



DIVISION OF
CORPORATION FINANCE

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

July 15, 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.
Amendment No. 1 to Registration Statement on Form S-1
Filed July 11, 2013
File No. 333-189358**

Dear Dr. Kumar:

We have reviewed your amended registration statement and correspondence dated July 11, 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 and your amended registration statement, we may have additional comments.

Phase 1/2 Trial Results of Rigosertib IV in Patients with Myelodysplastic Syndromes , page 60

1. We note your discussion in this section of the length of survival of the 39 patients in Phase 1, Phase 2, and Phase 1/2 studies who had previously failed treatment with hypomethylating agents. You state that 23 patients lived for at least six months, 11 patients lived for more than one year, and 3 patients lived more than two years. This suggests that 16 of the 39 patients did not survive for at least six months. Please clarify if this is the case.

Report of Independent Registered Public Accounting Firm, pages F-2 and F-3

2. As a reminder, please assure that your auditors (both Ernst & Young LLP and EisnerAmper LLP) remove the explanatory language referencing the reverse stock

Ramesh Kumar, Ph.D.
Onconova Therapeutics, Inc.
July 15, 2013
Page 2

split and include a signed audit report in the amendment for which you will request effectiveness. Also please file as Exhibits updated, signed consents from these independent auditors with that amendment.

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.

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/ Daniel Greenspan for

Jeffrey P. Riedler
Assistant Director

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