



DIVISION OF  
CORPORATION FINANCE

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

Mail Stop 3030

February 4, 2009

VIA U.S. MAIL and FACSIMILE (508) 553-8760

Harry G. Mitchell  
Chief Financial Officer  
Echo Therapeutics, Inc.  
10 Forge Parkway  
Franklin, MA 02038

**RE: Echo Therapeutics, Inc.  
Form 10-K for the Fiscal Year Ended December 31, 2007  
Filed March 31, 2008  
File No. 000-23017**

Dear Mr. Mitchell:

We have reviewed your response dated January 15, 2009 and filings and have the following comments. We have limited our review of your filing to only your financial statements and related disclosures and do not intend to expand our review to other portions of your documents. 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 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.

Form 10-KSB for the year ended December 31, 2007

Liquidity and Capital Resources, page 23

1. We note your response to prior comment 1 in our letter dated December 9, 2008. Please confirm to us that you will enhance your disclosures about liquidity and capital resources in future filings, similar to your response.

Critical Accounting Policies and Estimates, page 20

2. Please reference your response to prior comment 2 in our letter dated December 9, 2008 that the amount of purchased research and development is the excess value of the acquisition value over the fair value of identifiable intangible assets and other assets. Please tell us how that complies with paragraph 9 of SFAS 142 which states that the cost of a group of assets acquired in a transaction other than a business combination should be allocated to the individual assets acquired based on their relative fair values. In that regard, it appears that you would calculate the fair value of purchased research and development and then allocate the purchase price of the asset group to all identified intangible assets based on their relative fair value. Please advise.

Item 7. Financial Statements

3. Refer to prior comment 4. It appears that you are in the development stage and, therefore, you should include the disclosures required by SFAS 7. Under paragraphs 8-9 of SFAS 7, a development stage company is one in which principal operations have not commenced or principal operations have generated an insignificant amount of revenue. In addition, we refer to your response to prior comment 5 in our letter dated December 9, 2008, which states that ETI was a development stage company that had not commenced planned principal operations at the time it was acquired. Therefore, it appears that with the acquisition of the assets of ETI, the company has re-entered the development stage. Please tell us your consideration of providing the disclosures required by SFAS 7 in future filings.

As appropriate, please respond to these comments 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 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 responses to our comments.

Mr. Mitchell  
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You may contact Kristin Lochhead at (202) 551-3664 or me at (202) 551-3676 if you have questions. In this regard, please do not hesitate to contact Martin James, Senior Assistant Chief Accountant at (202) 551-3671 with any other questions.

Sincerely,

Brian Cascio  
Accounting Branch Chief