

Via Facsimile and U.S. Mail  
Mail Stop 6010

May 10, 2007

Mr. Gregory P. Hanson, CMA  
Senior Vice President, Chief Financial Officer  
(Principal Financial and Accounting Officer)  
ADVENTRX Pharmaceuticals, Inc.  
6725 Mesa Ridge Road  
Suite 100  
San Diego, CA 92121

**Re: ADVENTRX Pharmaceuticals, Inc.**  
**Form 10-K for the Fiscal Year Ended December 31, 2006**  
**Filed March 15, 2007**  
**File Number: 001-32157**

Dear Mr. Hanson:

We have limited our review of your filing to the issues we have addressed in our comments. In our comments, we ask you to provide us with additional information so we may better understand your disclosures. 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 on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-K for the Fiscal Year Ended December 31, 2006

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, page 43

Critical Accounting Policies and Estimates, page 44

Clinical Trial Expenses, page 45

1. Please clarify if the 3% variance in your estimate of the work completed is the reasonably likely change in the estimate and if so, please provide to us, using disclosure-type format, a discussion of the reason management believes it is

reasonably likely. Otherwise, propose revisions to include the change in estimate that is reasonably likely with a discussion supporting it.

Research and Development Expenses, page 45

2. Please expand your disclosure in Management's Discussion and Analysis by referring to the Division of Corporation Finance "Current Issues and Rulemaking Projects Quarterly Update" under section VIII - Industry Specific Issues – Accounting and Disclosure by Companies Engaged in Research and Development Activities. You can find it at the following website address:  
<http://www.sec.gov/divisions/corpfin/cfcrq032001.htm#secviii>.

Please disclose the following information for each of your major research and development projects:

- a. The costs incurred during each period presented and to date on the project;
- b. The nature, timing and estimated costs of the efforts necessary to complete the project;
- c. The anticipated completion dates;
- d. The risks and uncertainties associated with completing development on schedule, and the consequences to operations, financial position and liquidity if the project is not completed timely; and finally
- e. The period in which material net cash inflows from significant projects are expected to commence.

Regarding a., if you do not maintain any research and development costs by project, disclose that fact and explain why management does not maintain and evaluate research and development costs by project. Provide other quantitative or qualitative disclosure that indicates the amount of the company's resources being used on the project.

Regarding b. and c., disclose the amount or range of estimated costs and timing to complete the phase in process and each future phase. To the extent that information is not estimable, disclose those facts and circumstances indicating the uncertainties that preclude you from making a reasonable estimate.

Index to Consolidated Financial Statements, page F-1

Report of Independent Registered Public Accounting Firm, page F-2

3. As your auditor has relied on the report of another auditor, please provide us a copy of the manually signed report of the other auditor provided to you as part of your preparation of your December 31, 2006 Form 10-K, as it should have been included in your filing. Please refer to Rule 2-05 of Regulation S-X. Further, please ensure that it makes reference to the standards of the Public Company

Oversight Board of the United States as the basis for the audits performed as the reports will have been reissued subsequent to the issuance of PCAOB Auditing Standard No. 1.

Note 3. Acquisition of SDP, page F-18

4. Please disclose the following information relating to the purchase of \$10 million in-process research and development:
  - a. Disclose the specific nature and fair value of each significant in-process research and development project acquired.
  - b. Disclose the completeness, complexity and uniqueness of the projects at the acquisition date.
  - c. Disclose the nature and timing of the efforts necessary to complete the projects, and the anticipated completion dates at the acquisition date.
  - d. Disclose the significant appraisal assumptions, such as:
    - i. the period in which material net cash inflows from significant projects are expected to commence;
    - ii. material anticipated changes from historical pricing, margins and expense levels
  - e. In periods subsequent to the purchase of the in-process research and development, discuss the status of efforts to complete the projects, and the impact of any delays on your expected investment return, results of operations and financial condition.

Note 7. Warrant Liability, page F-21

5. Please tell us why it is appropriate to record negative additional paid in capital in connection with the 10 million shares of stock issued so that essentially none of the proceeds are allocated to the common stock.

Please provide us the information requested within 10 business days or tell us when you will provide us with a response. Please furnish a cover letter with your response that keys your response to our comments. Detailed cover letters greatly facilitate our review. Please furnish your letter on EDGAR under the form type label CORRESP.

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

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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 your letter, 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 change 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.

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.

You may contact Tabatha Akins, Staff Accountant, at (202) 551-3658 or Mary Mast, Senior Accountant, at (202) 551-3613 if you have any questions regarding the comments. In this regard, do not hesitate to contact me, at (202) 551-3679.

Sincerely,

Jim B. Rosenberg  
Senior Assistant Chief  
Accountant