

Via Facsimile and U.S. Mail
Mail Stop 6010

March 27, 2009

Mr. Mark N.K. Bagnall
Director (Principal Financial and Accounting Officer)
ADVENTRX Pharmaceuticals, Inc.
6725 Mesa Ridge Road
Ste 100
San Diego, CA 92121

**Re: ADVENTRX Pharmaceuticals, Inc.
Item 4.02 Form 8-K
Filed March 25, 2009
File No. 001-33537**

Dear Mr. Bagnall:

We have reviewed your filing and have the following comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with more information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Item 4.02 (a) Form 8-K filed March 27, 2009

1. Please disclose the circumstances that led to the discovery of the “erroneous application of generally accepted accounting principles related to accounting for warrant liability” as disclosed in your Form 8-K.

2. Elaborate on any internal control deficiencies that allowed the misapplication of FSP EITF 00-19-2 to prevail over time and explain whether these amounted to a material weakness.
3. Please amend your filing to quantify the errors of for all periods affected. If you are unable to do so, please tell us and amend your filing to explain why you are unable to provide that information.
4. Please revise your disclosure to specify whether you have reconsidered, in accordance with Item 307 of Regulation S-K, the adequacy of your previous assertions and disclosures regarding disclosure controls and procedures, specific to all of the applicable periods affected by your decision to restate, particularly in light of the restatement issue that you have described in this 8-K.
5. Similarly, please revise your disclosure to specify whether you have reconsidered, in accordance with Item 308(T) of Regulation S-K, the adequacy of your previous assertions and disclosures regarding internal controls over financial reporting, for the year ended December 31, 2007, particularly in light of the restatement issue that you have described in this 8-K.

* * * *

As appropriate, please amend your filing and respond to these comments within five business days or tell us when you will provide us with a response. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In connection with responding to our comments, please provide, in writing, a statement from the company acknowledging 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

Mr. Mark N.K. Bagnall
ADVENTRX Pharmaceuticals, Inc.
March 27, 2009
Page 3

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.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comments on your filing.

If you have any questions, please do not hesitate to call me at (202) 551-3658.

Sincerely,

Tabatha Akins
Staff Accountant