

Via Facsimile and U.S. Mail
Mail Stop 6010

August 15, 2006

Mr. J. William Freytag
President and Chief Executive Officer
Myogen, Inc.
7575 West 103rd Avenue, Suite 102
Westminster, CO 80021

Re: Myogen, Inc.
Form 10-K for Fiscal Year Ended December 31, 2005
Form 10-Q for Fiscal Quarter Ended June 30, 2006
File No. 0-50438

Dear Mr. Freytag:

We have limited our review of your filings to the issues we have addressed in our comments. In our comments, we ask you to provide us with more 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 filings. 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-K for the year ended December 31, 2005

Management's Discussion and Analysis of Financial Condition and Results of Operations

Results of Operations, page 52

1. Please provide in a disclosure-type format, a revised discussion regarding your research and development projects that quantifies the estimated costs to complete each project and identifies the estimated completion dates. Otherwise, please tell us where you have disclosed this information in your filings.

Obligations and Commitments, page 58

2. On page 61 you indicate that the majority of your research and development expenses are incurred through external service providers. Please provide us, in a

disclosure-type format, a revised contractual obligations table that includes your contracted research and development obligations or explain to us why these obligations are not required to be disclosed.

3. Please provide us, in a disclosure-type format, a revised contractual obligations discussion that presents either in a head note or footnote to your table your contingent milestone obligations. In this revised disclosure, please provide at a minimum the nature of the events triggering your payment obligations, the aggregate dollar value of your milestone payments and the aggregate amount of milestone payments you are reasonably likely to incur within the next year.

Critical Accounting Policies and the Use of Estimates

Accounting for research and development expense, page 60

4. You indicate that you make significant judgments and estimates in determining your accrual balances for research and development expenditures. Please provide us, in a disclosure-type format, a revised discussion that quantifies how accurate your estimates have been in the past. If true, please indicate that no material adjustments to your estimates have been made for each of the periods presented in the financial statements.

Consolidated Financial Statements

Notes to Consolidated Financial Statements

Note 10: Stockholders' Equity, page F-26

5. In connection with your September 29, 2004 PIPE financing, you disclose that you do not believe that the liquidated damages clause related to your warrant holder's registration rights do not exceed what would be a reasonable discount on registered shares, and accordingly classify these warrants as equity under EITF 00-19. It appears that Section 6(d) of your September 24, 2004 Securities Purchase Agreement requires a 1% per month payment for each month that a registration statement covering the underlying common shares is not effective. Please explain to us how you concluded that this provision does not result in an excessive discount from registered shares as it would appear that a substantial payment to the warrant holders is possible. Also explain to us how the requirement in Section 6.1(a)(iii) to maintain effectiveness of a registration statement does not require liability treatment under paragraphs 14 and 18 of EITF 00-19. In addition, please provide us your analysis and conclusions regarding each of the conditions of EITF 00-19 described in paragraphs 12 through 32 of that consensus.

Form 10-Q for the quarter ended June 30, 2006

Note 6: Revenue Recognition

Product Sales, Net, page 13

6. You disclose that you record product sales under your new license agreement with GlaxoSmithKline net of the supply price paid pursuant to the guidance provided by EITF 99-19. Please provide us your EITF 99-19 analysis supporting your position that the supply cost should be netted against revenues. In your response, please address why you characterize these revenues as product sales rather than a fee for your marketing, promotion and distribution services.

Please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a letter that keys your responses to our comments and provides the requested information. Detailed letters greatly facilitate our review. Please file 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 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 changes 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.

Mr. J. William Freytag
Myogen, Inc.
August 15, 2006
Page 4

If you have any questions, please contact Mark Brunhofer, Senior Staff Accountant, at (202) 551-3638. In this regard, do not hesitate to contact me, at (202) 551-3679.

Sincerely,

Jim B. Rosenberg
Senior Assistant Chief
Accountant