UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 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): October 8, 2014

Onconova Therapeutics, Inc.

(Exact Name of Issuer as Specified in Charter)

Delaware (State or Other Jurisdiction of Incorporation or Organization)

001-36020 (Commission File Number)

22-3627252 (I.R.S. Employer Identification Number)

375 Pheasant Run, Newtown, PA (Address of Principal Executive Offices)

18940 (Zip Code)

(267) 759-3680 (Registrant's Telephone Number, Including Area Code)

(Former Name or Former Address, if Changed Since Last Report)

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

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

Item 1.01. Entry Into a Material Definitive Agreement.

On October 8, 2014, Onconova Therapeutics, Inc. (the "*Company*") entered into a Sales Agreement (the "*Agreement*") with Cantor Fitzgerald & Co. ("*Cantor*" or the "*Agent*) to create an at-the-market equity program under which the Company from time to time may offer and sell shares of its common stock, par value \$0.01 per share, having an aggregate offering price of up to \$20,000,000 (the "*Shares*") through Cantor.

Subject to the terms and conditions of the Agreement, Cantor will use its commercially reasonable efforts to sell the Shares from time to time, based upon the Company's instructions. The Company has provided the Agent with customary indemnification rights, and the Agent will be entitled to a commission at a fixed commission rate of up to 3.0% of the gross proceeds per Share sold.

Sales of the Shares, if any, under the Agreement may be made in transactions that are deemed to be "at the market offerings" as defined in Rule 415 under the Securities Act of 1933, as amended (the "Securities Act"), including sales made by means of ordinary brokers' transactions, including on The NASDAQ Global Market, at market prices or as otherwise agreed with the Agent. The Company has no obligation to sell any of the Shares, and may at any time suspend offers under the Agreement or terminate the Agreement.

This report shall not constitute an offer to sell or the solicitation of an offer to buy nor shall there be any sale of the Shares in any state in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state.

The Agreement is filed as Exhibit 1.1 to the shelf registration statement on Form S-3 filed today with the Securities and Exchange Commission (the "*Registration Statement*"). This description of the Agreement does not purport to be complete and is qualified in its entirety by reference to the Agreement which is incorporated by reference herein.

The Registration Statement has been filed with the Securities and Exchange Commission but has not yet become effective. The securities being registered may not be sold, nor may offers to buy be accepted, prior to the time the shelf registration statement becomes effective. This Form 8-K shall not constitute an offer to sell or the solicitation of an offer to buy any securities, nor shall there be any sale of these securities in any state or jurisdiction in which such an offer, solicitation or sale would be unlawful prior to the registration or qualification under the securities law of any such state or jurisdiction

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits: The Exhibit Index annexed hereto is incorporated herein by reference.

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SIGNATURES

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

Onconova Therapeutics, Inc.

Date: October 8, 2014 By: /s/ Ramesh Kumar, Ph.D

Ramesh Kumar, Ph.D

President and Chief Executive Officer

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EXHIBIT INDEX

Exhibit
Number

Exhibit

Sales Agreement dated October 8, 2014 by and between Onconova Therapeutics, Inc., and Cantor Fitzgerald & Co., incorporated herein by reference to Exhibit 1.1 to the Registration Statement of the Company on Form S-3 filed with the Securities and Exchange Commission on October 8, 2014

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