

PROSPECTUS SUPPLEMENT NO. 1  
To Prospectus dated July 7, 2016



Onconova Therapeutics, Inc.

Subscription Rights to Purchase Up to 4,256,186 Units  
Consisting of an Aggregate of Up to 4,256,186 Shares of Common Stock  
and Warrants to Purchase Up to 3,192,140 Shares of Common Stock  
at a Subscription Price of \$4.10 Per Unit

This Prospectus Supplement No. 1 amends and supplements the prospectus dated July 7, 2016, which forms a part of our Registration Statement on Form S-1 (Registration No. 333-211769). This Prospectus Supplement is being filed to amend and supplement the information included or incorporated by reference in the prospectus with the information contained in this prospectus supplement.

The prospectus and this prospectus supplement relate to our distribution to holders of our common stock and to holders of certain of our outstanding warrants, at no charge, non-transferable subscription rights to purchase units. Each unit, which we refer to as a Unit, consists of one share of common stock and 0.75 of a tradable warrant representing the right to purchase one share of common stock, which we refer to as the Warrants. We refer to the offering that is the subject of prospectus and this prospectus supplement as the Rights Offering.

In the Rights Offering, holders received 1.5 subscription rights for each share of common stock, or each share of common stock underlying our participating warrants, owned at 5:00 PM Eastern Time, on July 7, 2016, the record date of the Rights Offering. The Rights Offering commenced on July 8, 2016, and the subscription rights will expire if they are not exercised by 5:00 PM Eastern Time, on July 26, 2016. We may extend the Rights Offering for additional periods in our sole discretion.

On July 22, 2016, we reduced the Subscription Price from \$4.90 per Unit to \$4.10 per Unit, the exercise price of the Warrants from \$5.88 per share to \$4.92 per share, and the threshold price above which we may redeem the Warrants from \$14.70 per share to \$12.30 per share. The subscription price per Unit for any subscribers who receive Pre-Funded Warrants in lieu of common stock will be \$4.09. In all other respects, the terms of the Rights Offering remain as set forth in the prospectus.

Holders of the Subscription Rights who have already exercised their Subscription Rights at \$4.90 per Unit will be considered to have exercised their Subscription Rights at \$4.10 per Unit and will receive an appropriate refund as soon as practicable after the termination or expiration of the Rights Offering, without interest or penalty.

The Rights Offering is being conducted on a best-efforts basis. There is no minimum amount of proceeds necessary in order for us to close the Rights Offering.

We have engaged Maxim Group LLC to act as dealer-manager in the Rights Offering.

**Investing in our securities involves a high degree of risk. See the section entitled "Risk Factors" beginning on page 20 of the Prospectus and in the documents we incorporate by reference into the Prospectus. You should carefully consider these risk factors, as well as the information contained in or incorporated by reference into the Prospectus, before you invest.**

Our common stock is listed on the NASDAQ Capital Market, or NASDAQ, under the symbol "ONTX." On July 21, 2016, the last reported sale price of our common stock was \$4.67. We have applied to list the Warrants on NASDAQ following their issuance under the symbol "ONTXW." The Subscription Rights are non-transferable and will not be listed for trading on NASDAQ or any other stock exchange or market. You are urged to obtain a current price quote for our common stock before exercising your Subscription Rights.

	Per Unit	Total(2)
Subscription price	\$ 4.100	\$ 17,450,363
Dealer-Manager fees and expenses (1)	\$ 0.351	\$ 1,496,029
Proceeds to us, before expenses	\$ 3.749	\$ 15,954,334

- (1) In connection with this Rights Offering, we have agreed to pay to the dealer-manager a cash fee equal to (a) 4.5% of the dollar amount of the Units sold to any holders of Subscription Rights who were beneficial owners of shares of our common stock prior to July 30, 2013, and (b) 8.0% of the dollar amount of the Units sold to any other holders of Subscription Rights. We will provide to the dealer-manager upon completion of the Rights Offering a non-accountable expense allowance equal to the lesser of \$100,000 or 3% of the gross proceeds of the Rights Offering for expenses incurred in connection with the Rights Offering. We advanced \$30,000 against out-of-pocket accountable expenses to Maxim Group LLC upon its engagement as a dealer-manager; provided that Maxim Group LLC will promptly reimburse to us (i) any portion of the advance not used for actual out-of-pocket expenses, if the Rights Offering is not completed, and (ii) the full amount of the advance, if the Rights Offering is completed. See "Plan of Distribution" beginning on page 53 of the prospectus.
- (2) Assumes the Rights Offering is fully subscribed, but excludes proceeds from the exercise of Warrants included within the Units.

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of the prospectus or this prospectus supplement. Any representation to the contrary is a criminal offense.**

*Dealer-Manager*

**Maxim Group LLC**

The date of this Prospectus Supplement is July 22, 2016

This Prospectus Supplement No. 1 amends and supplements the prospectus to reflect the reduction of the Subscription Price of the non-transferable Subscription Rights from \$4.90 per Unit to \$4.10 per Unit and to make related changes. All references to the price per Unit of \$4.90 are hereby amended to \$4.10 per Unit. All references to the Warrant exercise price of \$5.88 per share are hereby amended to \$4.92 per share.

After the one-year anniversary of issuance, we may redeem the Warrants for \$0.001 per Warrant if the volume weighted average price of our common stock is above a threshold price equal to 250% of the exercise price for each of 10 consecutive trading days. All references to the threshold price of \$14.70 per share are hereby amended to \$12.30 per share. The subscription price per Unit for any subscribers receiving Pre-Funded Warrants in lieu of common stock equals the Subscription Price for the other Units sold in the Rights Offering, less the \$0.01 exercise price for each Pre-Funded Warrant. All references to \$4.89 are hereby amended to \$4.09.

The Capitalization and Dilution sections on pages 28 and 29 of the prospectus are hereby replaced by the following new Capitalization and Dilution sections (which reflect the change to the subscription price of the non-transferable Subscription Rights).

This Prospectus Supplement No. 1 should be read in conjunction with and is qualified by reference to the prospectus, except to the extent that the information provided by this Prospectus Supplement No. 1 supersedes the information contained in the prospectus.

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## CAPITALIZATION

The following table presents our cash, cash equivalents and capitalization, as of March 31, 2016:

- on an actual basis; and
- on a pro forma as adjusted basis to give further effect to the sale by us in this Rights Offering of maximum of 4,256,186 Units (consisting of 4,256,186 shares of our common stock (assuming no Pre-Funded Warrants) and Warrants to purchase an aggregate of 3,192,140 shares of common stock upon exercise), at the Subscription Price of \$4.10 per Unit, and our receipt of the net proceeds from that sale after deducting estimated offering expenses.

The table below does not reflect the exercise of Warrants issued in connection with the Rights Offering. The pro forma as adjusted information set forth below assumes equity accounting for the Warrants, is illustrative only and will be adjusted based on the Units sold. You should read this information in conjunction with our consolidated financial statements and notes thereto incorporated by reference into this prospectus.

	March 31, 2016 (unaudited)	
	Actual	Pro Forma as Adjusted
Cash and cash equivalents	\$ 16,835,000	\$ 32,440,000
Long-term liabilities	5,181,000	5,181,000
Stockholders' equity*:		
Preferred stock, \$0.01 par value, 5,000,000 authorized at March 31, 2016 and March 31, 2016 Pro Forma, none issued and outstanding at March 31, 2016	—	—
Common stock, \$0.01 par value, 25,000,000 authorized at March 31, 2016 and March 31, 2016 Pro Forma as Adjusted, 2,740,212 shares issued and outstanding at March 31, 2016 and 6,996,398 shares issued and outstanding at March 31, 2016 Pro Forma as Adjusted	27,000	70,000
Additional paid-in capital	331,775,000	347,337,000
Accumulated other comprehensive loss	(16,000)	(16,000)
Accumulated deficit	(325,797,000)	(325,797,000)
Total Onconova Therapeutics, Inc. stockholders' equity	5,989,000	21,594,000
Non-controlling interest	830,000	830,000
Total stockholders' equity	6,819,000	22,424,000

\* Stockholders' equity has been restated to reflect the one-for-ten reverse stock split and decrease in authorized common shares from 75,000,000 to 25,000,000.

The information above is as of March 31, 2016 and excludes

- 567,122 shares of common stock issuable upon the exercise of stock options outstanding at March 31, 2016 with a weighted average exercise price of \$72.60 per share;
- 97,424 shares of common stock issuable upon the exercise of outstanding warrants at March 31, 2016 with a weighted average exercise price of \$12.05 per share;
- 185,909 shares of common stock reserved for future issuance under our 2013 Equity Compensation Plan at March 31, 2016; and
- any additional shares of common stock that we may issue to Lincoln Park Capital Fund, LLC, or Lincoln Park, pursuant to a purchase agreement we entered into on October 8, 2015, which provides that, upon the terms and subject to the conditions and limitation set forth therein, Lincoln Park is committed to purchase up to an aggregate of an additional \$15 million of shares of our common stock over the term of the purchase agreement, should we elect to sell shares to Lincoln Park.

All share and per share data has been restated to reflect our one-for-ten reverse stock split effective May 31, 2016, subject to final adjustments for treatment of fractional share interests.

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## DILUTION

Purchasers of our common stock in the Rights Offering (and upon exercise of the Warrants issued pursuant to this Rights Offering) will experience an immediate dilution of the net tangible book value per share of our common stock. Our net tangible book value as of March 31, 2016 was approximately \$6,819,000, or \$2.49 per share of our common stock (based upon 2,740,212 shares of our common stock outstanding after giving effect to the one-for-ten reverse stock split on May 31, 2016). Net tangible book value per share is equal to our total net tangible book value, which is our total tangible assets less our total liabilities, divided by the number of shares of our outstanding common stock. Dilution per share equals the difference between the amount per share paid by purchasers of shares of common stock in the Rights Offering and the net tangible book value per share of our common stock immediately after the Rights Offering.

Based on the sale by us in this Rights Offering of a maximum of 4,256,186 Units (consisting of 4,256,186 shares of our common stock (assuming no Pre-Funded Warrants) and Warrants to purchase an aggregate of 3,192,140 shares of common stock upon exercise), at the Subscription Price of \$4.10 per Unit, and after deducting estimated offering expenses and dealer-manager fees and expenses payable by us of \$1.8 million, and the application of the estimated \$15.6 million of net proceeds from the Rights Offering, assuming equity accounting for the Warrants, our pro forma net tangible book value as of March 31, 2016 would have been approximately \$22.4 million, or \$3.21 per share. This represents an immediate increase in pro forma net tangible book value to existing shareholders of \$0.72 per share and an immediate dilution to purchasers in the Rights Offering of \$0.89 per share.

The following table illustrates this per-share dilution on a pro forma basis, assuming a fully subscribed for Rights Offering of 4,256,186 Units at the Subscription Price of \$4.10 per Unit (assuming no Pre-Funded Warrants and excluding any issuance of shares of common stock upon exercise of Warrants):

Subscription Price		\$	4.10
Net tangible book value per share as of March 31, 2016, before Rights Offering	\$	2.49	
Increase in net tangible book value per share attributable to Rights Offering	\$	0.72	
Pro forma net tangible book value per share as of March 31, 2016, after giving effect to Rights Offering		\$	3.21
Dilution in net tangible book value per share to purchasers		\$	0.89

The information above is as of March 31, 2016 and excludes:

- 567,122 shares of common stock issuable upon the exercise of stock options outstanding at March 31, 2016 with a weighted average exercise price of \$72.60 per share;
- 97,424 shares of common stock issuable upon the exercise of outstanding warrants at March 31, 2016 with a weighted average exercise price of \$12.05 per share;
- 185,909 shares of common stock reserved for future issuance under our 2013 Equity Compensation Plan at March 31, 2016; and
- any additional shares of common stock that we may issue to Lincoln Park Capital Fund, LLC, or Lincoln Park, pursuant to a purchase agreement we entered into on October 8, 2015, which provides that, upon the terms and subject to the conditions and limitation set forth therein, Lincoln Park is committed to purchase up to an aggregate of an additional \$15 million of shares of our common stock over the term of the purchase agreement, should we elect to sell shares to Lincoln Park.

All share and per share data has been restated to reflect our one-for-ten reverse stock split effective May 31, 2016.

To the extent that outstanding options or warrants are exercised, the investor purchasing our common stock in this offering will experience further dilution. In addition, we may choose to raise additional capital due to market conditions or strategic considerations. To the extent that additional capital is raised through the sale of securities, the issuance of those securities could result in further dilution to our stockholders.