



DIVISION OF  
CORPORATION FINANCE

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

November 8, 2012

Via E-mail

Paul J. Hastings  
President & Chief Executive Officer  
OncoMed Pharmaceuticals, Inc.  
800 Chesapeake Drive  
Redwood City, CA 94063

**Re: OncoMed Pharmaceuticals, Inc.  
Amendment No. 4 to Registration Statement on Form S-1  
Filed October 25, 2012  
File No. 333-181331**

Dear Mr. Hastings:

We have reviewed your amended registration statement filed October 25, 2012, 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.

Business, page 70

Overview, page 70

1. For each of Fzd8-Fc (OMP-54F28) and Anti-Notch1 (OMP-52M51), please expand your disclosure here and elsewhere throughout your filing to include the indication or indications that you are currently targeting. In addition, please expand your disclosure regarding your Fzd8-Fc (OMP-54F28) Phase I trial to describe the trial that you are enrolling as of July 2012.

Anti-Notch1 (OMP-52M51), page 82

2. We note your disclosure on page 52 that “The clinical trials for all five product candidates are ongoing.” However, it does not appear from your disclosure on pages 72 or 82 that clinical trials for Anti-Notch1 have been initiated. Please revise your disclosure to reconcile this inconsistency. Further, please expand your disclosure with respect to Anti-Notch1 to discuss more specifically your plans or expectations with respect to advancing the clinical development of this product candidate.

Lonza Sales AG, page 89

3. Please expand your disclosure to disclose the aggregate milestone payments under the license agreement, the termination provision disclosed in section 2.2 of the collaboration agreement, the termination provision disclosed in section 10.2 of the license agreement and that either party may terminate either agreement for material breach or insolvency of the opposite party.

Notes to Unaudited Interim Condensed Financial Statements, page F-34

8. Subsequent Events, page F-41

4. With respect to your agreement with Lonza Sales AG, please quantify here and elsewhere in the filing the aggregate amount of payments that you are obligated to make upon achievement of specified events.

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.

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.

Paul J. Hastings  
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November 8, 2012  
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You may contact Tabatha Akins, Staff Accountant, at (202) 551-3658 or Lisa Vanjoske, Senior Staff Accountant, at (202) 551-3614 if you have questions regarding comments on the financial statements and related matters. Please contact Karen Ubell, Staff Attorney, at (202) 551-3873, Jennifer Riegel, Special Counsel, at (202) 551-3575 or me at (202) 551-3715 with any other questions.

Sincerely,

/s/ Jennifer Riegel for

Jeffrey P. Riedler  
Assistant Director

cc: Via E-mail  
Mark V. Roeder, Esq.  
Latham & Watkins LLP  
140 Scott Drive  
Menlo Park, CA 94025