

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

SCHEDULE 13D
(Rule 13d-101)

INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT
TO § 240.13d-1(a) AND AMENDMENTS THERETO FILED PURSUANT TO
§ 240.13d-2(a)

(Amendment No. 2)¹

Actinium Pharmaceuticals, Inc. (formerly, Cactus Ventures, Inc.)
(Name of Issuer)

Common Stock, par value \$0.001 per share
(Title of Class of Securities)

00507W107
(CUSIP Number)

Eric M. Cottingham, Ph.D
Memorial Sloan-Kettering Cancer Center
1275 York Avenue
New York, NY 10065
(212) 639-2000
(Name, Address and Telephone Number of Person
Authorized to Receive Notices and Communications)

December 21, 2015
(Date of Event Which Requires Filing of This Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§ 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box ☐.

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. *See* § 240.13d-7 for other parties to whom copies are to be sent.

¹ The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, *see* the *Notes*).

1	NAME OF REPORTING PERSON Memorial Sloan-Kettering Cancer Center	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS OO	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION New York	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 5,702,387
	8	SHARED VOTING POWER
	9	SOLE DISPOSITIVE POWER 5,702,387
	10	SHARED DISPOSITIVE POWER
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 5,702,387	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 13.6%	
14	TYPE OF REPORTING PERSON CO	

Explanatory Note

Introduction

This Amendment No. 2 to Schedule 13D (the “Amended 13D”) amends the Schedule 13D, filed on August 23, 2013 (the “Prior Schedule 13D”), on behalf of Memorial Sloan-Kettering Cancer Center (“MSKCC” or the “Reporting Person”), AHLB Holdings, LLC (“AHLB”) and Actinium Holdings Ltd. (“AHL”). The Amended 13D reflects, among other matters, the removal of AHLB and AHL as reporting persons and the entry by MSK into an Investors’ Rights Agreement with Actinium Pharmaceuticals, Inc., a Delaware corporation (“Actinium”), on December 21, 2015, described in Item 6 below.

Item 1. Security and Issuer.

Item 1 is hereby amended and restated to read as follows:

This Amended 13D relates to the common stock, par value \$0.001 per share, of Actinium whose principal offices are located at 757 Third Avenue, 21st Floor, New York, NY 10017.

Item 2. Identity and Background.

The second paragraph of Item 2 is hereby amended and restated to read as follows:

This Amended 13D is being filed on behalf of MSKCC. The Prior Schedule 13D was filed jointly on behalf of MSKCC, AHLB Holdings, LLC (“AHLB”) and Actinium Holdings, Ltd. (“AHL”). On May 6, 2015, the shares of Common Stock subject to this Amended 13D (the “Shares”) previously held directly by AHL, a wholly owned subsidiary of AHLB (a wholly owned subsidiary of MSKCC), were transferred to MSKCC. As a result of the transfer, AHL and AHLB are no longer deemed beneficial owners of the Shares.

Item 4. Purpose of the Transaction.

Item 4 is hereby amended and restated to read as follows:

The information set forth in Items 2, 3 and 6 is hereby incorporated herein by reference.

To the extent of expiration of, or any reduction in, sale forbearance arrangements as described in Item 6 below, the Reporting Person (or any person acting on their behalf pursuant to any transfer of beneficial ownership) may sell all or any portion of the Shares in the open-market (including pursuant to the registration rights agreements described in Item 6, if practicable) or in privately negotiated transactions, subject to market conditions and compliance with applicable laws.

The Reporting Person intends to review the investment in the Shares from time to time (or to have such investment reviewed from time to time by any person acting on their behalf pursuant to any transfer of beneficial ownership). Such review may result in the Reporting Person’s sale of the Shares, maintenance of their holdings of the Shares at current levels or, if so determined, the acquisition of additional shares. Any such actions will be dependent upon, among other things: the market price of the Common Stock; general market and economic conditions; future evaluations of the Issuer’s business, financial condition, operations and prospects; the actions of the management and Board of Directors of the Issuer; and other future developments.

The Reporting Person intends, over time, to sell the Shares. Such sale is consistent with the Reporting Person’s mandate as a leading non-profit cancer treatment and research institution. The Reporting Person’s private company collaboration focuses primarily on pre-clinical and early-stage private companies rather than on publicly traded late-stage clinical and commercial stage enterprises.

Item 5. Interest in Securities of the Issuer.

Item 5 is hereby amended and restated to read as follows:

The information set forth in Items 2, 3, 4 and 6 is hereby incorporated herein by reference.

(a) The Reporting Person beneficially owns 5,702,387 shares of Common Stock, representing approximately 13.6% of the outstanding Common Stock (based on 42,017,449 shares of Common Stock outstanding as of November 2, 2015, as reported in the Issuer's Definitive Proxy Statement on Schedule 14A filed with the Securities and Exchange Commission on November 12, 2015).

(b) The Reporting Person has sole power to vote or direct the vote of, or to dispose or direct the disposition of, all of the Shares, subject to the limitations on their ability to exercise such power as described in Items 3 and 6.

(c) The Reporting Person has not effected any transactions in the Common Stock of the Issuer in the past 60 days.

(d) Not applicable.

(e) Not applicable.

Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer.

Item 6 is hereby amended and restated to read as follows:

The information set forth in Items 2, 3, 4 and 5 is incorporated herein by reference.

Investors' Rights Agreement

On December 21, 2015, MSKCC entered into an Investors' Rights Agreement (the "Investors' Rights Agreement") with Actinium. Under the terms of the Investors' Rights Agreement, MSKCC agreed to be present for quorum purposes at Actinium's 2015 annual shareholders meeting and vote the Shares in favor of Actinium's proposal to approve an amendment to the Actinium Pharmaceuticals, Inc. 2013 Amended and Restated Stock Plan, as amended (the "Plan"), to increase the shares of Actinium's Common Stock available for issuance thereunder by 3.5 million shares. Actinium has agreed with MSKCC that until the earlier of (a) MSKCC beneficially owning 5% or less of Actinium's Common Stock and (b) December 31, 2016, Actinium shall not (i) issue any option under the Plan for a per share exercise price lower than what is required by Section 9 of the Plan (without giving effect to any amendments to that Section following the date of the Investors' Rights Agreement), except as permitted under Section 14 of the Plan (relating to certain adjustments and corporate transactions) or (ii) grant any stock purchase rights under (or otherwise issue shares pursuant to) the Plan that entitles the recipient to purchase shares at a price less than 100% of the Fair Market Value (as defined in the Plan) per share on the date of such grant.

MSKCC has also agreed to certain standstill provisions, effective through the period ending immediately after Actinium's 2016 annual shareholders meeting but no later than December 31, 2016. So long as Actinium is in compliance with its obligations under the Investors' Rights Agreement, the standstill provisions restrict MSKCC's ability to make certain proposals to the board of Actinium or to stockholders (including, but not limited to, proposals offering any business combination involving Actinium or its subsidiaries or seeking representation on Actinium's board of directors), engage in certain proxy solicitations and acquire any equity securities representing in aggregate more than 1% of the outstanding voting power in Actinium's shares.

Additionally, MSKCC has agreed to forebear from transferring or otherwise disposing of the Shares (other than pursuant to a piggyback registration as described below) until the start of Actinium's Actimab-A Phase 2 clinical study (but, in no event until later than March 31, 2016). Thereafter in 2016, MSKCC shall be permitted to sell its shares subject (other than in the case of piggyback registration as described below) to a weekly volume limitation of 150,000 shares (which limit may be increased to up to 250,000 shares per week to the extent any prior weekly allotments were not fully used) and applicable law so long as MSKCC maintains at least 25% of its current shareholding in Actinium through December 31, 2016. Actinium has granted MSKCC piggyback registration rights that would be triggered in the event Actinium were to engage in a public registered offering of its shares for its own account where other shareholders are participating as selling shareholders or where such public registered offering is for the account of other selling shareholders. In addition, following December 31, 2016, there shall be no limitation of MSKCC's ability to transfer or otherwise dispose of its Shares (except as required by law) and Actinium has granted MSKCC Form S-3 registration rights with respect to the Shares.

Reference to and the description of the Investors' Rights Agreement set forth above in this Item 6 are not intended to be complete and are qualified in their entirety by reference to the full text of such agreement, which is listed as an Exhibit to this Amended Schedule 13D and incorporated by reference herein.

Item 7. Material to be Filed as Exhibits.

Item 7 is hereby amended and restated to read as follows:

- 1 Investors' Rights Agreement, dated as of December 21, 2015, by and between Actinium Pharmaceuticals, Inc. and Memorial Sloan-Kettering Cancer Center (filed herewith).

SIGNATURES

After reasonable inquiry and to the best of his knowledge and belief, the undersigned certifies that the information set forth in this statement is true, complete and correct.

Dated: December 23, 2015

MEMORIAL SLOAN-KETTERING CANCER CENTER

By: /s/ Eric M. Cottington

Name: Eric M. Cottington, Ph.D

Title: Senior Vice President

INVESTORS' RIGHTS AGREEMENT

BY AND BETWEEN

ACTINIUM PHARMACEUTICALS, INC.

AND

MEMORIAL SLOAN KETTERING CANCER CENTER

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Exhibit A - Form of Press Release

INVESTORS' RIGHTS AGREEMENT

THIS INVESTORS' RIGHTS AGREEMENT (this "**Agreement**"), is made as of the 21st day of December, 2015, by and between Actinium Pharmaceuticals, Inc., a Delaware corporation (the "**Company**"), and Memorial Sloan Kettering Cancer Center, a New York not-for-profit corporation ("**MSKCC**").

RECITALS

WHEREAS, MSKCC holds shares of the Company's Common Stock; and

WHEREAS, MSKCC and the Company agree that this Agreement shall govern certain liquidity matters and certain other matters as set forth herein.

NOW, THEREFORE, the parties to this Agreement hereby agree as follows:

1. Definitions. For purposes of this Agreement:

1.1 "**Agreement**" shall have the meaning set forth in the Preamble.

1.2 "**Affiliate**" means, with respect to any specified Person, any other Person who, directly or indirectly, controls, is controlled by, or is under common control with such Person, including any general partner, managing member, officer or director of such Person.

1.3 "**Common Stock**" means shares of the Company's common stock, par value \$0.001 per share.

1.4 "**Company**" has the meaning set forth in the Preamble.

1.5 "**Confidential Information**" has the meaning set forth in Section 3.1.

1.6 "**Damages**" means any loss, damage, claim or liability (joint or several) to which a party hereto may become subject under the Securities Act, the Exchange Act, or other federal or state law, insofar as such loss, damage, claim or liability (or any action in respect thereof) arises out of or is based upon: (i) any untrue statement or alleged untrue statement of a material fact contained in any registration statement of the Company, including any preliminary prospectus or final prospectus contained therein or any amendments or supplements thereto; (ii) an omission or alleged omission to state therein a material fact required to be stated therein, or necessary to make the statements therein not misleading; or (iii) any violation or alleged violation by the indemnifying party (or any of its agents or Affiliates) of the Securities Act, the Exchange Act, any state securities law, or any rule or regulation promulgated under the Securities Act, the Exchange Act, or any state securities law.

1.7 "**Demand Notice**" has the meaning set forth in Section 2.1(a).

1.8 “**Exchange Act**” means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

1.9 “**Excluded Registration**” means (i) a registration relating to the sale of securities to employees of the Company or a subsidiary pursuant to a stock option, stock purchase, or similar plan; (ii) a registration relating to an SEC Rule 145 transaction; (iii) a registration on any form that does not include substantially the same information as would be required to be included in a registration statement covering the sale of the Registrable Securities; or (iv) a registration in which the only Common Stock being registered is Common Stock issuable upon conversion of debt securities that are also being registered.

1.10 “**Form S-3**” means such form under the Securities Act as in effect on the date hereof or any registration form under the Securities Act subsequently adopted by the SEC that permits incorporation of substantial information by reference to other documents filed by the Company with the SEC.

1.11 “**Holder**” means any holder of Registrable Securities who is a party to this Agreement.

1.12 “**Initiating Holders**” means, collectively, Holders who properly initiate a registration request under this Agreement.

1.13 “**MSKCC**” has the meaning set forth in the Preamble.

1.14 “**Person**” means any individual, corporation, partnership, trust, limited liability company, association or other entity.

1.15 “**Plan**” has the meaning set forth in Section 4.2.

1.16 “**Pre-Registration Period**” has the meaning set forth in Section 2.10(a).

1.17 “**Registrable Securities**” means (i) the five million, seven hundred and two thousand, three hundred and eighty seven (5,702,387) shares of Common Stock held by MSKCC on the date hereof; and (ii) any Common Stock issued as (or issuable upon the conversion or exercise of any warrant, right, or other security that is issued as) a dividend or other distribution with respect to, or in exchange for or in replacement of, the shares referenced in clause (i) above; excluding in all cases, however, any Registrable Securities sold by MSKCC in a transaction in which the applicable rights under this Agreement are not assigned pursuant to Section 5.1, and excluding for purposes of Section 2 (but not Section 2.9 or 2.10) any shares for which registration rights have terminated pursuant to Section 2.11 of this Agreement.

1.18 “**Representative**” means, as to any Person, such Person’s Affiliates, and its and their respective directors, officers, employees, managing members, general partners, agents and consultants (including attorneys, financial advisors and accountants).

1.19 “SEC” means the Securities and Exchange Commission.

1.20 “SEC Rule 144” means Rule 144 promulgated by the SEC under the Securities Act.

1.21 “SEC Rule 145” means Rule 145 promulgated by the SEC under the Securities Act.

1.22 “Securities Act” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

1.23 “Selling Expenses” means all underwriting discounts, selling commissions, and stock transfer taxes applicable to the sale of Registrable Securities, and fees and disbursements of counsel for any Holder, except for the fees and disbursements of the Selling Holder Counsel borne and paid by the Company as provided in Section 2.6.

1.24 “Selling Holder Counsel” has the meaning set forth in Section 2.6.

1.25 “Subject Information” has the meaning set forth in Section 3.2.

2. Registration Rights. The Company covenants and agrees as follows:

2.1 Demand Registration.

(a) Form S-3 Demand. If at any time after December 31, 2016, the Company receives a request from Holders of at least a majority of the Registrable Securities then outstanding that the Company file a Form S-3 registration statement with respect to outstanding Registrable Securities of such Holders, then the Company shall (i) within ten (10) days after the date such request is given, give notice thereof (the “Demand Notice”) to all Holders other than the Initiating Holders; and (ii) as soon as practicable, and in any event within forty-five (45) days after the date such request is given by the Initiating Holders, file a Form S-3 registration statement under the Securities Act covering all Registrable Securities requested to be included in such registration by the Initiating Holders and any other Holders, as specified by notice given by each such Holder to the Company within twenty (20) days of the date the Demand Notice is given, and in each case, subject to the limitations of Section 2.1(b).

(b) Notwithstanding the foregoing obligations, if the Company furnishes to the Holders requesting a registration pursuant to this Section 2.1 a certificate signed by the Company’s chief executive officer stating that in the good faith judgment of the Company’s Board of Directors it would be materially detrimental to the Company and its stockholders for such registration statement to either become effective or remain effective for as long as such registration statement otherwise would be required to remain effective, because such action would (i) materially interfere with a significant acquisition, corporate reorganization, or other similar transaction involving the Company; (ii) require premature disclosure of material information that the Company has a bona fide business purpose for preserving as confidential; or (iii) render the Company unable to comply with requirements under the Securities Act or Exchange Act, then the Company shall have the right to defer taking action with respect to such filing, and any time periods with respect to filing or effectiveness thereof shall be tolled correspondingly, for a period of not more than ninety (90) days after the request of the Initiating Holders is given; provided, however, that the Company may not invoke this right more than once in any twelve (12) month period; and provided further that the Company shall not register any securities for its own account or that of any other stockholder during such ninety (90) day period other than an Excluded Registration.

(c) The Company shall not be obligated to effect, or to take any action to effect, any registration pursuant to Section 2.1(a) (i) during the period that is thirty (30) days before the Company's good faith estimate of the date of filing of, and ending on a date that is ninety (90) days after the effective date of, a Company-initiated registration, provided that the Company is actively employing in good faith commercially reasonable efforts to cause such registration statement to become effective; or (ii) if the Company has effected two registrations pursuant to Section 2.1(a) within the twelve (12) month period immediately preceding the date of such request. A registration shall not be counted as "effected" for purposes of this Section 2.1(c) until such time as the applicable registration statement has been declared effective by the SEC, unless, subject to Section 2.6, the Initiating Holders withdraw their request for such registration and elect not to pay the registration expenses therefor, in which case such withdrawn registration statement shall be counted as "effected" for purposes of this Section 2.1(c).

2.2 Piggyback Registration. If the Company proposes to register (including, for this purpose, a registration effected by the Company for stockholders other than the Holders) any of its Common Stock under the Securities Act in connection with the public offering of such securities solely for cash (other than in an Excluded Registration), (i) by the Company for its own account as to which any of the Company's stockholders participate as selling stockholders or (ii) by the Company for the account of other stockholders, the Company shall, at such time, promptly give each Holder notice of such registration. Upon the request of each Holder given within twenty (20) days after such notice is given by the Company, the Company shall, subject to the provisions of Section 2.3, cause to be registered all of the Registrable Securities that each such Holder has requested to be included in such registration. The Company shall have the right to terminate or withdraw any registration initiated by it under this Section 2.2 before the effective date of such registration, whether or not any Holder has elected to include Registrable Securities in such registration. The expenses (other than Selling Expenses) of such withdrawn registration shall be borne by the Company in accordance with Section 2.6.

2.3 Underwriting Requirements.

(a) In connection with any offering involving an underwriting of shares of the Company's capital stock pursuant to Section 2.2, the Company shall not be required to include any of the Holder's Registrable Securities in such underwriting unless the Holders accept the terms of the underwriting as agreed upon between the Company (acting reasonably) and its underwriters, and then only in such quantity as the underwriters in their sole discretion determine will not jeopardize the success of the offering by the Company. If the total number of securities, including Registrable Securities, requested by stockholders to be included in such offering exceeds the number of securities to be sold (other than by the Company) that the underwriters in their reasonable discretion determine is compatible with the success of the offering, then the Company shall be required to include in the offering only that number of such securities, including Registrable Securities, which the underwriters and the Company in their sole discretion determine will not jeopardize the success of the offering. Notwithstanding the foregoing, (x) in no event shall the Registrable Securities included in the offering be reduced by a greater percentage than the bona fide securities sought to be included in such offering by any other selling shareholder and (y) in no event shall the number of Registrable Securities included in the offering be reduced below twenty percent (20%) of the total number of securities included in such offering.

2.4 Obligations of the Company. Whenever required under this Section 2 to effect the registration of any Registrable Securities, the Company shall, as expeditiously as reasonably possible:

(a) prepare and file with the SEC a registration statement with respect to such Registrable Securities and use its commercially reasonable efforts to cause such registration statement to become effective and, upon the request of the Holders of a majority of the Registrable Securities registered thereunder, keep such registration statement effective for a period of up to one hundred twenty (120) days or, if earlier, until the distribution contemplated in the registration statement has been completed; provided, however, that (i) such one hundred twenty (120) day period shall be extended for a period of time equal to the period the Holders refrain, at the request of an underwriter of Common Stock (or other securities) of the Company, from selling any securities included in such registration, and (ii) in the case of any registration of Registrable Securities on Form S-3 that are intended by the Holders to be offered on a continuous or delayed basis, subject to compliance with applicable SEC rules, such one hundred twenty (120) day period shall be extended for up to ninety (90) days, if necessary, to keep the registration statement effective until all such Registrable Securities are sold;

(b) prepare and file with the SEC such amendments and supplements to such registration statement, and the prospectus used in connection with such registration statement, as may be necessary to comply with the Securities Act in order to enable the disposition of all securities covered by such registration statement;

(c) furnish to the selling Holders such numbers of copies of a prospectus, including a preliminary prospectus, as required by the Securities Act, and such other documents as the selling Holders may reasonably request in order to facilitate their disposition of their Registrable Securities;

(d) use its commercially reasonable efforts to register and qualify the securities covered by such registration statement under such other securities or blue-sky laws of such jurisdictions as shall be reasonably requested by the selling Holders; provided that the Company shall not be required to qualify to do business or to file a general consent to service of process in any such states or jurisdictions, unless the Company is already subject to service in such jurisdiction and except as may be required by the Securities Act;

(e) in the event of any underwritten public offering (whether on an “all or none basis”, “best efforts basis” or otherwise), enter into and perform its obligations under an underwriting agreement, in usual and customary form, with the underwriter(s) of such offering;

(f) use its commercially reasonable efforts to cause all such Registrable Securities covered by such registration statement to be listed on a national securities exchange or trading system and each securities exchange and trading system (if any) on which similar securities issued by the Company are then listed;

(g) provide a transfer agent and registrar for all Registrable Securities registered pursuant to this Agreement and provide a CUSIP number for all such Registrable Securities, in each case not later than the effective date of such registration;

(h) promptly make available for inspection by the selling Holders, any managing underwriter(s) participating in any disposition pursuant to such registration statement, and any attorney or accountant or other agent retained by any such underwriter or selected by the selling Holders, all financial and other records, pertinent corporate documents, and properties of the Company, and cause the Company's officers, directors, employees, and independent accountants to supply all information reasonably requested by any such seller, underwriter, attorney, accountant, or agent, in each case, as necessary or advisable to verify the accuracy of the information in such registration statement and to conduct appropriate due diligence in connection therewith;

(i) notify each selling Holder, promptly after the Company receives notice thereof, of the time when such registration statement has been declared effective or a supplement to any prospectus forming a part of such registration statement has been filed; and

(j) after such registration statement becomes effective, promptly notify each selling Holder of any request by the SEC that the Company amend or supplement such registration statement or prospectus.

2.5 Furnish Information. It shall be a condition precedent to the obligations of the Company to take any action pursuant to this Section 2 with respect to the Registrable Securities of any selling Holder that such selling Holder shall furnish to the Company such information regarding itself, the Registrable Securities held by it, and the intended method of disposition of such securities as is reasonably required to effect the registration of such Holder's Registrable Securities.

2.6 Expenses of Registration. All expenses (other than Selling Expenses) incurred in connection with registrations, filings, or qualifications pursuant to Section 2, including all registration, filing, and qualification fees; printers' and accounting fees; fees and disbursements of counsel for the Company; and the reasonable fees and disbursements, not to exceed fifteen thousand dollars (\$15,000) per registration, of one counsel for the selling Holders ("**Selling Holder Counsel**"), shall be borne and paid by the Company; provided, however, that the Company shall not be required to pay for any expenses of any registration proceeding begun pursuant to Section 2.1 if the registration request is subsequently withdrawn at the request of the Initiating Holders; provided, further, that if, at the time of such withdrawal, the Holders shall have learned of a material adverse change in the condition, business, or prospects of the Company from that known to the Holders at the time of their registration request and have withdrawn the request with reasonable promptness after learning of such information then the Holders shall not be required to pay any of such expenses and the withdrawal shall not be deemed to result in an "effected" registration for purposes of Section 2.1(c). All Selling Expenses relating to Registrable Securities registered pursuant to this Section 2 shall be borne and paid by the Holders pro rata on the basis of the number of Registrable Securities registered on their behalf.

2.7 Delay of Registration. No Holder shall have any right to obtain or seek an injunction restraining or otherwise delaying any registration pursuant to this Agreement as the result of any controversy that might arise with respect to the interpretation or implementation of this Section 2.

2.8 Indemnification. If any Registrable Securities are included in a registration statement under this Section 2:

(a) To the extent permitted by law, the Company will indemnify and hold harmless each selling Holder, and the partners, members, officers, directors, and stockholders of such Holder; legal counsel and accountants for such Holder; any underwriter (as defined in the Securities Act) for such Holder; and each Person, if any, who controls such Holder or underwriter within the meaning of the Securities Act or the Exchange Act, against any Damages, and the Company will pay to such Holder, underwriter, controlling Person, or other aforementioned Person any legal or other expenses reasonably incurred thereby in connection with investigating or defending any claim or proceeding from which Damages may result, as such expenses are incurred; provided, however, that the indemnity agreement contained in this Section 2.8(a) shall not apply to amounts paid in settlement of any such claim or proceeding if such settlement is effected without the consent of the Company, which consent shall not be unreasonably withheld, nor shall the Company be liable for any Damages to the extent that they arise out of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by or on behalf of such Holder, or its underwriter, controlling Person, or other aforementioned Person connected with such Holder expressly for use in connection with such registration.

(b) To the extent permitted by law, each selling Holder, severally and not jointly, will indemnify and hold harmless the Company, and each of its directors, each of its officers who has signed the registration statement, each Person (if any), who controls the Company within the meaning of the Securities Act, legal counsel and accountants for the Company, any underwriter (as defined in the Securities Act), any other Holder selling securities in such registration statement, and any controlling Person of any such underwriter or other Holder, against any Damages, in each case only to the extent that such Damages arise out of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by or on behalf of such indemnifying selling Holder expressly for use in connection with such registration; and each such indemnifying selling Holder will pay to the Company and each other aforementioned Person any legal or other expenses reasonably incurred thereby in connection with investigating or defending any claim or proceeding from which Damages may result, as such expenses are incurred; provided, however, that the indemnity agreement contained in this Section 2.8(b) shall not apply to amounts paid in settlement of any such claim or proceeding if such settlement is effected without the consent of the indemnifying Holder, which consent shall not be unreasonably withheld; and provided further that in no event shall the aggregate amounts payable by any Holder by way of indemnity or contribution under Section 2.8(b) and 2.8(d) exceed the proceeds from the offering received by such Holder (net of any Selling Expenses paid by such Holder), except in the case of fraud or willful misconduct by such Holder.

(c) Promptly after receipt by an indemnified party under this Section 2.8 of notice of the commencement of any action (including any governmental action) for which a party may be entitled to indemnification hereunder, such indemnified party will, if a claim in respect thereof is to be made against any indemnifying party under this Section 2.8, give the indemnifying party notice of the commencement thereof. The indemnifying party shall have the right to participate in such action and, to the extent the indemnifying party so desires, participate jointly with any other indemnifying party to which notice has been given, and to assume the defense thereof with counsel mutually satisfactory to the parties; provided, however, that an indemnified party (together with all other indemnified parties that may be represented without conflict by one counsel) shall have the right to retain one separate counsel, with the fees and expenses to be paid by the indemnifying party, if representation of such indemnified party by the counsel retained by the indemnifying party would be inappropriate due to actual or potential differing interests between such indemnified party and any other party represented by such counsel in such action. The failure to give notice to the indemnifying party within a reasonable time of the commencement of any such action shall relieve such indemnifying party of any liability to the indemnified party under this Section 2.8, to the extent that such failure materially prejudices the indemnifying party's ability to defend such action. The failure to give notice to the indemnifying party will not relieve it of any liability that it may have to any indemnified party otherwise than under this Section 2.8.

(d) To provide for just and equitable contribution to joint liability under the Securities Act in any case in which either: (i) any party otherwise entitled to indemnification hereunder makes a claim for indemnification pursuant to this Section 2.8 but it is judicially determined (by the entry of a final judgment or decree by a court of competent jurisdiction and the expiration of time to appeal or the denial of the last right of appeal) that such indemnification may not be enforced in such case, notwithstanding the fact that this Section 2.8 provides for indemnification in such case, or (ii) contribution under the Securities Act may be required on the part of any party hereto for which indemnification is provided under this Section 2.8, then, and in each such case, such parties will contribute to the aggregate losses, claims, damages, liabilities, or expenses to which they may be subject (after contribution from others) in such proportion as is appropriate to reflect the relative fault of each of the indemnifying party and the indemnified party in connection with the statements, omissions, or other actions that resulted in such loss, claim, damage, liability, or expense, as well as to reflect any other relevant equitable considerations. The relative fault of the indemnifying party and of the indemnified party shall be determined by reference to, among other things, whether the untrue or allegedly untrue statement of a material fact, or the omission or alleged omission of a material fact, relates to information supplied by the indemnifying party or by the indemnified party and the parties' relative intent, knowledge, access to information, and opportunity to correct or prevent such statement or omission; provided, however, that, in any such case (x) no Holder will be required to contribute any amount in excess of the public offering price of all such Registrable Securities offered and sold by such Holder pursuant to such registration statement, and (y) no Person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) will be entitled to contribution from any Person who was not guilty of such fraudulent misrepresentation; and provided further that in no event shall a Holder's liability pursuant to this Section 2.8(d), when combined with the amounts paid or payable by such Holder pursuant to Section 2.8(b), exceed the proceeds from the offering received by such Holder (net of any Selling Expenses paid by such Holder), except in the case of willful misconduct or fraud by such Holder.

(e) Notwithstanding the foregoing, to the extent that the provisions on indemnification and contribution contained in the underwriting agreement entered into in connection with the underwritten public offering are in conflict with the foregoing provisions, the provisions in the underwriting agreement shall control.

(f) Unless otherwise superseded by an underwriting agreement entered into in connection with the underwritten public offering, the obligations of the Company and Holders under this Section 2.8 shall survive the completion of any offering of Registrable Securities in a registration under this Section 2, and otherwise shall survive the termination of this Agreement.

2.9 Reports Under Exchange Act With a view to making available to the Holders the benefits of SEC Rule 144 and any other rule or regulation of the SEC that may at any time permit a Holder to sell securities of the Company to the public without registration or pursuant to a registration on Form S-3, the Company shall:

(a) make and keep available adequate current public information, as those terms are understood and defined in SEC Rule 144, at all times;

(b) use commercially reasonable efforts to file with the SEC in a timely manner all reports and other documents required of the Company under the Securities Act and the Exchange Act; and

(c) furnish to any Holder, so long as such Holder owns any Registrable Securities, forthwith upon request (i) to the extent accurate, a written statement by the Company that it has complied with the reporting requirements of SEC Rule 144, the Securities Act, and the Exchange Act and that it qualifies as a registrant whose securities may be resold pursuant to Form S-3; and (ii) such other information as may be reasonably requested in availing any Holder of any rule or regulation of the SEC that permits the selling of any such securities without registration or pursuant to Form S-3.

2.10 Restrictions on Transfer.

(a) Commencing from the date hereof until the earlier to occur of (i) March 31, 2016 and (ii) the start of the Actimab-A Phase 2 clinical study (the “**Pre-Registration Period**”), each Holder agrees not to make any sale, assignment, transfer, pledge or other disposition of all or any portion of the Registrable Securities, except pursuant to a registered offering under Section 2.2; provided, that no officers or directors of the Company (or any Affiliates of such officers or directors, any immediate family members of such officers or directors, or any trusts formed for the benefit of any of the foregoing) shall sell, assign, transfer, pledge or otherwise dispose of any Common Stock during the Pre-Registration Period.

(b) From and after the Pre-Registration Period until December 31, 2016, each Holder agrees that (i) no more than seventy five percent (75%) of the Registrable Securities outstanding as of the date hereof may be sold, assigned, transferred, pledged, or otherwise disposed of (including, pursuant to a registered offering under Section 2.2) and (ii) except pursuant to a registered offering under Section 2.2, no more than one hundred fifty thousand (150,000) shares of Registrable Securities (subject to appropriate adjustment for stock splits, stock dividends, combinations, and other recapitalizations) may be sold, assigned, transferred, pledged or otherwise disposed of in any calendar week; provided, that such one hundred fifty thousand (150,000) share allotment shall be increased to the extent of the aggregate unused allotment from all prior calendar weeks; provided, further, that, except pursuant to a registered offering under Section 2.2, in no event after giving effect to any such increase shall more than two hundred fifty thousand (250,000) shares of Registrable Securities (subject to appropriate adjustment for stock splits, stock dividends, combinations, and other recapitalizations) be sold, assigned, transferred, pledged or otherwise disposed in any calendar week.

(c) For the avoidance of doubt, except for the restrictions contained in Sections 2.10(a) and 2.10(b), there shall be no other restriction imposed by the Company on the ability to sell, assign, transfer, pledge or otherwise dispose of Registrable Securities.

(d) Any transfer or purported transfer of the Registrable Securities in violation of this Section 2.10 shall be void ab initio. The Company shall not be required to register any transfer of the Registrable Securities in violation of this Section 2.10. The Company may, and may instruct any transfer agent for the Company, to place such stop transfer orders as may be required on the transfer books of the Company in order to ensure compliance with the provisions of this Section 2.10.

(e) Each certificate, instrument, or book entry representing (i) the Registrable Securities, and (ii) any other securities issued in respect of the securities referenced in clause (i), upon any stock split, stock dividend, recapitalization, merger, consolidation, or similar event, shall be notated with a legend as follows:

THE SHARES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR ANY APPLICABLE STATE SECURITIES LAWS. THE SHARES HAVE BEEN ACQUIRED FOR INVESTMENT PURPOSES ONLY AND NOT WITH A VIEW TOWARD RESALE AND MAY NOT BE OFFERED, SOLD, DELIVERED AFTER SALE, TRANSFERRED, PLEDGED, HYPOTHECATED OR OTHERWISE TRANSFERRED IN THE ABSENCE OF AN EFFECTIVE REGISTRATION STATEMENT FILED BY THE ISSUER WITH THE U.S. SECURITIES AND EXCHANGE COMMISSION COVERING THE SHARES UNDER THE SECURITIES ACT OR AN EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF SAID ACT THAT IS THEN APPLICABLE TO THE SHARES. AN OPINION OF COUNSEL SATISFACTORY TO THE ISSUER IN RESPECT OF THE FOREGOING MAY BE REQUIRED BY THE ISSUER OR THE TRANSFER AGENT.

The Holders consent to the Company making a notation in its records and giving instructions to any transfer agent of the Registrable Securities in order to implement the restrictions on transfer set forth in this Section 2.10.

(f) Subject to compliance with the proviso in this Section 2.10(f) below, the Company will (i) promptly remove any restrictive legends on certificates representing the Registrable Securities, (ii) upon request of any Holder, make the Company's counsel available to participate in any due diligence calls with such Holder's brokers and (iii) employ the Company's counsel (at the Company's expense) to prepare any legal opinion necessary for the prompt removal of such restrictive legends; provided, in each case (x) such legends may be removed in reliance on SEC Rule 144 or otherwise in compliance with any other applicable laws, (y) such Holder provides to the Company and/or its counsel such supporting documentation as is customarily provided in connection with such legend removal and (z) such Holder is then in compliance with its obligations under this Agreement.

2.11 Termination of Registration Rights. The right of any Holder to request registration or inclusion of Registrable Securities in any registration pursuant to Sections 2.1 or 2.2 shall terminate upon the earlier to occur of (a) such time as (i) SEC Rule 144 or another similar exemption under the Securities Act is available for the sale of all of such Holder's shares of Registrable Securities without volume limitation, (ii) the Company shall have removed all restrictive legends on certificates representing such Holder's shares of Registrable Securities and (iii) such Holder holds fewer than five hundred thousand (500,000) shares of Registrable Securities (subject to appropriate adjustment for stock splits, stock dividends, combinations, and other recapitalizations) and (b) December 31, 2019.

3. Confidentiality and Publicity.

3.1 Confidentiality. Each Holder agrees that it will keep confidential and will not disclose, divulge, or use for any purpose (other than to monitor its investment in the Company) (a) any notices of proposed registration provided by the Company to such Holder pursuant to Section 2.2, and (b) any information contained to the extent necessary in any registration statement or prospectus (including drafts thereof) provided by the Company to such Holder in connection with any registration of its shares pursuant to Section 2.1 or 2.2, (together with (a), "**Confidential Information**"), unless such Confidential Information (i) is known or becomes known to the public in general (other than as a result of a breach of this Section 3.1 by such Holder), (ii) is or has been independently developed or conceived by such Holder without use of the Company's Confidential Information, or (iii) is or has been made known or disclosed to such Holder by a third party without, to the knowledge of such Holder, a breach of any obligation of confidentiality such third party may have to the Company; provided, however, that such Holder may disclose Confidential Information (x) to its attorneys, accountants, consultants, and other professionals to the extent necessary to obtain their services in connection with monitoring its investment in the Company; (y) to any Affiliate, partner, member, stockholder, or wholly owned subsidiary of such Holder in the ordinary course of business, provided that such Holder informs such Person that such information is confidential and directs such Person to maintain the confidentiality of such information; or (z) as may otherwise be required by law, provided that, to the extent reasonable and practicable, such Holder promptly notifies the Company of such disclosure and takes reasonable steps to minimize the extent of any such required disclosure. The Company shall not furnish to any Holder (without such Holder's prior written consent) any material non-public information concerning the Company other than any such information required to be provided to such Holder pursuant to the terms of this Agreement.

3.2 Publicity. The Company and MSKCC will issue a joint press release announcing entry into this Agreement, in the form attached hereto as Exhibit A. MSKCC shall have the right to review and approve (such approval not be unreasonably withheld, delayed or conditioned) the Company's 8-K filing disclosing the joint press release and this Agreement. The Company shall have the right to review and approve (such approval not to be unreasonably withheld, delayed or conditioned) MSKCC's amendment to its Schedule 13D disclosing the joint press release and this Agreement. Unless specifically approved by both the Company and MSKCC in writing, and except to the extent of any filings with (or submissions to) any court of law in connection with the enforcement of any rights or exercise of remedies under this Agreement, no party shall make any public disclosure concerning the terms of, circumstances of, or otherwise as to, this Agreement (collectively, "**Subject Information**") that is inconsistent with, or provides information as to Subject Information that is in addition to, or contains a material omission relative to, that provided in, (a) the joint press release or (b) this Agreement. For the avoidance of doubt, the provisions contained in this Section 3.2 shall relate solely to the Subject Information and shall not amend or otherwise modify any other agreement between the parties restricting publicity as to any other information.

4. Prescribed Activity.

4.1 Standstill. So long as the Company is in compliance with its obligations under this Agreement, then unless approved in advance by the Board of Directors of the Company, each Holder agrees that neither it nor any of its Representatives acting on behalf of such Holder will, for a period ending immediately after the annual shareholders meeting of the Company in 2016 (and in all events no later than December 31, 2016), directly or indirectly:

(a) make any proposal to the Board of Directors of the Company, any of the Company's Representatives or any of the Company's stockholders regarding, or make any public announcement, proposal or offer (including "solicitation" of "proxies" as such terms are defined or used in Regulation 14A of the Exchange Act) offering (i) any business combination, merger, tender offer, exchange offer or similar transaction involving the Company or any of its subsidiaries, (ii) any restructuring, recapitalization, liquidation or similar transaction involving the Company or any of its subsidiaries, except in each case solely in connection with contractual arrangements between MSKCC and the Company or its then existing subsidiaries, (iii) any acquisition by MSKCC or any of its Affiliates of any of the Company's equity securities representing in aggregate more than one percent (1%) of outstanding voting power in shares of the Company, or rights or options to acquire interests in any of the Company's equity securities representing in aggregate more than one percent (1%) of outstanding voting power in shares of the Company, (iv) any proposal by MSKCC to seek representation on the Board of Directors of the Company; or

(b) form an Exchange Act Section 13(d) "group" with any third party to take any of the actions set forth in Section 4.1(a);

(c) in the case of MSKCC together with any of its Affiliates, acquire (or propose or agree to acquire), of record or beneficially, by purchase or otherwise, any equity securities representing in aggregate more than one percent (1%) of outstanding voting power in shares of the Company, or rights or options to acquire interests in any of the Company's equity securities representing in aggregate more than one percent (1%) of outstanding voting power in shares of the Company.

4.2 Voting. MSKCC shall be present for quorum purposes at the 2015 annual shareholders meeting of the Company and vote their shares of Common Stock in favor of the Company's proposal to approve an amendment to the Actinium Pharmaceuticals, Inc. 2013 Amended and Restated Stock Plan, as amended (the "**Plan**"), to increase the shares of Common Stock available for issuance thereunder by three million, five hundred thousand (3,500,000) shares. The Company hereby agrees that until the earlier to occur of (a) MSKCC beneficially owning five percent (5%) or less of the outstanding Common Stock and (b) December 31, 2016, the Company shall not (i) issue any option under the Plan with a per share exercise price lower than what is required by Section 9 of the Plan (without giving effect to any amendments to that Section following the date hereof), except as permitted under Section 14 of the Plan (relating to certain adjustments and corporate transactions) or (ii) grant any stock purchase rights under (or otherwise issue shares pursuant to) the Plan that entitles the recipient to shares at a purchase price less than one hundred percent (100%) of the Fair Market Value (as defined in the Plan) per share on the date of such grant.

5. Miscellaneous.

5.1 Successors and Assigns. The rights under this Agreement may be assigned (but only with all related obligations expressly applicable to all Holders) by a Holder to a transferee of Registrable Securities that (a) is an Affiliate of such Holder; (b) is a trust for the benefit of such Holder; or (c) after such transfer, holds at least five hundred thousand (500,000) shares of Registrable Securities (subject to appropriate adjustment for stock splits, stock dividends, combinations, and other recapitalizations); provided, however, that (i) the Company is, within a reasonable time after such transfer, furnished with written notice of the name and address of such transferee and the Registrable Securities with respect to which such rights are being transferred; and (ii) such transferee agrees in a written instrument delivered to the Company to be bound by and subject to the terms and conditions of this Agreement expressly applicable to Holders, including the provisions of Sections 2.10 and 4.1. For the purposes of determining the number of shares of Registrable Securities held by a transferee, the holdings of a transferee (x) that is an Affiliate of a Holder, (y) that is a trust for the benefit of a Holder, or (z) that is a member of the immediate family of the Holder (or a trust for the benefit of such member) shall be aggregated together and with those of such Holder. The terms and conditions of this Agreement inure to the benefit of and are binding upon the respective successors and permitted assignees of the parties. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and permitted assignees any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided herein.

5.2 Governing Law. This Agreement shall be governed by the internal law of the State of New York.

5.3 Counterparts. This Agreement may be executed in two (2) or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, *e.g.*, www.docusign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

5.4 Titles and Subtitles. The titles and subtitles used in this Agreement are for convenience only and are not to be considered in construing or interpreting this Agreement.

5.5 Notices. All notices and other communications given or made pursuant to this Agreement shall be in writing and shall be deemed effectively given upon the earlier of actual receipt or (a) personal delivery to the party to be notified; (b) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid; or (c) one (1) business day after the business day of deposit with a nationally recognized overnight courier, freight prepaid, specifying next-day delivery, with written verification of receipt. All communications shall be sent to the respective parties at their addresses as set forth below (or at such other address for a party as shall be specified in a notice given in accordance with this Section 5.5):

If to the Company:

Actinium Pharmaceuticals, Inc.
757 3rd Ave, 21st Floor
New York, NY 10017
Attention: Kaushik J. Dave, Chief Executive Officer
Email: kdave@actiniumpharma.com

With a copy to:

Boies Schiller & Flexner, LLP,
575 Lexington Ave, 7th Floor,
New York, NY, 10022,
Facsimile: 212-446-2350
Attention: Mike Huang
Email: mhuang@bsfllp.com

and

The Matt Law Firm, PLLC
1701 Genesee Street
Utica, NY 13501
Facsimile: 315-624-7359
Attention: Thomas R. Slusarczyk
Email: tslusarczyk@mattlawfirm.com

If to MSKCC:

Memorial Sloan Kettering Cancer Center
1275 York Avenue,
New York, NY 10065
Telephone: 212-639-5800
Email: parkerr@mskcc.org
Attn: Roger Parker, Executive Vice President and Chief Legal Officer

With a copy to:

Olshan Frome Wolosky, LLP,
Park Avenue Tower,
65 East 55th St,
New York, NY 10022
Facsimile: 212-451-2222
Attn: Mitchell Raab
Email: mraab@olshanlaw.com

5.6 Amendments and Waivers. Any term of this Agreement may be amended and the observance of any term of this Agreement may be waived (either generally or in a particular instance, and either retroactively or prospectively) only with the written consent of the Company and the Holders of a majority of the Registrable Securities then outstanding; provided that any such amendment or waiver that by its explicit terms would alter or change the right or obligations of any Holder in a disproportionate and adverse manner compared to the rights and obligations of the other Holders shall require the written consent of such Holder that is being so disproportionately and adversely treated, provided further that Sections 3.2 and 4.2 may be amended or waived only with the written consent of MSKCC and the Company, provided further that the Company may in its sole discretion waive (a) compliance by any Holder with Section 2.10 and (b) compliance by MSKCC with Section 3.2 and 4.2; and provided further that any provision hereof may be waived by any waiving party on such party's own behalf, without the consent of any other party. The Company shall give prompt notice of any amendment or termination hereof or waiver hereunder to any party hereto that did not consent in writing to such amendment, termination, or waiver. Any amendment, termination, or waiver effected in accordance with this Section 5.6 shall be binding on all parties hereto, regardless of whether any such party has consented thereto. No waivers of or exceptions to any term, condition, or provision of this Agreement, in any one or more instances, shall be deemed to be or construed as a further or continuing waiver of any such term, condition, or provision.

5.7 Severability. In case any one or more of the provisions contained in this Agreement is for any reason held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision of this Agreement, and such invalid, illegal, or unenforceable provision shall be reformed and construed so that it will be valid, legal, and enforceable to the maximum extent permitted by law.

5.8 Aggregation of Stock. All shares of Registrable Securities held or acquired by Affiliates shall be aggregated together for the purpose of determining the availability of any rights under this Agreement and such Affiliated persons may apportion such rights as among themselves in any manner they deem appropriate.

5.9 Entire Agreement. This Agreement constitutes the full and entire understanding and agreement among the parties with respect to the subject matter hereof, and any other written or oral agreement relating to the subject matter hereof existing between the parties is expressly canceled.

5.10 Dispute Resolution. The parties (a) hereby irrevocably and unconditionally submit to the jurisdiction of the state courts of New York and to the jurisdiction of the United States District Court for the Southern District of New York for the purpose of any suit, action or other proceeding arising out of or based upon this Agreement, (b) agree not to commence any suit, action or other proceeding arising out of or based upon this Agreement except in the state courts of New York or the United States District Court for the Southern District of New York, and (c) hereby waive, and agree not to assert, by way of motion, as a defense, or otherwise, in any such suit, action or proceeding, any claim that it is not subject personally to the jurisdiction of the above-named courts, that its property is exempt or immune from attachment or execution, that the suit, action or proceeding is brought in an inconvenient forum, that the venue of the suit, action or proceeding is improper or that this Agreement or the subject matter hereof may not be enforced in or by such court.

WAIVER OF JURY TRIAL: EACH PARTY HEREBY WAIVES ITS RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF THIS AGREEMENT, THE OTHER TRANSACTION DOCUMENTS, THE SECURITIES OR THE SUBJECT MATTER HEREOF OR THEREOF. THE SCOPE OF THIS WAIVER IS INTENDED TO BE ALL-ENCOMPASSING OF ANY AND ALL DISPUTES THAT MAY BE FILED IN ANY COURT AND THAT RELATE TO THE SUBJECT MATTER OF THIS TRANSACTION, INCLUDING CONTRACT CLAIMS, TORT CLAIMS (INCLUDING NEGLIGENCE), BREACH OF DUTY CLAIMS, AND ALL OTHER COMMON LAW AND STATUTORY CLAIMS. THIS SECTION HAS BEEN FULLY DISCUSSED BY EACH OF THE PARTIES HERETO AND THESE PROVISIONS WILL NOT BE SUBJECT TO ANY EXCEPTIONS. EACH PARTY HERETO HEREBY FURTHER WARRANTS AND REPRESENTS THAT SUCH PARTY HAS REVIEWED THIS WAIVER WITH ITS LEGAL COUNSEL, AND THAT SUCH PARTY KNOWINGLY AND VOLUNTARILY WAIVES ITS JURY TRIAL RIGHTS FOLLOWING CONSULTATION WITH LEGAL COUNSEL.

5.11 Delays or Omissions. No delay or omission to exercise any right, power, or remedy accruing to any party under this Agreement, upon any breach or default of any other party under this Agreement, shall impair any such right, power, or remedy of such nonbreaching or nondefaulting party, nor shall it be construed to be a waiver of or acquiescence to any such breach or default, or to any similar breach or default thereafter occurring, nor shall any waiver of any single breach or default be deemed a waiver of any other breach or default theretofore or thereafter occurring. All remedies, whether under this Agreement or by law or otherwise afforded to any party, shall be cumulative and not alternative.

5.12 Interpretation. When a reference is made in this Agreement to Articles, Sections, Schedules or Exhibits, such reference shall be to an Article or Section of, or an Exhibit or Schedule to this Agreement, unless otherwise expressly indicated. The headings contained in this Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement. The words "include," "includes" and "including" when used herein shall be deemed in each case to be followed by the words "without limitation." Unless the context of this Agreement otherwise requires: (a) words of any gender include each other gender; (b) words using the singular or plural number also include the plural or singular number, respectively; and (c) the terms "hereof", "herein", "hereunder" and derivative or similar words refer to this entire Agreement, including the Exhibits and Schedules hereto. The word "or" shall not be deemed to be exclusive. The word "Agreement" shall mean this Agreement as amended or supplemented, together with all Exhibits and Schedules attached hereto.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

ACTINIUM PHARMACEUTICALS, INC.

By: /s/ Kaushik J. Dave

Name: Kaushik J. Dave

Title: CEO

Signature Page to 2015 Investors' Rights Agreement

MEMORIAL SLOAN KETTERING CANCER CENTER:

By: /s/ Eric M Cottington

Name: Eric M. Cottington, Ph.D

Title: Senior Vice President, Research & Technology
Management

Signature Page to 2015 Investors' Rights Agreement

EXHIBIT A

Form Of Press Release