



DIVISION OF
CORPORATION FINANCE

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

June 7, 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.
Registration Statement on Form S-1
Filed May 11, 2012
File No. 333-181331**

Dear Mr. Hastings:

We have reviewed your 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.

General

1. Please file all exhibits as soon as practicable. We may have further comments upon examination of these exhibits.
2. Comments on your confidential treatment request will be delivered under separate cover.
3. Please note that when you file a pre-effective amendment containing pricing-related information, we may have additional comments. As you are likely aware, you must file this amendment prior to circulating the prospectus. Please note that when you file a pre-effective amendment that includes your price range, it must

be bone fide. We interpret this to mean that your range may not exceed \$2 if you price up to \$10 and 20% if you price above \$10.

4. Please provide us proofs of all graphic, visual or photographic information you will provide in the printed prospectus prior to its use, for example in a preliminary prospectus. Please note that we may have comments regarding this material.

Cover Page

5. Please advise us as to the status of your listing application with the Nasdaq Global Market. If you have filed the listing application or taken any steps beyond your expectation to apply, please update your disclosure accordingly.

Prospectus Summary, page 1

6. Since you do not have any product candidates in Phase II trials, please revise your table on pages 2 and 76 to remove the heading "Phase II" from the table.
7. Given your disclosure concerning the partial clinical hold on your demcizumab Phase Ia trial and the adverse effects disclosed on page 11, please provide us with a detailed analysis supporting your conclusion that the use of "tolerable safety profile" on page 2 and elsewhere throughout this prospectus is appropriate without further disclosures of the prior events.

Risk Factors

"If we are required to suspend or discontinue clinical trials due to side effects..." page 13

8. You disclose that you have observed adverse events in clinical trials with each of your three product candidates. Please expand your disclosure here and in your Business section to disclose all adverse events and side effects associated with each product candidate.

"Failure to successfully validate, develop and obtain regulatory approval for companion diagnostics..." page 18

9. Please expand your Business section to clarify the specific product candidates that you intend to also develop companion diagnostics.

"Requirements associated with being a public company will increase our costs significantly..." page 25

10. Please expand your disclosure regarding the circumstances pursuant to which the company would cease to be an "emerging growth company" to include recognition of total annual gross revenues of \$1 billion or more.

“We or our collaborators may become subject to third parties’ claims alleging infringement...,” page 27

11. We note that you disclose that you are aware of U.S. and foreign issued patents and pending patent applications controlled by third parties that may relate to the areas in which you are developing product candidates. If you have received any notice of infringement from any third party, please expand your disclosure to disclose the notice and the circumstances relating thereto.

“If we are unable to obtain a commercial license agreement for the manufacture of our product candidates...,” page 30

12. You disclose that you have an existing research license from Lonza to use certain technology and know-how in the production of your biologic product candidates. Please file a copy of this agreement as a material agreement and expand your disclosure to disclose the material terms of this agreement. Alternatively, please provide us with an analysis that supports your conclusion that your business is not substantially dependent on this agreement.

Use of Proceeds, page 45

13. Please revise your disclosure to disclose a reasonable estimate of the amount of proceeds that will be used for the development of each drug candidate.
14. Please expand your estimated use of proceeds to indicate, as applicable, any terms of your agreements with GSK or Bayer that would influence how the proceeds of the offering are allocated among product candidates. Your disclosure should indicate whether GSK or Bayer, through joint development committees or development plans, for example, will have any input into how the proceeds are allocated.
15. Please expand your disclosure to estimate the amount of proceeds to fund your research and drug discovery activities related to additional product candidates.

Management’s Discussion and Analysis of Financial Condition and Results of Operations
Stock-Based Compensation
Common Stock Valuations, page 59

16. We have reviewed your disclosure with respect to the valuation of your common stock and have the following comments:
 - Quantitatively discuss the significant assumptions used under the different valuation methodologies at each assessment date, including how the enterprise value was estimated and changed.
 - Qualitatively and quantitatively elaborate on why the receipt of \$29 million for the advancement of your collaboration programs in 2011 did not constitute

a material change in the business, such that the value of your stock would not be impacted.

- You indicate that as a result of the GSK amendment, you obtained the full rights to two product candidates, and that the future value of the program will inure to you. Please tell us why this did not impact the valuation of the stock.
- Please tell us why there was no change in the estimated fair value of the stock between September 2011 and November 2011, given the advancement of the clinical trials for demcizumab and the movement of two preclinical programs towards 2012 IND filings. Further, given the number of shares granted during this period, please tell us why no valuation was performed.
- Please tell us why there was no change in the estimated fair value of the common stock between December 2011 and April 2012, especially considering the filing of the registration statement in May 2012. Tell us why the probability of the IPO did not increase in April 2012.
- Once you can reasonably estimate the IPO price, qualitatively and quantitatively discuss each significant factor contributing to the difference between each valuation and the estimated IPO price. Please update your schedule of stock options granted to the date of your response to these comments.
- Disclose in your discussion here the intrinsic value of the outstanding vested and unvested options based on the estimated IPO price and the options outstanding as of the most recent balance-sheet date presented in the registration statement.

Business

Understanding Cancer, page 73

17. Please expand your disclosure to attribute the statistics in the first paragraph of this section to the source from which you obtained the information.

Demcizumab (OMP-21M18, Anti-DLL4), page 76

18. You disclose that the depiction on page 77 is of the best percent change in measurable tumor lesions for the 47 patients enrolled in the Phase Ia study. Please clarify what you mean by “best percent change” and how it is distinct from a RECIST response. Similarly, please clarify what you mean by “Best Response” in the depiction on page 78.
19. Please expand your disclosure relating to the toxicity profile of demcizumab to describe the events as set forth on page 11. Your disclosure should indicate how the toxicity profile and resulting clinical hold affected the development of demcizumab, specifically the initiation of two Phase 1b trials prior to moving forward to a Phase II trial.

20. In describing the results to date in your Phase 1b trials we note your statement that “these trials are ongoing, and results may change over time as more patients are enrolled.” Please further highlight the limitations of these preliminary results and the limited number of assessable patients. Additionally, to the extent any toxicity or adverse results beyond those described in the context of the Phase 1a trials have been observed, please disclose such results.
21. Please disclose the definition of a RECIST partial response and complete response.
22. For each trial, please disclose the number of patients that have left the trial prior to completion. To the extent known, please disclose the reasons why patients have left the respective trials.

Anti-Notch2/3 (OMP-59R5), page 79

23. You disclose that you plan to present results of your Phase 1 dose escalation trial at the annual ASCO meeting in June 2012. Please confirm that you will expand your disclosure to disclose any material information which you present at that conference.

Cancer Stem Cell Technologies, page 80

24. You disclose that your novel single-cell gene expression analysis platform originated from an ongoing research collaboration with Fluidigm Corporation to access their microfluidics technologies. Please provide us with an analysis that supports your determination that you are not substantially dependent on this agreement. Alternatively, please file a copy of the agreement and expand your disclosure to disclose the material terms of the agreement.

Strategic Alliance with GSK, page 82

25. We note your disclosure that you will be entitled to “double-digit royalties on net product sales.” Please revise your disclosure here and throughout the filing to indicate a range of royalties not to exceed ten percentage points.
26. Please expand your disclosure to describe the role of the Joint Steering Committee and any sub-teams or sub-committees in your research and development decisions and resource allocation with respect to product candidates covered by the agreement with GSK. Please describe the parties’ relative input and control in determining the development path for covered drug candidates.
27. Please expand your disclosure to indicate whether you have any minimum expenditure or investment requirements with respect to the product candidates covered by your agreement with GSK. Specifically, please indicate whether any term of your agreement with GSK will influence how the proceeds of this offering

are allocated among your research and development activities or for particular product candidates. If there are no such provisions, please so state.

28. Please expand your disclosure to indicate whether GSK's rights with regard to these two product candidates relate to all possible indications, a particular indication or a set number of potential indications. Further, please indicate whether GSK's election to exercise its option with respect to either product candidate would entitle it to pursue development of the product candidate for multiple indications or only for the particular indication that was the subject of the proof-of-concept or earlier stage clinical trials.

Strategic Alliance with Bayer, page 82

29. We note your disclosure that you will be entitled to "double-digit royalties on net product sales." Please revise your disclosure here and throughout the filing to indicate a range of royalties not to exceed ten percentage points.
30. Please expand your disclosure to describe the role of the Joint Steering Committee or the Joint Development Sub-Committee in your research and development decisions and resource allocation with respect to product candidates covered by the agreement with Bayer. Please describe the parties' relative input and control in determining the development path for covered drug candidates.
31. Please expand your disclosure to indicate whether you have any minimum expenditure or investment requirements with respect to the product candidates covered by your agreement with Bayer. Specifically, please indicate whether any term of your agreement with Bayer will influence how the proceeds of this offering are allocated among your research and development activities or for particular product candidates. If there are no such provisions, please so state.
32. You disclose that in April 2011, you entered into a clinical manufacturing agreement which expanded your alliance with Bayer. Please file a copy of this agreement as a material agreement and expand your disclosure to disclose the material terms of this agreement. Alternatively, please provide us with an analysis that supports your conclusion that your business is not substantially dependent on this agreement.

MorphoSys, page 84

33. Please expand your disclosure to disclose all of the material terms of your agreements with MorphoSys, including the aggregate amounts paid under each agreement to date, the aggregate milestone payments that may be due under each agreement and the products to which each of the antibodies relate.

Description of Capital Stock
Common Stock, page 124

34. In addition to the threshold for election of directors, please expand your disclosure to include the voting threshold for all matters that may be voted on by stockholders.

Shares Eligible for Future Sale, page 128

35. Once available, please file copies of each of the lock-up agreements.

Notes to Financial Statements
9. License Agreement, page F-16

36. Please revise your disclosure to clarify when the worldwide license agreement with the University of Michigan was acquired and the amount of the upfront fee.

11. Collaborations
GSK Strategic Alliance, page F-18

37. Please disaggregate the amount of future milestone payments as required under ASC 605-28-50-2b. Disclose the milestones achieved that resulted in milestone revenue being recognized during the periods presented. Further, please revise your disclosure throughout the filing to consistently reflect this disclosure.

Bayer Strategic Alliance, page F-19

38. Please disaggregate the development, regulatory approval and commercialization milestone payments of \$387.5 million and \$112.0 million, as required under ASC 605-28-50-2b. Further, please tell why you have not provided further breakout of the future milestone payments of \$119 million, \$517.5 million, and \$670.0 million in accordance with the aforementioned guidance. Disclose the milestones achieved that resulted in milestone revenue being recognized during the periods presented. Further, please revise your disclosure throughout the filing to consistently reflect this disclosure.

12. Convertible Preferred Stock and Stockholders' Deficit
Conversion Rights, page F-21

39. Please clarify the nature of the "certain adjustments for antidilution". Also include a detailed discussion of any accounting implications that such adjustments would involve as well as whether any such adjustments have been made in the past.

13. Stock Incentive Plan, page F-22

40. Please tell us why the volatility remained the same for each period presented in the financial statements.

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.

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
OncoMed Pharmaceuticals, Inc.
June 7, 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 Riedler
Assistant Director

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