

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

September 26, 2017

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

> Re: Actinium Pharmaceuticals, Inc. Form 10-K for the Fiscal Year Ended December 31, 2016 Filed March 16, 2017 File No. 001-36374

Dear Mr. Seth:

We have reviewed your filing and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to these comments within ten business days by providing the requested information or advise us as soon as possible when you will respond. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing your response to these comments, we may have additional comments.

Form 10-K for the Fiscal Year Ended December 31, 2016

Item 1. Business

Summary of Material Agreements Related to our Business, page 8

1. In future filings, please expand your discussion of your material agreements to provide a description of the term and termination provisions of such agreements. If the term of the agreement coincides with the royalty term, which is connected to patent expiration, please also disclose any material patent expiration dates. If applicable, and if the royalty term is different from the term of the agreement, please also disclose the royalty term.

Sandesh Seth Actinium Pharmaceuticals, Inc. September 26, 2017 Page 2 Intellectual Property Portfolio, page 10

- 2. In future filings, please revise your discussion of your patent portfolio to provide the following information for each material patent or patent family:
 - Specific products, product groups and technologies to which such patents relate;
 - Type of patent protection such as composition of matter, use or process;
 - Patent expiration dates;
 - Identification of applicable jurisdictions; and
 - Contested proceedings and/or third-party claims, if any.

We remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

Please contact Irene Paik at 202-551-6553 or Dorrie Yale at 202-551-8776 with any questions.

Division of Corporation Finance Office of Healthcare & Insurance

cc: Thomas R. Slusarczyk - The Matt Law Firm, PLLC