

VIA EDGAR

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

Attention: Christine Westbrook  
Erin Jaskot

**Re: Onconova Therapeutics, Inc.  
Registration Statement on Form S-1 (the "Registration Statement")  
Filed December 29, 2017  
File No. 333-222374**

Dear Ms. Westbrook:

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 January 18, 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.

Form S-1 filed December 29, 2017

Cover Page

1. *Please tell us whether the recent market price set forth on the cover page of the prospectus will be substantially similar to the offering price. If not, please include disclosure on the cover page indicating the factors that will be used to determine the offering price.*

Response: The Company is filing Amendment No. 1 ("Amendment No. 1") to the Registration Statement and has included disclosure on the prospectus cover page indicating the factors that will be used to determine the offering price.

2. *Please identify the lead underwriter(s) on the prospectus cover page. Please note that we may defer further review of any amendment to your registration statement that does not include the names of the lead underwriter(s).*

Response: In Amendment No. 1, the Company has identified H.C. Wainwright & Co. LLC as the lead underwriter on the prospectus cover page.

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Exhibit 23.1

3. *Please file a signed consent of your auditors as required by Section 7 of the Securities Act and Item 601(b)(23) of Regulation S-K.*

Response: The Company is filing a signed consent of Ernst & Young, LLP, the Company's auditors, as Exhibit 23.1 to Amendment No. 1, as required by Section 7 of the Securities Act and Item 601(b)(23) of Regulation S-K.

Exhibit 5.1

4. *Please file a revised legality opinion that covers the securities included in the registration statement. For example, we note that the opinion references the offer and sale of up to \$25,000,000 of shares of common stock. In addition, it is inappropriate to assume, for purposes of your opinion, that the issuance of shares will not exceed the number of shares available for issuance under the Company's certificate of incorporation. Please revise your opinion to remove this assumption. Refer to Section II.B.3.a. of Staff Legal Bulletin No. 19.*

Response: The Company is filing a revised legal opinion of Morgan, Lewis & Bockius LLP as Exhibit 5.1 to Amendment No. 1 to address the Staff's comment.

Executive Compensation

5. *Please update your executive compensation disclosure to include your most recently completed fiscal year. Refer to Item 402 of Regulation S-K.*

Response: The Company has included in Amendment No. 1 a section entitled "Executive Compensation" which includes executive compensation information for fiscal years 2017 and 2016 as required by Item 402 of Regulation S-K.

Signatures

6. *Please revise your signature page to the registration statement and provide the signatures required by Form S-1. We note that you have included such signatures in the power of attorney filed as Exhibit 24.1. Please include these signatures within the body of the registration statement. To the extent you use a power of attorney for future signatures, please ensure it refers to amendments to the Form S-1, as it currently refers to a Form S-3.*

Response: The Company is filing Amendment No. 1 to provide the required signatures required by Form S-1 and a revised power of attorney which refers to amendments to the Form S-1.

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

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Joanne R. Soslow

Morgan, Lewis & Bockius LLP

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

Mark Guerin (Onconova Therapeutics, Inc.)