Amendment.

Summary of the Proposed Fourth Amendment

Our Board adopted the Fourth Amendment on September 23, 2022, subject to stockholder approval, to increase the number of shares of our common stock available for issuance pursuant to awards under the 2019 Plan by an additional 3,500,000 shares, for a total of 9,333,333 shares of common stock.

Description of the 2019 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 incentives to our employees, directors, and consultants; and to promote the success of our business. The 2019 Plan provides for the granting of incentive stock options, nonstatutory stock options, stock purchase rights, and RSUs. The 2019 Plan is expected to provide flexibility to our compensation methods in order to adapt the compensation of our employees, consultants, and directors to a changing business environment, after giving due consideration to competitive conditions and the impact of tax laws.

Share Authorization. Subject to certain adjustments, the maximum aggregate number of shares of our common stock that may be delivered pursuant to awards under the 2019 Plan is currently 5,833,333 shares, 100% of which may be delivered pursuant to incentive stock options. If the Fourth Amendment is approved, the total number of shares of our common stock that may be issued pursuant to awards will be increased by 3,500,000 shares, for a total of 9,333,333 shares of our common stock.

Shares to be issued may be made available from authorized but unissued or reacquired shares of our common stock. During the term of the 2019 Plan, we will at all times reserve and keep enough shares available to satisfy the requirements of the 2019 Plan. If an award under the 2019 Plan is cancelled, forfeited, or expires (in whole or in part) or if any shares subject to an award are retained by us upon exercise of an award to satisfy the exercise or purchase price of the award or the withholding taxes due, such shares may again be awarded under the 2019 Plan. Shares issued under the 2019 Plan that are later repurchased by us pursuant to any repurchase rights shall not be available for future awards under the 2019 Plan.

Administration. The 2019 Plan shall be administered by our Board or a committee, or a combination thereof, as determined by our Board. The 2019 Plan may be administered by different administrative bodies with respect to different classes of participants and, if permitted by the Applicable Laws (as defined in the 2019 Plan), the Board may authorize one or more officers to make awards under the 2019 Plan.

Powers of the Administrator. As delegated by our Board to the committee, which is the administrator of the 2019 Plan, the committee shall have the authority, in its discretion:

- to determine the fair market value of our 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 awards under the 2019 Plan 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 under the 2019 Plan;
- 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 thereunder, 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-time 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 it, 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, stock purchase rights and RSUs 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

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any participant during any calendar year exceeds \$100,000, such excess options shall be treated as nonstatutory stock options. As of November 14, 2022, there are approximately 46 employees, 3 non-employee directors, and no consultants eligible to participate in the 2019 Plan.

Term of Plan. The 2019 Plan became effective on December 18, 2019 upon its approval by our stockholders and will continue in effect until October 18, 2029, which is the tenth anniversary of the date that the 2019 Plan was approved by our Board, unless earlier terminated by us in accordance with its terms.

Term of Options. The term of each option shall be the term stated in the option agreement; provided, however, 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 an employee, who at the time of such grant is a holder of ten percent or more of the combined voting power of all classes of our outstanding shares (or of any parent or subsidiary), 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:

- granted to an employee who at the time of grant is a holder of ten percent or more of the combined voting power of all classes of our outstanding shares (or of any parent or subsidiary), the per share exercise price shall be no less than 110% of the fair market value per share on the date of grant; or
- 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 no less than 100% of the fair market value per share on the date of grant.

Exercise of Option. Any option granted under the 2019 Plan shall be exercisable at such times and under such conditions as determined by the administrator, consistent with the terms 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 participant. 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).

The administrator will determine the manner in which recipients of stock options may pay the option exercise price, which may include payment: (i) by cash, check, or promissory note, to the extent permitted by Applicable Laws; (ii) cancellation of a participant's indebtedness to the Company; (iii) in shares of our common stock, provided such shares have a fair market value equal to the aggregate exercise price of the options exercised, and provided further that such shares have been held by the participant for at least six months; (iv) by 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 effectuate a cashless exercise of the option with the Company receiving any resulting sale or loan proceeds necessary to pay the exercise price; or (v) any combination of the foregoing.

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 of 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 2019 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 a participant's continuous service status with us and our parents, affiliates, and subsidiaries, if applicable, 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 participant is not vested in the optioned stock on the date of termination of his or her continuous service status, or if the participant (or other person entitled to exercise the option) does not exercise the option to the extent so entitled within the time period specified in the option agreement or in the 2019 Plan as

summarized below (as applicable), the option shall terminate and the optioned stock underlying the unexercised portion of the option shall revert to the 2019 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 (i) shall apply to the extent an option agreement does not specify the terms and conditions upon which an option shall terminate upon termination of a participant's continuous service status, and (ii) 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 such a termination of a participant's continuous service status, such participant may exercise an option for three months following such termination, but only to the extent the participant was vested in the optioned stock as of the date of such termination.

Disability of Participant. In the event of termination of a participant'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 of 1986, as amended (the "Code")), such participant may exercise an option at any time within one year following such termination, but only to the extent the participant was vested in the optioned stock as of the date of such termination.

Death of Participant. In the event of the death of a participant during the period of continuous service status since the date of grant of the option, or within three months following termination of a participant's continuous service, the option may be exercised by the participant's estate or by a person who acquired the right to exercise the option by bequest or inheritance at any time within one year following the date of death, but only to the extent the participant was vested in the optioned stock as of the date of death or, if earlier, the date the participant's continuous service status terminated.

Stock Purchase Rights. When the administrator determines that it will offer stock purchase rights under the 2019 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, if any, and the time within which such person must accept the 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 participant, if any, and may be paid by cancellation of any indebtedness of the participant to the Company. The repurchase option shall lapse at such rate as the administrator may determine.

Once a stock purchase right is exercised, the participant shall have the rights equivalent to those of a stockholder once the purchase is evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company.

Restricted Stock Units. When the administrator determines that it will offer RSUs under the Plan, it shall advise the individual in writing of the terms, conditions and restrictions related to the offer, including the number of shares that such person shall be entitled to receive upon conversion of vested RSUs into shares, the price to be paid, if any, and the time within which such person must accept such offer. The offer to award RSUs shall be accepted by execution of an RSU Agreement (as defined in the Third Amendment) in the form determined by the administrator.

The RSU 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; provided, however, that such terms and conditions are (i) not inconsistent with the Plan, and (ii) to the extent RSUs issued under the Plan are subject to Section 409A of the Code, in compliance with the applicable requirements of Section 409A of the Code and the regulations and other guidance issued thereunder. In addition, the provisions of RSU Agreements need not be the same with respect to each Participant.

Until the issuance of shares upon conversion of any RSUs (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 RSUs awarded under the Plan. No adjustment will be made for a dividend or other right for which the record date is prior to the date the RSUs are converted into shares, except as provided in the Plan's adjustments provision (as further described below).

Taxes. As a condition of the exercise of an option or stock purchase right or the conversion of any RSUs 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 or converting the RSUs) 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 or the conversion of the RSUs and the issuance of shares. The Company shall not be required to issue any shares under the 2019 Plan until such obligations are satisfied.

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 such taxes from other compensation payable to him or her from the next payroll payment otherwise payable after the date of the exercise of the option or stock purchase right or the conversion of the RSUs. In the case of any other participant (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 or the conversion of the RSUs, the number of shares having a fair market value equal to the tax amounts required to be withheld. Notwithstanding the foregoing, 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 or the conversion of the RSUs by surrendering to the Company shares that have a fair market value equal to the amount required to be withheld, provided that such shares have been held by such participant for at least six months.

Non-Transferability of Options, Stock Purchase Rights and RSUs. Except as set forth in the 2019 Plan, options, stock purchase rights, and RSUs, 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. An option, stock purchase right, or RSU may be exercised or converted into shares during the lifetime of the holder of such option, stock purchase right, or RSU only by such holder or a transferee permitted pursuant to the 2019 Plan. Notwithstanding the foregoing, the administrator may, in its discretion, grant transferrable nonstatutory stock options pursuant to option agreements that specify the manner in which such options may be transferable.

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

Change of Control. Notwithstanding any provision of the Plan or any award agreement to the contrary, in the event of a Change of Control (as defined in the 2019 Plan) (i) each outstanding option shall become immediately vested and exercisable, (ii) any outstanding restricted stock shall become immediately vested and any repurchase option with respect to such restricted stock shall immediately lapse, and (iii) any outstanding RSUs shall become immediately vested, in each case, effective immediately prior to the Change of Control.

Changes in Capitalization. Subject to any required action by our stockholders of the Company, the number of shares of our common stock covered by each outstanding option, stock purchase right or RSU, the number of shares of our common stock that have been authorized for issuance under the 2019 Plan but as to which no options, stock purchase rights, or RSUs have yet been granted or that have been returned to the 2019 Plan upon cancellation or expiration of an option, stock purchase right, or RSUs, as well as the price per share of our common stock covered by each such outstanding option, stock purchase right, or RSUs, shall be proportionately adjusted for any increase or decrease in the number of issued shares of our common stock resulting from a stock split, reverse stock split, stock dividend, combination, recapitalization, or reclassification of our common stock, or any other increase or decrease in the number of issued shares of our 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" as provided under Applicable Law.

Dissolution or Liquidation. In the event of the dissolution or liquidation of our Company, each option, stock purchase right, or RSU 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 (as defined in the 2019 Plan), each outstanding option, stock purchase right, or RSU shall be assumed or an equivalent award 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 award, in which case such option, stock purchase right, or RSU shall terminate upon the consummation of the transaction in consideration for a

cash payment to the participant (on the closing date of the Corporate Transaction), with respect to each such option, equal to the excess, if any, of the fair market value of our 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 2019 Plan, but no amendment, alteration, suspension, or discontinuation (other than an adjustment for changes in capitalization discussed above) shall be made that would materially and adversely affect the rights of any participant under any outstanding grant, without his or her consent. In addition, the Company shall obtain stockholder approval of any such plan amendment to the extent required to comply with the Applicable Laws. No amendment or termination of the 2019 Plan shall materially and adversely affect options, stock purchase rights or RSUs already granted, unless mutually agreed otherwise between the participant and the administrator, which agreement must be in writing and signed by the participant and or holder and the Company.

Federal Income Tax Consequences

The following is a brief summary of certain federal income tax consequences relating to the transactions described under the 2019 Plan as set forth below. This summary does not purport to address all aspects of federal income taxation and does not describe state, local, or foreign tax consequences. This discussion is based upon provisions of the Code and the Treasury Regulations issued thereunder, and judicial and administrative interpretations under the Code and the Treasury Regulations, all as in effect as of the date hereof, and all of which are subject to change (possibly on a retroactive basis) or different interpretation.

Law Affecting Deferred Compensation. In 2004, Section 409A was added to the Code to regulate all types of deferred compensation. If the requirements of Section 409A of the Code are not satisfied, deferred compensation and earnings thereon will be subject to tax as it vests, plus a premium interest charge at the underpayment rate plus 1% and a 20% penalty tax. Certain stock options, restricted stock units, and types of restricted stock are subject to Section 409A of the Code.

Incentive Stock Options. A participant will not recognize income at the time an incentive stock option is granted. When a participant exercises an incentive stock option, a participant also generally will not be required to recognize income (either as ordinary income or capital gain). However, to the extent that the fair market value (determined as of the date of grant) of the shares with respect to which the participant's incentive stock options are exercisable for the first time during any year exceeds \$100,000, the incentive stock options for the shares over \$100,000 will be treated as nonstatutory stock options, and not incentive stock options, for federal tax purposes, and the participant will recognize income as if the incentive stock options were nonstatutory stock options. In addition to the foregoing, if the fair market value of the shares received upon exercise of an incentive stock option exceeds the exercise price, then the excess may be deemed a tax preference adjustment for purposes of the federal alternative minimum tax calculation. The federal alternative minimum tax may produce significant tax repercussions depending upon the participant's particular tax status.

The tax treatment of any shares acquired by exercise of an incentive stock option will depend upon whether the participant disposes of his or her shares prior to the later of (i) two years after the date the incentive stock option was granted and (ii) one year after the shares were transferred to the participant (referred to as, the "Holding Period"). If a participant disposes of shares acquired by exercise of an incentive stock option after the expiration of the Holding Period, any amount received in excess of the participant's tax basis for such shares will be treated as short-term or long-term capital gain, depending upon how long the participant has held the shares. If the amount received is less than the participant's tax basis for such shares, the loss will be treated as short-term or long-term capital loss, depending upon how long the participant has held the shares.

If the participant disposes of shares acquired by exercise of an incentive stock option prior to the expiration of the Holding Period, the disposition will be considered a disqualifying disposition. If the amount received for the shares is greater than the fair market value of the shares on the exercise date, then the difference between the incentive stock option's exercise price and the fair market value of the shares at the time of exercise will be treated as ordinary income for the tax year in which the disqualifying disposition occurs. The participant's basis in the shares will be increased by an amount equal to the amount treated as ordinary income due to such "disqualifying disposition." In addition, the amount received in such disqualifying disposition over the participant's increased basis in the shares will be treated as capital gain. However, if the price received for shares acquired by exercise of an incentive stock option is less than the fair market value of the shares on the exercise date, and the disposition is a transaction in

which the participant sustains a loss which otherwise would be recognizable under the Code, then the amount of ordinary income that the participant will recognize is the excess, if any, of the amount realized on the “disqualifying disposition” over the basis of the shares.

Nonstatutory Stock Options. A participant generally will not recognize income at the time a nonstatutory stock option is granted. When a participant exercises a nonstatutory stock option, the difference between the option price and any higher market value of the shares of our common stock on the date of exercise will be treated as compensation taxable as ordinary income to the participant. The participant’s tax basis for the shares acquired under a nonstatutory stock option will be equal to the option price paid for such shares, plus any amounts included in the participant’s income as compensation. When a participant disposes of shares acquired by exercise of a nonstatutory stock option, any amount received in excess of the participant’s tax basis for such shares will be treated as short-term or long-term capital gain, depending upon how long the participant has held the shares. If the amount received is less than the participant’s tax basis for such shares, the loss will be treated as short-term or long-term capital loss, depending upon how long the participant has held the shares.

Special Rule if Option Price is Paid for in Shares. If a participant pays the option price of a nonstatutory stock option with previously-owned shares of our common stock and the transaction is not a disqualifying disposition of shares previously acquired under an incentive stock option, the shares received equal to the number of shares surrendered are treated as having been received in a tax-free exchange. The participant’s tax basis and holding period for these shares received will be equal to the participant’s tax basis and holding period for the shares surrendered. The shares received in excess of the number of shares surrendered will be treated as compensation taxable as ordinary income to the participant to the extent of such shares’ fair market value. The participant’s tax basis in such shares will be equal to their fair market value on the date of exercise, and the participant’s holding period for such shares will begin on the date of exercise.

If the use of previously acquired shares to pay the exercise price of a nonstatutory stock option constitutes a disqualifying disposition of shares previously acquired under an incentive stock option, the participant will have ordinary income as a result of the disqualifying disposition in an amount equal to the excess of the fair market value of the shares surrendered, determined at the time such shares were originally acquired on exercise of the incentive stock option, over the aggregate option price paid for such shares. As discussed above, a disqualifying disposition of shares previously acquired under an incentive stock option occurs when the participant disposes of such shares before the end of the Holding Period. The other tax results from paying the exercise price with previously-owned shares are as described above, except that the participant’s tax basis in the shares that are treated as having been received in a tax-free exchange will be increased by the amount of ordinary income recognized by the participant as a result of the disqualifying disposition.

Restricted Stock. A participant who receives a stock purchase right subject to a repurchase right (referred to herein as, “restricted stock”) generally will recognize as ordinary income the excess, if any, of the fair market value of the shares granted as restricted stock at such time as the shares are no longer subject to forfeiture or restrictions, over the amount paid, if any, by the participant for such shares. However, a participant who receives restricted stock may make an election under Section 83(b) of the Code within 30 days of the date of transfer of the shares to recognize ordinary income on the date of transfer of the shares equal to the excess of the fair market value of such shares (determined without regard to the restrictions on such shares) over the purchase price, if any, paid for such shares. If a participant does not make an election under Section 83(b) of the Code, then the participant will recognize as ordinary income any dividends received with respect to such shares. At the time of the sale of such shares, any gain or loss realized by the participant will be treated as either short-term or long-term capital gain (or loss) depending on how long the participant has held the shares. For purposes of determining any gain or loss realized, the participant’s tax basis will be the amount previously taxable as ordinary income, plus the purchase price paid by the participant, if any, for such shares.

Restricted Stock Units. In the case of an award of restricted stock units, the recipient will generally recognize ordinary income in an amount equal to the fair market value of any shares received on the date the restricted stock units are converted into shares. In that taxable year, we will receive a federal income tax deduction in an amount equal to the ordinary income that the participant has recognized.

Federal Tax Withholding. Any ordinary income realized by a participant upon the exercise of an award under the 2019 Plan is subject to withholding of federal, state, and local income tax and to withholding of the participant’s share of tax under the Federal Insurance Contribution Act and the Federal Unemployment Tax Act. To satisfy federal

income tax withholding requirements, we will have the right to require that, as a condition to delivery of cash, any certificates for shares of our common stock, or the registration of the shares in the participant's name, as applicable, the participant remit to us an amount sufficient to satisfy the withholding requirements.

Withholding does not represent an increase in the participant's total income tax obligation, since it is fully credited toward his or her tax liability for the year. Additionally, withholding does not affect the participant's tax basis in the shares. Compensation income realized and tax withheld will be reflected on Forms W-2 supplied by the Company to employees by January 31 of the succeeding year. Deferred compensation that is subject to Section 409A of the Code will be subject to certain federal income tax withholding and reporting requirements.

Tax Consequences to the Company. To the extent that a participant recognizes ordinary income in any of the circumstances described above, we will be entitled to a corresponding tax deduction provided that, among other things, the income meets the test of reasonableness, is an ordinary and necessary business expense, is not an "excess parachute payment" within the meaning of Section 280G of the Code, and is not disallowed by the \$1,000,000 limitation on certain executive compensation under Section 162(m) of the Code.

Million Dollar Deduction Limit and Other Tax Matters. We may not deduct compensation of more than \$1,000,000 that is paid to "covered employees" (as defined in Section 162(m) of the Code), which include (i) an individual (or, in certain circumstances, his or her beneficiaries) who, at any time during the taxable year, is either our principal executive officer or principal financial officer; (ii) an individual who is among our three highest compensated officers for the taxable year (other than an individual who was either our principal executive officer or principal financial officer at any time during the taxable year); or (iii) anyone who was a covered employee for purposes of Section 162(m) of the Code for any tax year beginning on or after January 1, 2017. This limitation on deductions (x) only applies to compensation paid by a publicly-traded corporation (and not compensation paid by non-corporate entities) and (y) may not apply to certain types of compensation, such as qualified performance-based compensation that is payable pursuant to a written, binding contract that was in effect as of November 2, 2017, so long as the contract is not materially modified after that date.

If an individual's rights under the 2019 Plan are accelerated as a result of a Change of Control and the individual is a "disqualified individual" under Section 280G of the Code, the value of any such accelerated rights received by such individual may be included in determining whether or not such individual has received an "excess parachute payment" under Section 280G of the Code, which could result in (i) the imposition of a 20% federal excise tax (in addition to federal income tax) payable by the individual on the value of such accelerated rights; and (ii) the loss by the Company of a compensation deduction.

New Plan Benefits

With respect to the increased number of shares reserved under the 2019 Plan pursuant to the Fourth Amendment, we cannot currently determine the benefits or number of shares subject to awards that may be granted in the future to eligible participants under the 2019 Plan because the grant of awards and terms of such awards are to be determined in the sole discretion of the administrator.

The market value of our common stock is \$12.51 per share based on the closing price of our common stock on November 14, 2022.

Vote Required

If a quorum is present, approval of the Amendment will require the affirmative vote of a majority of votes cast, with abstentions counting as a vote cast, at the Annual Meeting. An abstention is not an "affirmative vote," but it is considered as a vote cast pursuant to Section 711 of the NYSE American Company Guide. Accordingly, an abstention will have the effect of a vote against the proposal. If you hold your shares through a broker and you do not instruct the broker on how to vote for the Amendment, your broker will not have the authority to vote your shares. Broker non-votes will be counted as present for purposes of determining the presence of a quorum but will not have any effect on the outcome of the vote.

THE BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" APPROVAL OF THE FOURTH AMENDMENT

PROPOSAL 3

RATIFICATION OF THE APPOINTMENT OF MARCUM LLP

The Audit Committee has appointed Marcum 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, 2022. Representatives of Marcum will not be present at the Annual Meeting but 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 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

If a quorum is present, the approval of the ratification of the appointment of Marcum as our independent registered public accounting firm will require the affirmative vote of a majority of the shares represented in person or by proxy and entitled to vote on the proposal at the Annual Meeting. An abstention is not an “affirmative vote,” but an abstaining stockholder is considered “entitled to vote” at the Annual Meeting. Accordingly, an abstention will have the effect of a vote against Proposal 3. Brokers are considered “entitled to vote” because brokers have discretionary voting authority on Proposal 3. Because a broker non-vote is not an “affirmative vote,” a broker non-vote will have the effect of a vote against Proposal 3.

THE BOARD OF DIRECTORS RECOMMENDS A VOTE “FOR” RATIFICATION OF MARCUM AS THE INDEPENDENT REGISTERED ACCOUNTING FIRM OF ACTINIUM PHARMACEUTICALS, INC.

PROPOSAL 4

ADVISORY VOTE ON THE COMPENSATION OF OUR NAMED EXECUTIVE OFFICERS

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 2021 compensation of our CEO, Chief Financial Officer, Former Chief Medical Officer, and Former Chief Scientific and Technology 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 2022 Annual Meeting:

“RESOLVED, that the compensation paid to the Company’s Named Executive Officers for the fiscal year ended December 31, 2021, as disclosed pursuant to Item 402 of Regulation S-K, including the 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. Our current policy is to hold such an advisory vote every three years, and we expect to hold another advisory vote with respect to approve to executive compensation at the 2025 annual meeting of stockholders.

Vote Required

If a quorum is present, the approval of the advisory vote on the compensation of our named executive officers will require the affirmative vote of a majority of the shares represented in person or by proxy and entitled to vote on the proposal at the Annual Meeting. An abstention is not an “affirmative vote,” but an abstaining stockholder is considered “entitled to vote” at the Annual Meeting. Accordingly, an abstention will have the effect of a vote against Proposal 4. Broker non-votes will have no effect on Proposal 4.

THE BOARD OF DIRECTORS RECOMMENDS A VOTE “FOR” APPROVAL, ON A NON-BINDING ADVISORY BASIS, OF THE COMPENSATION OF OUR 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.

HOUSEHOLDING OF PROXY MATERIALS

SEC rules concerning the delivery of annual disclosure documents allow us or your broker to send 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 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 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 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 and together both of you would like to receive only a single 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 when you submit a proxy to vote over the Internet; or
- going to www.AALvote.com/atnm and following the instructions provided.

SUBMISSION OF FUTURE STOCKHOLDER PROPOSALS

Pursuant to Rule 14a-8 under the Exchange Act (“Rule 14a-8”), a stockholder who intends to present a proposal at our next annual meeting of stockholders (the “2023 Annual Meeting”) and who wishes the proposal to be included in the proxy statement and form of proxy for that meeting must submit the proposal in writing no later than July 24, 2023, or not less than 120 calendar days before the date this proxy statement is being released to shareholders (unless the date of the 2023 Annual Meeting is not scheduled to be held between November 8, 2023 and January 7, 2024, in which case the deadline will be a reasonable time before the company begins to print and send its proxy materials for the 2023 Annual Meeting), after which date such stockholder proposal will be considered untimely. Such proposal must be submitted on or before the close of business to our corporate offices at 275 Madison Avenue, 7th Floor, New York, New York 10016, Attn: Secretary.

Stockholders wishing to nominate a director or submit proposals to be presented directly at the 2023 Annual Meeting instead of by inclusion in next year’s proxy statement must follow the submission criteria and deadlines set forth in our Bylaws concerning stockholder nominations and proposals. Stockholder nominations for director and other proposals that are not to be included in such materials must be received by our Secretary in writing at our corporate offices at 275 Madison Avenue, 7th Floor, New York, New York 10016, Attn: Secretary no later than August 10, 2023 and no earlier than July 11, 2023; provided, however, if and only if the 2023 Annual Meeting is not scheduled to be held between November 8, 2023 and February 16, 2024, to be timely, notice must be received not later than the later of the close of business on the one hundred twentieth (120th) day prior to the 2023 Annual Meeting and the tenth (10th) day following the day on which public announcement of the date of the 2023 Annual Meeting is first made by the Corporation, and not earlier than the close of business on the one hundred fiftieth (150th) day prior to the 2023 Annual Meeting. Any such stockholder proposals or nominations for director must also satisfy the requirements set forth in our Bylaws. To be eligible for inclusion in our proxy materials, stockholder proposals must also comply with the requirements of Rule 14a-8. Stockholders are also advised to review our Bylaws, which contain additional advance notice requirements, including requirements with respect to advance notice of stockholder proposals and director nominations. A proxy granted by a stockholder will give discretionary authority to the proxies to vote on any matters introduced pursuant to the above advance notice provisions in the Bylaws, subject to applicable rules of the SEC.

For the 2023 Annual Meeting, we will be required pursuant to new Rule 14a-19 under the Exchange Act to include on our proxy card all nominees for director for whom we have received notice under the rule, which must be received no later than 60 calendar days prior to the anniversary of the Annual Meeting. For any such director nominee to be included on our proxy card for next year’s annual meeting, notice must be received no later than October 9, 2023. Please note that the notice requirement under Rule 14a-19 is in addition to the applicable notice requirements under the advance notice provisions of our Bylaws described above.

A copy of our 2021 Annual Report is 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 (except for exhibits, which are available upon payment of an appropriate processing fee). Requests for such documents should be directed to Chief Financial Officer, Actinium Pharmaceuticals, Inc., 275 Madison Avenue, 7th Floor, New York, NY 10016, (646) 677-3875. Please note that additional information can be obtained from our website at www.actiniumpharma.com.

**FOURTH AMENDMENT TO
ACTINIUM PHARMACEUTICALS, INC. 2019 STOCK PLAN**

This FOURTH AMENDMENT TO ACTINIUM PHARMACEUTICALS, INC. 2019 STOCK PLAN (this “*Amendment*”), effective as of _____, 2022, is made and entered into by Actinium Pharmaceuticals, Inc., a Delaware corporation (the “*Company*”). Terms used in this Amendment with initial capital letters that are not otherwise defined herein shall have the meanings ascribed to such terms in the Actinium Pharmaceuticals, Inc. 2019 Stock Plan (the “*Original Plan*”), as amended by those certain Amendments to Actinium Pharmaceuticals, Inc. 2019 Stock Plan, effective as of November 18, 2020, November 9, 2021, and August 10, 2022 (collectively with the Original Plan, the “*Plan*”).

RECITALS

WHEREAS, Section 16(a) of the Plan provides that the Board may amend, alter, suspend, or discontinue the Plan at any time and from time to time;

WHEREAS, the Board desires to amend the Plan to increase the aggregate number of shares of Common Stock that may be issued under the Plan as set forth in Section 3 of the Plan by an additional 3,500,000 shares of Common Stock; and

WHEREAS, the Board intends to submit this Amendment to the Company’s stockholders for their approval.

NOW, THEREFORE, in accordance with Section 16(a) of the Plan, the Company hereby amends the Plan as follows:

1. Section 3 of the Plan is hereby amended by deleting the first sentence of said section in its entirety and substituting in lieu thereof the following new sentence:

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 9,333,333, and the maximum aggregate number of Shares that may be granted in the form of Incentive Stock Options is 9,333,333.

2. Except as expressly amended by this Amendment, the Plan shall continue in full force and effect in accordance with the provisions thereof.

IN WITNESS WHEREOF, the Company has caused this Amendment to be duly executed as of the date first written above.

ACTINIUM PHARMACEUTICALS, INC.
By: _____
Name: Sandesh Seth
Title: Chairman and Chief Executive Officer

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 October 18, 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.

**AMENDMENT TO
ACTINIUM PHARMACEUTICALS, INC. 2019 PLAN**

This AMENDMENT TO ACTINIUM PHARMACEUTICALS, INC. 2019 PLAN (this “***Amendment***”), effective as of November 18, 2020, is made and entered into by Actinium Pharmaceuticals, Inc., a Delaware corporation (the “***Company***”). Terms used in this Amendment with initial capital letters that are not otherwise defined herein shall have the meanings ascribed to such terms in the Actinium Pharmaceuticals, Inc. 2019 Plan (the “***Plan***”).

RECITALS

WHEREAS, Section 16(a) of the Plan provides that the Board may amend the Plan at any time and from time to time;

WHEREAS, the Board desires to amend the Plan to increase the aggregate number of shares of Common Stock that may be issued under the Plan as set forth in Section 3 of the Plan by an additional 2,750,000 shares of Common Stock; and

WHEREAS, the Board intends to submit this Amendment to the Company’s stockholders for their approval.

NOW, THEREFORE, in accordance with Section 16(a) of the Plan, the Company hereby amends the Plan as follows:

1. Section 3 of the Plan is hereby amended by deleting the first sentence of said section in its entirety and substituting in lieu thereof the following new sentence:

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 3,083,333, and the maximum aggregate number of Shares that may be granted in the form of Incentive Stock Options is 3,083,333.

2. Except as expressly amended by this Amendment, the Plan shall continue in full force and effect in accordance with the provisions thereof.

IN WITNESS WHEREOF, the Company has caused this Amendment to be duly executed as of the date first written above.

ACTINIUM PHARMACEUTICALS, INC.
By: <u>/s/ Sandesh Seth</u>
Name: Sandesh Seth
Title: Chairman and Chief Executive Officer

**SECOND AMENDMENT TO
ACTINIUM PHARMACEUTICALS, INC. 2019 PLAN**

This SECOND AMENDMENT TO ACTINIUM PHARMACEUTICALS, INC. 2019 PLAN (this “**Amendment**”), effective as of November 9, 2021, is made and entered into by Actinium Pharmaceuticals, Inc., a Delaware corporation (the “**Company**”). Terms used in this Amendment with initial capital letters that are not otherwise defined herein shall have the meanings ascribed to such terms in the Actinium Pharmaceuticals, Inc. 2019 Plan (the “**Original Plan**”), as amended by that certain Amendment to Actinium Pharmaceuticals, Inc. 2019 Plan, effective as of November 18, 2020 (collectively with the Original Plan, the “**Plan**”).

RECITALS

WHEREAS, Section 16(a) of the Plan provides that the Board may amend the Plan at any time and from time to time;

WHEREAS, the Board desires to amend the Plan to increase the aggregate number of shares of Common Stock that may be issued under the Plan as set forth in Section 3 of the Plan by an additional 2,750,000 shares of Common Stock; and

WHEREAS, the Board intends to submit this Amendment to the Company’s stockholders for their approval.

NOW, THEREFORE, in accordance with Section 16(a) of the Plan, the Company hereby amends the Plan as follows:

1. Section 3 of the Plan is hereby amended by deleting the first sentence of said section in its entirety and substituting in lieu thereof the following new sentence:

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 5,833,333, and the maximum aggregate number of Shares that may be granted in the form of Incentive Stock Options is 5,833,333.

2. Except as expressly amended by this Amendment, the Plan shall continue in full force and effect in accordance with the provisions thereof.

IN WITNESS WHEREOF, the Company has caused this Amendment to be duly executed as of the date first written above.

ACTINIUM PHARMACEUTICALS, INC.
By: <u>/s/ Sandesh Seth</u>
Name: Sandesh Seth
Title: Chairman and Chief Executive Officer

**THIRD AMENDMENT TO
ACTINIUM PHARMACEUTICALS, INC. 2019 STOCK PLAN**

This THIRD AMENDMENT TO ACTINIUM PHARMACEUTICALS, INC. 2019 STOCK PLAN (this “**Amendment**”), effective as of August 10, 2022, is made and entered into by Actinium Pharmaceuticals, Inc., a Delaware corporation (the “**Company**”). Terms used in this Amendment with initial capital letters that are not otherwise defined herein shall have the meanings ascribed to such terms in the Actinium Pharmaceuticals, Inc. 2019 Stock Plan (the “**Original Plan**”), as amended by those certain Amendments to Actinium Pharmaceuticals, Inc. 2019 Stock Plan, effective as of November 18, 2020 and November 9, 2021, respectively (collectively with the Original Plan, the “**Plan**”).

RECITALS

WHEREAS, Section 16(a) of the Plan provides that the Board may amend, alter, suspend, or discontinue the Plan at any time and from time to time; and

WHEREAS, the Board desires to amend the Plan to add restricted stock units as a type of equity award available for issuance under the Plan.

NOW, THEREFORE, in accordance with Section 16(a) of the Plan, the Company hereby amends the Plan as follows:

1. Section 1 of the Plan is hereby amended by deleting the first paragraph of said section in its entirety and substituting in lieu thereof the following new paragraph:

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 incentives to Employees, Directors and Consultants and to promote the success of the Company’s business. To achieve these purposes, the Company may grant (a) Incentive Stock Options or Nonstatutory Stock Options, as determined by the Administrator at the time of grant of an option and, if applicable, subject to the provisions of Section 422 of the Code and the regulations promulgated thereunder, (b) Stock Purchase Rights, or (c) Restricted Stock Units, all in accordance with the terms and conditions of the Plan.

2. Section 1 of the Plan is hereby further amended by deleting the first sentence of the last paragraph of said section in its entirety and substituting in lieu thereof the following new sentence:

The amendments made to the Plan shall affect only awards granted on or after their respective effective dates.

3. Section 2(c) of the Plan is hereby amended by deleting said section in its entirety and substituting in lieu thereof the following new Section 2(c):

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

4. Section 2(e) of the Plan is hereby amended by deleting Subsection (iv)(B)(IV) in its entirety and substituting in lieu thereof the following new Subsection (iv)(B)(IV):

(IV) in respect of any Option, Restricted Stock or RSUs 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);

5. Section 2(k) of the Plan is hereby amended by deleting the phrase “of the Option” in the first sentence of said section and replacing it with new phrase “of an award”.

6. Section 2(z) of the Plan is hereby amended by deleting said section in its entirety and substituting in lieu thereof the following new Section 2(z):

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

7. Section 2 of the Plan is hereby amended by adding the following new Sections 2(cc)-1 and 2(cc)-2 immediately following Section 2(cc):

(cc)-1 **“Restricted Stock Units”** or **“RSUs”** means units awarded to Participants pursuant to Section 11-1 below, which are convertible into Shares at such time as the units are no longer subject to restrictions as established by the Committee.

(cc)-2 **“RSU Agreement”** means a written document, the form(s) of which shall be approved from time to time by the Administrator, reflecting the terms of RSUs granted under the Plan and includes any documents attached to such agreement.

8. Section 4 of the Plan is hereby amended by deleting Subsections (c)(vi), (ix), and (xi) in their entirety and substituting in lieu thereof the following new Subsections (vi), (ix), and (xi):

(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, Restricted Stock, or Restricted Stock Units based, in each case, on such factors as the Administrator, in its sole discretion, shall determine;

(ix) to adjust the vesting of an award granted hereunder 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;

(xi) in order to fulfill the purposes of the Plan and without amending the Plan, to modify grants of Options, Stock Purchase Rights, or Restricted Stock Units 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.

9. Section 5(a) of the Plan is hereby amended by deleting said section in its entirety and substituting in lieu thereof the following new Section 5(a):

(a) **Recipients of Grants.** Nonstatutory Stock Options, Stock Purchase Rights, and Restricted Stock Units 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.

10. The Plan is hereby further amended by adding the following new Section 11-1 immediately following Section 11:

11-1 Restricted Stock Units.

(a) **General.** When the Administrator determines that it will offer RSUs under the Plan, it shall advise the individual in writing of the terms, conditions and restrictions related to the offer, including the number of Shares that such person shall be entitled to receive upon conversion of vested RSUs into Shares, the price to be paid, if any, and the time within which such person must accept such offer. The offer to award RSUs shall be accepted by execution of an RSU Agreement in the form determined by the Administrator.

(c) **Other Provisions.** The RSU 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; provided, however, that such terms and conditions are (i) not inconsistent with the Plan, and

(ii) to the extent RSUs issued under the Plan are subject to Section 409A of the Code, in compliance with the applicable requirements of Section 409A of the Code and the regulations and other guidance issued thereunder. In addition, the provisions of RSU Agreements need not be the same with respect to each Participant.

(d) **Rights as a Stockholder.** Until the issuance of Shares upon conversion of any RSUs (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 RSUs awarded under the Plan. No adjustment will be made for a dividend or other right for which the record date is prior to the date the RSUs are converted into Shares, except as provided in Section 14 of the Plan.

11. Sections 12(a) through (d) of the Plan are hereby amended by deleting each instance of the phrase “exercise of an Option or Stock Purchase Right” in said sections and replacing it with the phrase “exercise or conversion of an Option, Stock Purchase Right, or RSUs”.

12. Section 12(a) of the Plan is hereby further amended by deleting the phrase “(or in the case of the Participant’s death, the person exercising the Option or Stock Purchase Right)” in the first sentence of said section and replacing it with the phrase “(or in the case of the Participant’s death, the person exercising the Option or Stock Purchase Right or receiving Shares upon conversion of vested RSUs)”.

13. Section 12(f) of the Plan is hereby amended by deleting the phrase “the Option or Stock Purchase Right is exercised” and replacing it with the phrase “the Option, Stock Purchase Right, or RSUs are exercised or converted, as applicable, into Shares”.

14. Section 13(a) of the Plan is hereby amended by deleting said section in its entirety and replacing it with the following new Section 13(a):

(a) **General.** Except as set forth in this Section 13, Options, Stock Purchase Rights, and RSUs 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 a Participant will not constitute a transfer. An Option, Stock Purchase Right, or RSUs may be exercised or converted into Shares during the lifetime of the holder of such Option, Stock Purchase Right, or RSUs only by such holder or a transferee permitted by this Section 13.

15. Sections 14(a) through (d), 16(b), and 17 of the Plan are hereby amended by deleting each instance of the phrase “Option or Stock Purchase Right” in said sections and replacing it with the phrase “Option, Stock Purchase Right, or RSUs”.

16. Section 14(c) of the Plan is hereby further amended by deleting each instance of the phrase “equivalent option or right” in said section and replacing it with the phrase “equivalent award”.

17. Section 14(e) of the Plan is hereby amended by deleting said section in its entirety and replacing it with the following new Section 14(e):

(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, (ii) any outstanding Restricted Stock shall become immediately vested and any repurchase option with respect to such Restricted Stock shall immediately lapse, and (iii) any outstanding RSUs shall become immediately vested, in each case, effective immediately prior to the Change of Control.

18. Section 15 of the Plan is hereby amended by deleting said section in its entirety and replacing it with the following new Section 15:

15. **Time of Granting Awards.** The date of grant of an Option, Stock Purchase Right, or RSUs shall, for all purposes, be the date on which the Administrator makes the determination granting such Option, Stock Purchase Right, or RSUs, 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, Stock Purchase Right, or RSUs are so granted within a reasonable time after the date of such grant.

19. Section 16 of the Plan is hereby amended by deleting the phrase "Optionee or holder of Stock Purchase Rights" in said section and replacing it with the phrase "Optionee or holder of Stock Purchase Rights or RSUs".

20. Section 19 of the Plan is hereby amended by deleting said section in its entirety and replacing it with the following new Section 19:

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

21. Section 21 of the Plan is hereby amended by deleting said section in its entirety and replacing it with the following new Section 21:

21. **Information and Documents to Participants.** If required by the Applicable Laws, the Company shall provide financial statements at least annually to each Participant and to each individual who acquired Shares pursuant to the Plan, during the period such Participant has one or more Options, Stock Purchase Rights, or RSUs 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, Stock Purchase Rights, or RSUs under the Plan is limited to key employees whose duties in connection with the Company assure their access to equivalent information.

22. Except as expressly amended by this Amendment, the Plan shall continue in full force and effect in accordance with the provisions thereof.

IN WITNESS WHEREOF, the Company has caused this Amendment to be duly executed as of the date first written above.

ACTINIUM PHARMACEUTICALS, INC.
By: <u>/s/ Sandesh Seth</u>
Name: Sandesh Seth
Title: Chairman and Chief Executive Officer

PROXY
ANNUAL MEETING OF STOCKHOLDERS
ACTINIUM PHARMACEUTICALS, INC.
December 8, 2022

***This Proxy is solicited by the Board of Directors of Actinium Pharmaceuticals, Inc.,
which recommends that you vote FOR proposals 1, 2, 3, and 4.***

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 Monday, December 8, 2022 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.

This proxy, when properly executed, will be voted in the manner directed herein. If no such direction is made, this proxy will be voted in accordance with the Board of Directors' recommendations.

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

▲ 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:**

**Our official Notice of Annual Meeting of Stockholders, the 2021 Annual Report
on Form 10-K and the Proxy Statement are available at
<http://www.viewproxy.com/actiniumpharma/2022>.**

THE BOARD OF DIRECTORS RECOMMENDS A VOTE “FOR” PROPOSALS 1, 2, 3, AND 4.

Proposal 1: Election of one director to serve as Class III director on our Board of Directors until our 2025 Annual Meeting of Stockholders, or until his successor is elected and qualified or until his earlier resignation or removal.

Nominee:

01) Ajit S. Shetty

FOR

☐

WITHHOLD

☐

Proposal 2: To approve an amendment to the Actinium Pharmaceuticals, Inc. 2019 Plan to increase the total number of shares of common stock authorized for issuance under such plan from 5,833,333 by 3,500,000, to a total of 9,333,333 shares to attract and retain the best available personnel and to support planned hiring efforts as the Company grows.

☐ **FOR**

☐ **AGAINST**

☐ **ABSTAIN**

Proposal 3: To ratify the appointment of Marcum LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2022.

☐ **FOR**

☐ **AGAINST**

☐ **ABSTAIN**

Proposal 4: To approve, on a non-binding advisory basis, the compensation of our named executive officers.

☐ **FOR**

☐ **AGAINST**

☐ **ABSTAIN**

Note: Such other business as may arise and that may properly be conducted at the Annual Meeting or any adjournment or postponement thereof.

Date: _____, 2022

Signature: _____

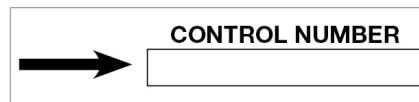
Signature (Joint Owners): _____

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.

➔ **CONTROL NUMBER**


▲ 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


As a stockholder of Actinium Pharmaceuticals, Inc., you have the option of voting your shares electronically through the Internet or by telephone, eliminating the need to return the proxy card. Your electronic vote authorizes the named proxies to vote your shares in the same manner as if you marked, signed, dated and returned the proxy card. Votes submitted electronically over the Internet or by telephone must be received by 11:59 p.m., Eastern Time, on December 7, 2022.



INTERNET
Vote Your Proxy on the Internet:
Go to 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.