

April 25, 2016

**Via EDGAR**

U.S. Securities and Exchange Commission  
Division of Corporate Finance  
100 F Street, N.E.  
Washington, DC 20549  
Attention: Suzanne Hayes, Assistant Director

**Re: Onconova Therapeutics, Inc.  
Post-Effective Amendment No. 1 to Form S-1  
Filed April 11, 2016  
Registration No. 333-207533**

Dear Ms. Hayes:

This letter is in response to the comment letter of the staff of the United States Securities and Exchange Commission (the "Commission") dated April 20, 2016 (the "Comment Letter") related to the Post-Effective Amendment No. 1 to Form S-1 filed April 11, 2016 (File No. 333-207533) ("Amendment No. 1") of Onconova Therapeutics, Inc. ("Onconova," the "Company," or "we"). For your convenience, we have set forth below the text of the comments contained in the Comment Letter, followed by our response.

Information Incorporated by Reference, page 1

*1. Please incorporate by reference your Current Report on Form 8-K filed on February 17, 2016.*

**Response:** We are filing Post-Effective Amendment No. 2 to our Registration Statement on Form S-1 ("Amendment No. 2") and have added the Company's Current Report on Form 8-K filed on February 17, 2016 to the documents incorporated by reference. (See page 1 of Amendment No. 2.)

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*2. Please include your web site address, including the uniform resource locator (URL) where your incorporated reports and other documents may be accessed. Please see Item 12(b)(1)(v) of Form S-1.*

**Response:** The Company's web site address, including the uniform resource locator (URL), is set forth on page 1 of Amendment No. 2 under the header "Where You Can Find More Information."

In responding to the Comment Letter, the Company acknowledges 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.

Thank you for your consideration of our responses to the Comment Letter and please do not hesitate to contact our counsel, Donald R. Readlinger, Esq., at 609.951.4164, with any questions or comments regarding any of the foregoing.

Very truly yours,

/s/ Mark Guerin

Mark Guerin

Vice President, Financial Planning & Accounting  
(Principal Financial and Accounting Officer)

cc: Donald R. Readlinger, Esq.

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