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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, DC 20549**

**FORM S-8**

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

**ACTINIUM PHARMACEUTICALS, INC.**

(Exact Name of Registrant as Specified in Its Charter)

**DELAWARE**

(State or other Jurisdiction of  
Incorporation or Organization)

**74-2963609**

(I.R.S Employer  
Identification Number)

**275 Madison Avenue, 7<sup>th</sup> Floor, New York, NY**

(Address of Principal Executive Offices)

**10016**

(Zip Code)

**ACTINIUM PHARMACEUTICALS, INC.  
AMENDED AND RESTATED 2013 EQUITY INCENTIVE PLAN**

(Full Title of the Plan)

**Sandesh Seth**

**Executive Chairman**

**275 Madison Avenue, 7<sup>th</sup> Floor,  
New York, New York 10016**

**Phone: (646) 677-3870**

(Name, Address and Telephone Number of Agent for Service)

**Copy to:**

**Thomas Slusarczyk, Esq.**

The Matt Law Firm, PLLC

1701 Genesee Street

Utica, New York 13501

(315) 235-2299

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer

Non-accelerated filer

(Do not check if a smaller reporting company)

Accelerated filer

Smaller reporting company

## CALCULATION OF REGISTRATION FEE

Title of securities to be registered	Amount to be registered (1)	Proposed maximum offering price per share (2)	Proposed maximum aggregate offering price (2)	Amount of registration fee
Common Stock \$0.001 par value (3)	7,000,000	\$ 1.34	\$ 9,380,000	\$ 1,087.15
Total	<u>7,000,000</u>	<u>\$ 1.34</u>	<u>\$ 9,380,000</u>	<u>\$ 1,087.15</u>

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

(2) Estimated solely for the purpose of calculating the registration fee computed pursuant to Rule 457(c) and (h), upon the basis of the average of the high and low prices of the common stock as quoted on The NASDAQ Capital Market on March 6, 2017.

(3) Represents the number of stock options and shares available for future option grants under the Actinium Pharmaceuticals, Inc. Amended and Restated 2013 Stock Plan, as amended.

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## EXPLANATORY NOTE

This Registration Statement on Form S-8 is being filed by Actinium Pharmaceuticals, Inc. (the “Company”), pursuant to General Instruction E to the Form S-8 Registration Statement under the Securities Act of 1933, as amended, in connection with the registration of (i) an additional 7,000,000 shares of the Company’s common stock, par value \$0.001 per share (the “Common Stock”) issuable pursuant to the Company’s Amended and Restated 2013 Stock Plan (as amended, the “Plan”) and (ii) options that may be granted under the Plan to purchase up to 7,000,000 additional shares of Common Stock. 5,750,000 shares of Common Stock issuable under the Plan have been previously registered pursuant to the Company’s Registration Statement on Form S-8 (File No. 333-197283) filed with the Securities and Exchange Commission on July 7, 2014 and the information contained therein is incorporated herein by reference.

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**PART I**

**INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS**

**Item 1. Plan Information\***

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

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\* Information required by Part I to be included in the Section 10(a) prospectus will be sent or given to employees as specified by Rule 428 of the Securities Act, and is omitted from this Registration Statement in accordance with Rule 428 under the Securities Act and the Note to Part I of Form S-8.

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## PART II

### INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

#### Item 3. Incorporation of Documents by Reference.

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

- (1) Actinium Pharmaceuticals, Inc. Amended and Restated 2013 Stock Plan (incorporated by reference to Exhibit 10.33 to Form S-1 filed on January 31, 2014).
- (2) First Amendment to Amended and Restated 2013 Stock Plan, effective August 6, 2015 (incorporated by reference to Exhibit 10.1 to Form 10-Q filed on August 7, 2015).
- (3) Second Amendment to the 2013 Amended and Restated Stock Plan, effective as of December 15, 2015 (incorporated by reference to Exhibit 10.1 to Form 8-K filed on December 16, 2015).
- (4) Third Amendment to the 2013 Amended and Restated Stock Plan, effective as of December 22, 2015 (incorporated by reference to Exhibit 10.56 to Form 10-K filed on March 11, 2016).
- (5) Fourth Amendment to the 2013 Amended and Restated Stock Plan, effective as of December 13, 2016 (incorporated by reference to Exhibit 1.1 to Form 8-K filed on December 14, 2016).
- (6) Fifth Amendment to the 2013 Amended and Restated Stock Plan, effective as of December 21, 2016 (incorporated by reference to Exhibit 10.59 to Form 10-K filed on March 16, 2017).
- (7) Our Annual Report on Form 10-K for fiscal year ended December 31, 2016, filed on March 16, 2017.
- (8) Our description of our common stock set forth in the section entitled “Description of Capital Stock” of our Registration Statement on Form S-3, initially filed with the Commission on March 16, 2017, as may be amended from time to time.

All documents subsequently filed by us pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act after the date of this Registration Statement and prior to the filing of a post-effective amendment to this Registration Statement indicating that all securities offered have been sold or which deregisters all securities then remaining unsold, are incorporated by reference in this Registration Statement and are a part of this Registration Statement from the respective dates of filings of such documents. Any statement contained herein or in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein or in any other filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

#### Item 4. Description of Securities.

Not applicable.

#### Item 5. Interests of Named Experts and Counsel.

Not applicable.

**Item 6. Indemnification of Directors and Officers.**

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

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

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

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

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

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

**Item 7. Exemption From Registration Claimed.**

Not applicable.

**Item 8. Exhibits.**

<u>Exhibit No.</u>	<u>Description</u>
5.1	<a href="#">Opinion of The Matt Law Firm, PLLC *</a>
23.1	<a href="#">Consent of GBH CPAs, PC *</a>
23.2	Consent of The Matt Law Firm, PLLC (included in Exhibit 5.1) *
24.1	Power of Attorney (included on signature page) *
99.1	<a href="#">Actinium Pharmaceuticals, Inc. Amended and Restated 2013 Stock Plan (incorporated by reference to Exhibit 10.33 to Form S-1 filed on January 31, 2014).</a>
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99.5	<a href="#">Fourth Amendment to the 2013 Amended and Restated Stock Plan, effective as of December 13, 2016 (incorporated by reference to Exhibit 1.1 to Form 8-K filed on December 14, 2016).</a>
99.6	<a href="#">Fifth Amendment to the 2013 Amended and Restated Stock Plan, effective as of December 21, 2016 (incorporated by reference to Exhibit 10.59 to Form 10-K filed on March 16, 2017).</a>

\* Filed herewith

**Item 9. Undertakings.**

The undersigned Company hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:
- (i) To include any prospectus required by Section 10(a)(3) of the Securities Act;
  - (ii) To reflect in the prospectus any facts or events arising after the effective date of the Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the Registration Statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective Registration Statement;
  - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the Registration Statement or any material change to such information in the Registration Statement;

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

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

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

The undersigned Company hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Company's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the Registration Statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

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

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



## SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Company certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of New York, State of New York, on this 16th day of March, 2017.

Actinium Pharmaceuticals, Inc.

By: /s/ Kaushik J. Dave

Name: Kaushik J. Dave

Title: Chief Executive Officer and Interim Chief  
Financial Officer  
(Duly Authorized Officer, Principal  
Executive Officer, and Principal Financial  
and Accounting Officer)

## POWER OF ATTORNEY

Each of the undersigned directors and officers of Actinium Pharmaceuticals, Inc., a Delaware corporation, do hereby constitute and appoint Sandesh Seth the undersigned's true and lawful attorney and agent, with full power of substitution and resubstitution in each, to do any and all acts and things in our name and on our behalf in our respective capacities as directors and officers and to execute any and all instruments for us and in our names in the capacities indicated below, which said attorneys and agents, or either one of them, may deem necessary or advisable to enable said corporation to comply with the Securities Act, as amended, and any rules, regulations and requirements of the Securities and Exchange Commission, in connection with this registration statement, including specifically, but without limitation, power and authority to sign for us or any of us in our names in the capacities indicated below, any and all amendments (including post-effective amendments) hereto, and each of the undersigned does hereby ratify and confirm all that said attorneys and agents, or either one of them or any substitute, shall do or cause to be done by virtue hereof. This Power of Attorney may be executed in any number of counterparts.

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

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Kaushik J. Dave</u> Kaushik J. Dave	Chief Executive Officer, Interim Chief Financial Officer and Director (Principal Executive Officer and Principal financial and Accounting Officer)	March 16, 2017
<u>/s/ Sandesh Seth</u> Sandesh Seth	Executive Chairman and Director	March 16, 2017
<u>/s/ David Nicholson</u> David Nicholson	Director	March 16, 2017
<u>/s/ Richard I. Steinhart.</u> Richard I. Steinhart	Director	March 16, 2017
<u>/s/ Sergio Traversa</u> Sergio Traversa	Director	March 16, 2017

## INDEX TO EXHIBITS

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\* Filed herewith

# MATT

Attorneys at Law

*The Matt Law Firm, PLLC*  
1701 Genesee Street  
Utica, New York 13501

315.624.7360  
Fax: 315.624.7359

March 16, 2017

Actinium Pharmaceuticals, Inc.  
275 Madison Avenue, 7th Floor  
New York, New York 10016

**Re: Actinium Pharmaceuticals, Inc. Amended and Restated 2013 Stock Plan**

Ladies and Gentlemen:

We have acted as special counsel to Actinium Pharmaceuticals, Inc., a Delaware corporation (the "Company"), in connection with the Registration Statement on Form S-8 (the "Registration Statement") relating to the registration of the offer and sale of (i) up to 7,000,000 shares (the "Shares") of the Company's common stock, par value \$0.001 per share (the "Common Stock"), issuable pursuant to the terms and in the manner set forth in the **Actinium Pharmaceuticals, Inc. Amended and Restated 2013 Stock Plan**, as amended to date (the "Plan"), in addition to the 5,750,000 shares registered before the filing of the Registration Statement, and (ii) options that may be granted under the Plan to purchase up to 7,000,000 Shares (the "Options").

In connection with the opinion expressed herein, we have examined such documents, records and matters of law as we have deemed relevant or necessary for purposes of this opinion.

In rendering this opinion, we have assumed the genuineness of all signatures on all documents examined by us, the due authority of the parties signing such documents, the authenticity of all documents submitted to us as originals, and the conformity to the originals of all documents submitted to us as copies. We have also assumed that the offer and sale of the Shares complies in all respects with the terms, conditions and restrictions set forth in the Registration Statement and the Plan. We have further assumed that, upon the dates of exercise of the options under the Plan, the Company will have reserved sufficient authorized shares of Common Stock for issuance in exchange therefor. As to any facts material to this opinion that we did not independently establish or verify, we have relied upon oral or written statements and representations of officers and other representatives of the Company and others.

Based upon the foregoing and subject to the assumptions, qualifications and limitations set forth herein, it is our opinion that:

1. The Shares have been duly authorized and, upon issuance and payment therefor in accordance with the terms of the Plan and the agreements or certificates issued thereunder, will be legally issued, fully paid and nonassessable.
2. When Options are issued pursuant to the Plan, such Options will be the legal, valid and binding obligations of the Company, subject to applicable bankruptcy, insolvency and other laws affecting the enforceability of creditors' rights generally.

The foregoing opinion is based upon and limited to the General Corporation Law of the State of Delaware as currently in effect, and we express no opinion as to the effect of any other law of the State of Delaware or the laws, statutes, regulations or ordinances of any other jurisdiction.

We hereby consent to the use of this opinion as Exhibit 5.1 to the Registration Statement. In giving such consent, we do not admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act of 1933, as amended, or the rules and regulations of the Securities and Exchange Commission promulgated thereunder.

Very truly yours,

THE MATT LAW FIRM, PLLC

/s/ The Matt Law Firm, PLLC

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We hereby consent to the incorporation by reference in this Registration Statement of Actinium Pharmaceuticals, Inc. on Form S-8 of our report dated March 16, 2017 relating to the consolidated financial statements of Actinium Pharmaceuticals, Inc. as of December 31, 2016 and 2015 and for the years then ended.

/s/ GBH CPAs, PC

GBH CPAs, PC  
www.gbcpas.com  
Houston, Texas

March 16, 2017