

VIA EDGAR

United States Securities and Exchange Commission
Division of Corporation Finance
100 F Street N.E.
Washington, D.C. 20549

Attention: Dorrie Yale
Erin Jaskot

**Re: Onconova Therapeutics, Inc.
Registration Statement on Form S-1 (the "Registration Statement")
Filed April 17, 2018
File No. 333-224315**

Dear Ms. Yale:

On behalf of Onconova Therapeutics, Inc. (the "Company"), we are responding to the comments of the Staff (the "Staff") of the Securities and Exchange Commission (the "Commission") contained in your letter dated April 24, 2018 to Ramesh Kumar, Ph.D., President and Chief Executive Officer of the Company, with respect to the above referenced filing with the Commission by the Company. For your convenience, we have set forth below the Staff's comments in italics, followed by the Company's responses.

Registration Statement on Form S-1

Incorporation by Reference, page 42

1. *Please revise this section to include the definitive proxy statement you filed on February 28, 2018, and the Current Reports on Form 8-K that you have filed since the filing of this registration statement. Refer to Item 12(a)(2) of the Form S-1.*

Response: The Company is filing Amendment No. 1 ("Amendment No. 1") to the Registration Statement and has included in "Incorporation by Reference" section the definitive proxy statement the Company filed on February 28, 2018 and the Current Reports on Form 8-K that the Company has filed since the filing of the Registration Statement.

General

2. *We note that you incorporate by reference your Form 10-K for the fiscal year ended December 31, 2017; however, the Form 10-K incorporates by reference information from your definitive proxy statement that has not yet been filed. Please note that we will not be in a position to accelerate the effective date of your registration statement until you have amended the Form 10-K to include Part III information or filed the definitive proxy statement. Please refer to Compliance and Disclosure Interpretations, Securities Act Forms Question 123.01 and Regulation S-K Question 117.05 for guidance.*

Response: The Company acknowledges the Staff's comment and intends to amend the Form 10-K to include Part III information prior to requesting acceleration of effectiveness of the Registration Statement.

The Company respectfully requests the Staff's assistance in completing the review as soon as possible. Please advise us if we can provide any further information or assistance to facilitate your review. Please direct any further comments or questions to the undersigned at (215) 963-5262.

Very truly yours,

/s/ Joanne R. Soslow

Joanne R. Soslow
Morgan, Lewis & Bockius LLP

cc: Ramesh Kumar, Ph.D. (Onconova Therapeutics, Inc.)
Mark Guerin (Onconova Therapeutics, Inc.)