



DIVISION OF  
CORPORATION FINANCE

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

June 28, 2013

Via E-mail

Ramesh Kumar, Ph.D.  
President and Chief Executive Officer  
Onconova Therapeutics, Inc.  
375 Pheasant Run  
Newtown, PA 18940

**Re: Onconova Therapeutics, Inc.  
Registration Statement on Form S-1  
Filed June 14, 2013  
File No. 333-189358**

Dear Dr. Kumar:

We have reviewed your registration statement filed June 14, 2013 and your response to our comments to your confidential draft registration statement submitted on May 3, 2013 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 providing the requested information and amending your registration statement. 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 the information you provide in response to these comments, we may have additional comments.

Management's Discussion and Analysis, page 55  
Financial Overview, page 58

1. We note your response to our prior comment 10. Please revise the tables on pages 58-9 to include the primary source of research funding for each of 2012 and 2011.

Stock-Based Compensation, page 69

2. Regarding your response to our prior comment 12, we have the following additional comments regarding your disclosure and accounting for stock-based compensation:
  - As a continuing reminder, since you have not disclosed an estimated offering price we are deferring a final evaluation of stock compensation and other costs

recognized until the estimated offering price is specified. We may have further comments in this regard when the amendment containing that information is filed.

- We acknowledge the disclosure in your response letter regarding the 13 “selected comparable companies” considered in estimating your assumed annual volatility rates. Please explain to us why you deemed Enzon Pharmaceuticals to be comparable to you since you state they had five marketed products generating \$116 million in annual revenue. In your response, please tell us what your estimated annual volatility rate would be if you deleted this company from your sample.
- Regarding your fair value common stock valuation at March 31, 2013, please tell us the fair value of common stock at this date inherent in your IPO scenario assuming the IPO is 100% certain and excluding any discounts for weighting other scenarios and lack of marketability.
- Please provide in your filing containing the IPO price range, a discussion of each significant factor contributing to the difference between the fair value as of the date of each grant and the estimated IPO price range. Please reconcile and explain the differences between the mid-point of your estimated offering price range and the fair values included in your analysis.

Recilisib – Acute Radiation Syndromes Treatment, page 99

3. We note your response to our prior comment 17 and your disclosure that you plan to “continue to seek support from government agencies and to develop recilisib under the FDA Animal Efficacy Rule.” Please expand your disclosure in this section to clarify that all agreements relating to the government funding of recilisib have expired and that no such funding or other obligations remain outstanding.

Notes to Consolidated Financial Statements

15. License and Collaboration Agreements

Baxter Agreement, page F-34

4. We acknowledge your response to our prior comment 25. Please revise your disclosure to elaborate on why the license deliverable has standalone value from the research and development services deliverable consistent with your response.

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.

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You may contact Jim Peklenk at (202) 551-3661 or Mark Brunhofer at (202) 551-3638 if you have questions regarding comments on the financial statements and related matters. Please contact Austin Stephenson at (202) 551-3192, Dan Greenspan at (202) 551-3623, or me at (202) 551-3715 with any other questions.

Sincerely,

/s/ Jeffrey P. Riedler

Jeffrey P. Riedler  
Assistant Director

cc: Via E-mail  
David S. Rosenthal, Esq.  
Dechert LLP