



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

Mail Stop 3030

December 9, 2008

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
Form 10-Q for the Quarterly Period Ended September 30, 2008
File No. 000-23017

Dear Mr. Mitchell:

We have reviewed your filing 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 fiscal year ended December 31, 2007

Liquidity and Capital Resources, page 23

1. We note that you have approximately \$1.2 million of cash on hand at December 31, 2007 and will need significant additional cash in order to bring your products to market. Please tell us and expand your discussion of liquidity and capital resources in future filings to specifically discuss your plans to generate sufficient liquidity, financing needs and expected sources of this financing, including the following:
 - Your plan of operation for the next twelve months;
 - The effect of the current economic conditions on your operating plans;
 - A summary of any product research and development that you will perform for the term of the plan;
 - An indication of the amount of cash that will be required to bring your products under development to market;
 - Any expected purchase or sale of plant and significant equipment; and
 - Any expected significant changes in the number of employees.

Refer to Item 303 of Regulation S-B and FRC 607.02.

Critical Accounting Policies and Estimates, page 20

2. For your purchased research and development in the acquisition of ETI, please tell us and disclose the following in future filings:
 - Nature of projects acquired;
 - Summary of values assigned to purchased research and development by technology / product
 - Status of the development of the work at acquisition date;
 - Nature and timing of remaining efforts for completion, including estimated completion date;
 - Value and risks of the purchased research and development;
 - How periods subsequent to the acquisition may have been affected by completion of the project and introduction of the technology, including an update of the status of the projects

3. Regarding your impairment analysis for intangible assets, please tell us and revise future filings to discuss how you determined the estimated future cash flows used to calculate fair value.

Item 7. Financial Statements

4. Tell us your consideration of whether you became a development stage company after the acquisition of ETI and abandonment of the SonoPrep System. It appears that your time is spent establishing a new business (tCGM system) and planned principal operations have not commenced. Refer to paragraphs 8-9 of SFAS 7.

Note 3. Acquisition of ETI, page F-11

5. We see that you accounted for the ETI acquisition as a purchase of assets. The purchase price is comprised almost entirely of 6,250,000 shares of your common stock. In addition, you changed your name to Echo Therapeutics, Inc. subsequent to the acquisition. We have the following comments as it relates to this transaction:
 - Please tell us how you determined that the ETI acquisition represents the purchase of assets rather than a business combination. Refer to EITF 98-3.
 - Tell us how you considered whether Sontra Medical or ETI is the accounting acquirer in the transaction. We refer you to paragraphs 15-19 of SFAS 141.
 - If ETI is the accounting acquirer, tell us why it is appropriate to assign fair value to the acquired assets and liabilities. Clarify why you should not account for the transaction as a reverse acquisition. In a reverse acquisition, you would record the assets and liabilities of the acquired entity (Sontra Medical) at fair value and include the results of operations of the acquired entity (legal acquirer) only from the date of the acquisition in the financial statements of the acquirer, even if the acquired entity is the surviving enterprise.
 - If the transaction is determined to be a business combination, tell us why you did not file in a Form 8-K the financial statements of the accounting acquirer under Item 310(c) of Regulation S-B or pro forma financial statements under Item 310(d) of Regulation S-B.
6. Please tell us and revise future filings to disclose the nature of the \$316,815 in transaction costs incurred in the acquisition.

Note 4. Intangible Assets, page F-13

7. Regarding your technology related intangible assets, please tell us why the \$6.8 million asset related to the two (2) in-process Durhalieve-related pharmaceutical products meet the capitalization standards of paragraph 39, A14 and A25 of SFAS

141. Demonstrate that the assets meet the contractual-legal criterion for recognition as an intangible asset and how you concluded that this technology should not be recorded as purchased research and development.

Note 10. Common Stock, page F-17

8. Please tell us and revise future filings to disclose how you valued the warrants issued to Burnham Hill Partners in connection with the ETI acquisition and for financial advisor services. In future filings, for all warrant issuances, please disclose how the warrants were valued and accounted for, including the model(s) and all significant assumptions. Footnote disclosure should also include a description of all significant terms and provisions of warrants.

Exhibits 31.1 and 31.2

9. We note that you omitted the language in paragraph 4 of Item 601(b)(31)(i) of Regulation S-K that refers to internal control over financial reporting. Please file an abbreviated amendment to the Form 10-K that includes a cover page, explanatory note, signature page and paragraphs 1, 2, 4 and 5 of the certification. Please note that you should also comply with any applicable futures comments in the abbreviated amendment.
10. We note that you refer to the “small business issuer” throughout the certification required by Exchange Act Rule 13a-14(a) rather than “registrant” as outlined in Item 601(b)(31)(i) of Regulation S-B. In addition, paragraphs 4 and 5 state “I am responsible” and “I have disclosed” rather than “The registrant's other certifying officer(s) *and* I.” The required certifications must be in the exact form prescribed; the wording of the required certifications may not be changed in any respect. In future filings, the wording in the certification should be consistent with Item 601(b)(31)(i) of Regulation S-B.

Form 10-Q for the Quarterly Period Ended September 30, 2008

Consolidated Balance Sheets

11. Please revise future quarterly filings to remove the notation “audited” from the balance sheet for the prior fiscal year, since full audited financial statements, including an audit opinion, are not included.

Note 5. Notes Payable

12. Regarding the warrants recorded as a derivative liability for the 2008 Senior Secured Note, please tell us how you considered the guidance of FSP EITF 00-19-2 which states that the contingent obligation to make future payments or otherwise transfer consideration under a registration payment arrangement shall

be recognized and measured separately in accordance with SFAS 5 and FASB Interpretation No. 14, Reasonable Estimation of the Amount of a Loss. Please also note that Paragraph 8 of FSP EITF 00-19-2 states that an entity should recognize and measure a registration payment arrangement as a separate unit of account from the financial instrument(s) subject to that arrangement in accordance with other applicable GAAP. We see that you recognized a derivative loss of \$587,000 during 2008 and that the derivative liability was reclassified to equity in May 2008 as a result of Amendment No. 1, which eliminated the registration requirement. Please advise.

Exhibits 31.1 and 31.2

13. We note that in paragraph 4, you do not include the statement “(as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) after “internal control over financial reporting.” The required certifications must be in the exact form prescribed; the wording of the required certifications may not be changed in any respect. In future filings, the wording in the certification should be consistent with Item 601(b)(31)(i) of Regulation S-K.

As appropriate, please amend your filing and 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 amendment and response that keys your responses to our comments and provides any requested information. You may wish to provide us with marked copies of your amendment for our review. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your 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 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 foreclose the Commission from taking any action with respect to the filing; and

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- 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 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