

Prospectus Supplement No. 4
To Prospectus dated November 3, 2015



Onconova Therapeutics, Inc.

5,200,000 shares of Common Stock

This Prospectus Supplement No. 4 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 January 6, 2016. 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 January 5, 2016, the last reported sale price per share of our common stock was \$0.95 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. 4 is January 6, 2016.

**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): **January 5, 2016**

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.)

(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))

Item 1.02 Termination of a Material Definitive Agreement

On January 5, 2016, Onconova Therapeutics, Inc. (the "Company") and Cantor Fitzgerald & Co. ("Cantor") mutually agreed to terminate the Sales Agreement between the Company and Cantor, dated October 8, 2014, as amended by Amendment No. 1 to Sales Agreement, dated September 30, 2015 (the "Sales Agreement"), pursuant to a Termination of Sales Agreement (the "Termination Agreement") between the Company and Cantor. Through January 5, 2016, the Company sold approximately \$6.2 million in shares of the Company's common stock under the Sales Agreement.

The foregoing description of the Termination Agreement does not propose to be complete and is qualified in its entirety by reference to the full text of the Termination Agreement, which is filed as Exhibit 10.1 hereto and incorporated herein by reference.

Item 9.01. Financial Statements and Exhibits

(d) Exhibits.

10.1 Termination of Sales Agreement, dated January 5, 2016, between Onconova Therapeutics, Inc. and Cantor Fitzgerald & Co.

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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: January 6, 2016

Onconova Therapeutics, Inc.

By: /s/ Mark Guerin

Name: Mark Guerin

Title: Vice President, Financial Planning and Accounting

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EXHIBIT INDEX

**Exhibit
No.**

Description

10.1 Termination of Sales Agreement, dated January 5, 2016, between Onconova Therapeutics, Inc. and Cantor Fitzgerald & Co.

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Exhibit 10.1

**TERMINATION OF
SALES AGREEMENT**

January 5, 2016

Cantor Fitzgerald & Co.
499 Park Avenue
New York, NY 10022

Ladies and Gentlemen:

Reference is made to the Sales Agreement, dated October 8, 2014, including the Schedules thereto, between Cantor Fitzgerald & Co. ("CF&Co") and Onconova Therapeutics, Inc., a Delaware corporation (the "Company"), as amended by Amendment No. 1 to Sales Agreement, dated September 30, 2015 (the "Sales Agreement"), pursuant to which the Company agreed to sell through CF&Co, as sales agent, shares of common stock, par value \$0.01 per share, of the Company. All capitalized terms used and not otherwise defined herein shall have the respective meanings assigned to such terms in the Sales Agreement. CF&Co and the Company agree as follows:

A. Termination of Sales Agreement. Pursuant to Section 13(d) of the Sales Agreement, the Company and Cantor hereby mutually agree to terminate the Sales Agreement, effective as of the date hereof.

B. Counterparts. This Termination of Sales Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Delivery by one party to the other may be made by facsimile or email transmission.

C. Governing Law. This Termination of Sales Agreement shall be governed by, and construed in accordance with, the internal laws of the State of New York without regard to the principles of conflicts of laws.

[Remainder of page intentionally left blank.]

If the foregoing correctly sets forth the understanding between us, please so indicate in the space provided below for that purpose.

Very truly yours,

ONCONOVA THERAPEUTICS, INC.

By: /s/ Ramesh Kumar, Ph.D
Name: Ramesh Kumar, Ph.D
Title: President and Chief Executive Officer

ACCEPTED as of the date first above written:

CANTOR FITZGERALD & CO.

By: /s/ Jeffrey Lumby
Name: Jeffrey Lumby
Title: Senior Managing Director

SIGNATURE PAGE

ONCONOVA THERAPEUTICS, INC. – TERMINATION OF SALES AGREEMENT
