

Actinium Pharmaceuticals, Inc.
501 Fifth Avenue, 3rd Floor
New York, NY 10017

November 21, 2013

VIA EDGAR

Maryse Mills-Apenteng
Special Counsel
Division of Corporation Finance
Securities and Exchange Commission
100 F Street N.E.
Washington, D.C. 20549

**Re: Actinium Pharmaceuticals, Inc. (Formerly Cactus Ventures, Inc.)
Preliminary Proxy Statement on Schedule 14A
Filed November 12, 2013
File No. 000-52446**

Dear Ms. Mills-Apenteng:

We are in receipt of your comment letter dated November 20, 2013 regarding the above referenced filing. As requested in your letter, we have provided responses to the questions raised by the staff. For your convenience, the matters are listed below, followed by Actinium Pharmaceuticals, Inc.'s (the "Company") responses:

Proposal 2

Approval of Amendment and Restatement of the 2013 Stock Plan to increase the Number of Shares of Common Stock Authorized for Issuance Under the Plan, page 36

1. It appears that you have not provided the disclosure required under Item 10(a)(2) of Schedule 14A with respect to both Proposal 2 and Proposal 3. Please amend your proxy statement to provide the required disclosure. If you are unable to provide the requested disclosure because the benefits or amounts cannot be determined at this time, please include a statement to this effect.

RESPONSE: We are unable to provide the disclosure required under Item 10(a)(2) of Schedule 14A with respect to both Proposal 2 and Proposal 3 because the benefits or amounts cannot be determined at this time. We have included on page 36 and page 41 of the proxy a statement to this effect.

Proposal 4

To Approve an Amendment of Our Certificate of Incorporation to Increase the Number of Shares the Corporation is Authorized to Issue to 250,000,000 shares, of which 200,000,000 Shares of Common Stock, Par Value \$0.001 Per Share, and 50,000,000 Shares of Preferred Stock, Par Value \$0.0001 per Share, Shall be Authorized

Purpose of Amendment, page 48

2. Your statement that you have “no current plan, commitment, arrangement, understanding or agreement regarding the issuance of the additional shares” is limited to common stock. The proposal, however, relates also to an increase in the number of shares of authorized preferred. If you have no plans to issue the additional shares, please provide similar disclosure with regard to your preferred stock. Alternatively, expand to disclose any plans, proposals or arrangements for the issuance of preferred stock and consider the application of Note A of Schedule 14A.

RESPONSE: We have revised the disclosure on page 48 of the proxy to indicate that the Company has no current plan, commitment, arrangement, understanding or agreement regarding the issuance of the additional shares of preferred stock.

Proposal 5

To Approve an Amendment to Our Certificate of Incorporation to Update the Staggered Board Provisions of Our Charter, page 50

3. Please revise the disclosure under Proposal 5 to summarize the material differences between the current and proposed classified board provisions. For example and without limitation, we note that the proposed provision does not include a director independence requirement. In addition, you should discuss any disadvantages or additional burdens to shareholders that may result from adopting the proposed revisions.

RESPONSE: We have revised the disclosure on page 50 of the proxy in response to the points raised in comment No. 3. The Company has decided that Class I directors shall be independent directors of the Company.

The Company acknowledges that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Sincerely,

Actinium Pharmaceuticals, Inc.

By: /s/ Kaushik J. Dave

Kaushik J. Dave

President and Chief Executive Officer
