

Prospectus Supplement No. 2  
To Prospectus dated November 3, 2015



Onconova Therapeutics, Inc.

5,200,000 shares of Common Stock

This Prospectus Supplement No. 2 supplements and amends our prospectus dated November 3, 2015 (the "Prospectus"), relating to the sale, from time to time, of up to 5,200,000 shares of our common stock by Lincoln Park Capital Fund, LLC.

This prospectus supplement is being filed to include the information set forth in our Current Report on Form 8-K filed with the Securities and Exchange Commission on December 4, 2015. This prospectus supplement should be read in conjunction with the Prospectus and any amendments or supplements thereto, which are to be delivered with this prospectus supplement, and is qualified by reference to the Prospectus, except to the extent that the information in this prospectus supplement updates or supersedes the information contained in the Prospectus, including any amendments or supplements thereto.

Our common stock trades on the NASDAQ Global Select Market under the ticker symbol "ONTX." On December 3, 2015, the last reported sale price per share of our common stock was \$1.28 per share.

**Investing in our common stock involves risk. Please read carefully the section entitled "Risk Factors" beginning on page 10 of the Prospectus.**

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved these securities or determined if the Prospectus or this prospectus supplement is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this Prospectus Supplement No. 2 is December 4, 2015.

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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, DC 20549

**FORM 8-K**

**CURRENT REPORT  
PURSUANT TO SECTION 13 OR 15(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934**

Date of Report (Date of earliest event reported): **December 3, 2015**

**Onconova Therapeutics, Inc.**  
(Exact name of Registrant as specified in its charter)

Delaware  
(State or Other Jurisdiction  
of Incorporation or Organization)

001-36020  
(Commission  
File Number)

22-3627252  
(I.R.S. Employer  
Identification No.)

375 Pheasant Run  
Newtown, PA 18940  
(267) 759-3680

(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

**Not Applicable**

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

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**Item 8.01. Other Events**

On December 3, 2015, Onconova Therapeutics, Inc. (the "Company") received notification from the U.S. Food and Drug Administration ("FDA") that a full clinical hold has been placed on the investigational new drug application for briciclib, one of the Company's secondary clinical-stage product candidates, following a drug product lot testing failure due to visible particulates. The Company will be required to undertake appropriate remedial actions prior to re-initiating the clinical trial. The Company previously reported that enrollment in the next cohort of a Phase 1 clinical trial of briciclib was expected to resume upon completion of quality control testing of the drug product.

The Company's current efforts are focused on its lead product candidate, rigosertib. The FDA action does not affect the Company's plans with respect to the Phase 3 clinical trial of rigosertib IV in patients with higher-risk myelodysplastic syndromes (MDS) or any other rigosertib clinical trials.

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**SIGNATURE**

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Dated: December 4, 2015

Onconova Therapeutics, Inc.

By: /s/ Ajay Bansal  
Name: Ajay Bansal  
Title: Chief Financial Officer

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