

September 4, 2007

Mail Stop 6010

Mark B. Knudson, Ph.D.
Chief Executive Officer
EnteroMedics Inc.
2800 Patton Road
St. Paul, Minnesota 55113

**Re: EnteroMedics Inc.
Amendment No. 2 to Registration Statement on Form S-1
Filed August 14, 2007
File No. 333-143265**

Dear Dr. Knudson:

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 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.

Prospectus Summary

1. We note your new paragraph 3. As the summary is intended to be a balanced presentation of your business, please balance this disclosure with the discussion in the business section regarding other factors affecting the success of your trials, such as additional medical weight management programs and the fact that the FDA's standard for effectiveness of your device is much higher than your standard for effectiveness.

Note 6. Notes Payable, page F-26

2. We noted you entered into a \$15 million debt facility on May 17, 2007 which allows for two \$5 million draw periods, the first of which was required upon closing and the second of which is available through August 31, 2007. Please clarify for us and investors if you have, in fact, closed on this agreement and

drawn the first and second \$5 under the facility, and if so, how you have accounted for the draw(s) in your balance sheet.

Note 13. Stock Options, page F-33

3. Please refer to prior comment 17. We have the following additional comments:
- We note on February 6, 2007 that you met with multiple underwriters who gave you an average price range which was significantly higher than the fair value of \$.57 used by the company to value the options granted on February 6, 2007. In greater detail, please bridge management's fair value determination of \$.57 and these pricing discussions.
 - In this regard, we note that you reached an agreement with your current underwriter on March 2, 2007. Please tell us the range determined on this date.
 - We also note that you issued Series C convertible preferred stock in July 2006 and December 2006 for \$.8893 per share and that you issued common stock options during September 2006 through December 2006 and February 2007 and March 2007, which you determined the fair value to be \$.21 and \$.57, respectfully. Please support, in greater detail your estimate of fair value.
 - Be advised that we are deferring final evaluation until the estimated offering price is specified.

Note 16. Commitments and Contingencies, page F-42

4. Please refer to prior comment 20. We note that the 2 million shares issued to the Mayo Foundation were for "partial consideration for Mayo patents and future patents and the Mayo obesity group know-how." Your response does not provide sufficient analysis for us to agree or disagree with your conclusion that the value of the shares should be amortized over five years versus expensed. Please tell us why the asset does not meet the definition of research and development as defined in SFAS 2 or product development costs that should be expensed as incurred. Also, explain why the accounting for the Mayo agreement is not inconsistent with the accounting for costs incurred for FDA approvals, which are expensed as incurred. Please provide detailed and specific support for your accounting in your response.

As appropriate, please amend your registration statement in response to these comments. 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.

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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 Act of 1933 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.

You may contact Julie Sherman at (202) 551-3640 or in her absence, Angela Crane at (202) 551-3554 if you have questions regarding comments on the financial statements and related matters. Please contact Jay Mumford at (202) 551-3637 or me at (202) 551-3800 with any other questions.

Sincerely,

Peggy Fisher
Assistant Director

cc (via Fax): Kenneth L. Cutler, Esq.
Ted S. Hollifield, Esq.