



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

DIVISION OF  
CORPORATION FINANCE

September 11, 2012

Via E-mail

Peter Levy  
Chief Operating Officer  
MYOS Corporation  
45 Horsehill Road, Suite 106  
Cedar Knolls, New Jersey 07927

**Re: MYOS Corporation  
Amendment No. 1 to Registration Statement on Form S-1  
Filed August 17, 2012  
File No. 333-183098**

Dear Mr. Levy:

We have reviewed your amended registration statement and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

Amendment No. 1 to Registration Statement on Form S-1

General

1. We note that you have submitted a request for confidential treatment relating to your Distribution Agreement filed as Exhibit 10.5. Please note that we will not be in a position to complete our review of your registration statement until all open issues, including those relating to your confidential treatment request, have been resolved.

Prospectus Cover Page

2. We note your statement that the prospectus relates to the sale or “other disposition” of your common stock. Please revise to describe these dispositions.

Prospectus Summary, page 1

3. Please revise your disclosure to discuss in necessary detail the basic features of your MYO-T12 product, any nutritional or therapeutic qualities you claim for it, and evidence concerning its efficacy, or provide a cross-reference to where such discussion may be found (for example a cross reference to your discussion on pages 22 and 23 of the filing).

Management’s Discussion and Analysis of Financial Condition and Results of Operations, page 17

4. With regard to the analysis of your operating results, please expand your discussion of general and administrative expenses to quantify the impact of each causal factor identified as causing a change in each period presented. Refer to Item 303(A)(3) of Regulation S-K.

Business, page 21

5. If you retain it, please provide support for the statement that MYO-T12 is a “natural” myostatin inhibitor. In this regard, we note your disclosure at page 9 under “We are prohibited from developing naturally occurring...” In addition, please provide independent third-party support for the bulleted statements at page 21 and the statements at page 22 under “Market Overview.” Please mark the supporting documents you provide to us on a supplemental basis to show precisely the location of each piece of information on which you are relying for the claims you make in your filing. In addition, please tell us whether you commissioned any such third-party research or report.
6. We note your statement that the \$700,000 promissory note was paid in full in February 2012. Please revise your disclosure to identify the source of funds used to pay off the note in view of your current assets as of December 31, 2011 and your sources and amounts of revenue since inception.
7. We note your statements that you have outsourced all manufacturing to a single manufacturer and that you had several consultants providing accounting, business development and “other services.” Please provide the basis for not filing as an exhibit any agreement memorializing these arrangements. In addition, please revise to identify such “other services.”

Directors, Executive Officers and Corporate Governance, page 24

8. Please revise your disclosure to discuss whether and, if so, how members of your Scientific Advisory Board are remunerated. Please also disclose whether such members are retained vis-à-vis an advisory board agreement or other similar agreement. If so, please file as exhibits such agreements.

Executive Compensation, page 28

9. Please expand your disclosure to comply fully with Items 402(o), (p) and (r)(3) of Regulation S-K, or explain to us why you believe your disclosure is compliant.

Certain Relationships and Related Transactions, page 31

10. Please file as an exhibit each of the consulting agreement with Mr. Bernstein and the advisory board agreement with Dr. Colker.

Exhibits and Financial Statement Schedules, page II-5

11. Please ensure that your exhibit index identifies precisely where an exhibit that is incorporated by reference is located. For example, we note that Exhibit 10.1 refers to your Current Report on Form 8-K filed March 3, 2011 only. Please revise to indicate that such exhibit is filed as Exhibit 10.1 to such Form 8-K.

Financial Statements

Notes to Consolidated Financial Statements

Note 1 – Nature of Organization and Significant Accounting Policies, page F-9

Revenue Recognition, page F-10

12. We note that you entered into a distribution agreement with Maximum Human Performance (“MHP”) in May 2012 and that the majority of your sales revenue for the six month period ended June 30, 2012 was from to sales to MHP. Please provide us with your analysis of the guidance per FASB ASC 605-45-45 regarding principal / agent considerations in the context of your distribution agreement with MHP.

Inventories, page F-10

13. Please expand your disclosure to state separately the amounts of major classes of inventory such as finished goods, work in process, raw materials and supplies. Also,

please expand your disclosures to describe the nature of the cost elements included in inventory. Refer to Rule 5-02(6)(a) and (b) of Regulation S-X.

#### Notes to Interim Consolidated Financial Statements

##### Note 1 – Nature of Organization and Significant Accounting Policies, page F-27

14. Please include an affirmative statement that your interim financial statements include all adjustments that, in the opinion of management, are necessary in order to make the financial statements not misleading. Refer to Instruction 2 to Rule 8-03 of Regulation S-X.

##### Signature, page II-7

15. Please revise your signature page to provide the signatures required by Instruction 1 to the “Signatures” in Form S-1. For example, we note that the registration statement is not signed by your principal financial officer.

#### Closing 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 the information the Securities Act of 1933 and all applicable Securities Act rules require. 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.

Notwithstanding our comments, in the event you request acceleration of the effective date of the pending registration statement please provide a written statement from the company acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Peter Levy  
MYOS Corporation  
September 11, 2012  
Page 5

Please refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

You may contact Sandra Eisen at (202) 551-3864 or Ethan Horowitz, Branch Chief, at (202) 551-3311 if you have questions regarding comments on the financial statements and related matters. Please contact Sirimal R. Mukerjee at (202) 551-3340 or, in his absence, Norman von Holtendorff at (202) 551-3237 or me at (202) 551-3740 with any other questions.

Sincerely,

*/s/ A.N. Parker for*

H. Roger Schwall  
Assistant Director

cc: Via E-mail  
Stuart Neuhauser  
Ellenoff Grossman & Schole LLP