

Via Facsimile and U.S. Mail
Mail Stop 6010

December 22, 2008

Craig A. Wheeler
President and Chief Executive Officer
Momenta Pharmaceuticals, Inc.
675 West Kendall Street
Cambridge, MA 02142

Re: Momenta Pharmaceuticals, Inc
Form 10-K for Fiscal Year Ended December 31, 2007
File No. 0-50797

Dear Mr. Wheeler:

We have reviewed your filing and have the following comment. In our comment, we ask you to provide us with information to better understand your disclosure. Where our comment requests you to revise disclosure, the information you provide should show us what the revised disclosure will look like and identify the annual or quarterly filings, as applicable, in which you intend to first include it. If you do not believe that revised disclosure is necessary, explain the reason in your response. After reviewing the information provided, we may raise additional comments and/or request that you amend your filings.

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 comment or on 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, 2007

Item 7. Management's Discussion And Analysis Of Financial Condition And Results Of Operations

Results of Operations

Research and Development, page 54

1. Please refer to the Division of Corporation Finance "Current Issues and Rulemaking Projects Quarterly Update" under section VIII – Industry Specific Issues – Accounting and Disclosure by Companies Engaged in Research and Development Activities. You can find it at the following website address:
<http://www.sec.gov/divisions/corpfin/cfcrq032001.htm#secviii>.

Please revise your disclosure to include the following information for each of your major research and development projects (i.e. M-Enoxaparin, M118, etc.):

- a. The current status of the project (i.e. Phase I, II, etc.);
- b. The costs incurred during each period presented and to date on the project;

Regarding b., if you do not maintain any research and development costs by project, disclose that fact and explain why management does not maintain and evaluate research and development costs by project. Provide other quantitative or qualitative disclosure that indicates the amount of the company's resources being used on the project.

* * * *

Please respond to this comment 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 comment and provide the requested information. Detailed letters greatly facilitate our review. Please furnish the letter to us via EDGAR under the form type label CORRESP.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filings to be certain that the filings include 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 comment, please provide, in your letter, a statement from the company acknowledging that:

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- the company is responsible for the adequacy and accuracy of the disclosure in the filings;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filings; 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 filings or in response to our comments on your filings.

Please contact James Peklenk, Staff Accountant, at (202) 551-3661 or Mary Mast, Review Accountant, at (202) 551-3613 if you have any questions regarding the comment. In this regard, do not hesitate to contact me, at (202) 551-3679.

Sincerely,

Jim B. Rosenberg
Senior Assistant Chief
Accountant