

Mail Stop 6010

February 2, 2007

Craig A. Wheeler
Momenta Pharmaceuticals, Inc.
675 West Kendall Street
Cambridge, MA 02142

**Re: Momenta Pharmaceuticals, Inc.
Registration Statement on Form S-3
File Number 333-140251**

Dear Mr. Wheeler:

This is to advise you that we have limited our review of the above referenced registration statement to only the issues identified below. We will make no further review of this filing.

Form S-3

Confidential Treatment Requests

1. We will be monitoring your registration statement for resolution of your pending confidential treatment requests. All comments will need to be fully resolved before we take final action on the registration statement.

Risk Factors, page 2

2. Please revise this section to provide a specific Exchange Act document, including the page number within that document where the investor may obtain disclosure related to your risk factor discussion, or in the alternative, you may revise your S-3 to include discussion of all the risk factors that you are referring to in this section.

* * *

Once you have cleared our comments, we will act upon any request for acceleration of the effective date of the Form S-3 and pursuant to delegated authority, grant acceleration of the effective date. We will consider your request for acceleration as a confirmation of the fact that you are aware of your responsibilities under the Securities Act of 1933 and the Securities Act of 1934 as they relate to the proposed public offering.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filings reviewed by the staff to be certain 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.

Notwithstanding our comments, in the event the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, 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 this action 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 connection with our review of your filing or in response to our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as a 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. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

Craig A. Wheeler
Momenta Pharmaceuticals, Inc.
February 2, 2007
Page 3

Please contact Song P. Brandon at (202) 551-3621 or me at (202) 551-3710 with any questions.

Sincerely,

Jeffrey P. Riedler
Assistant Director

cc: Steven D. Singer, Esq.
Wilmer Cutler Pickering Hale and Dorr LLP
60 State Street
Boston, MA 02109