

Onconova Therapeutics, Inc.  
Form S-1/A  
June 20, 2016

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As filed with the Securities and Exchange Commission on June 20, 2016

Registration No. 333-211769

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

Pre-effective  
Amendment No. 1  
to

**Form S-1**  
REGISTRATION STATEMENT  
UNDER  
THE SECURITIES ACT OF 1933

**Onconova Therapeutics, Inc.**

(Exact name of registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

**2834**  
(Primary Standard Industrial  
Classification Code Number)

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

**Onconova Therapeutics, Inc.**  
**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)

**Ramesh Kumar, Ph.D.**  
**President and Chief Executive Officer**  
**Onconova Therapeutics, Inc.**  
**375 Pheasant Run**  
**Newtown, PA 18954**  
**(267) 759-3680**

(Name, address, including zip code, and telephone number, including area code, of agent for service)

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**Approximate date of commencement of proposed sale to the public:  
As soon as practicable after the effective date of this registration statement.**

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (check one)

Large Accelerated filer                       Accelerated filer                       Non-accelerated filer                       Smaller reporting company

(Do not check if a smaller reporting company)

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## CALCULATION OF REGISTRATION FEE

Title of securities to be registered	Proposed maximum aggregate offering price(1)	Amount of registration fee(5)
Units, each consisting of share of common stock, par value \$0.01 per share ("Common Stock") and warrant ("Warrant") to purchase one share of Common Stock ("Units")	\$15,000,000	\$1,511
Non-transferable Rights to purchase Units(2)		
Common Stock, par value \$0.01 per share included as part of the Units(3)	Included with Units above	
Warrants included as part of the Units(3)	Included with Units above	
Common Stock issuable upon exercise of the Warrants included in the Units(4)	\$7,500,000	755
Pre-Funded Warrants in lieu of Common Stock included in Units(3)	Included with Units Above	
Common Stock issuable upon exercise of Pre-Funded Warrants(3)(4)	Included with Units Above	
Total	\$22,500,000	\$2,266

(1) Estimated solely for the purpose of calculating the registration fee in accordance with Rule 457(o) of the Securities Act of 1933 (the "Act").

(2) Non-transferable Rights to subscribe for Units are being issued without consideration.

(3)

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Pursuant to Rule 457(i) of and existing interpretations under the Act, no separate registration fee is required for the Common Stock and Warrants because the Common Stock and Warrants are being registered at the same time as the Units.

(4) Pursuant to Rule 416 under the Securities Act, the shares being registered hereunder include such indeterminate number of shares as may be issuable with respect to the shares being registered hereunder as a result of stock splits, stock dividends or similar transactions.

(5) \$2,266 was previously paid on June 1, 2016.

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**The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant files a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.**

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**The information in this prospectus is not complete and may be changed. We may not sell these securities until the Securities and Exchange Commission declares our registration statement effective. This preliminary prospectus is not an offer to sell these securities and we are not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.**

**Subject to completion, dated June 20, 2016**

**PRELIMINARY PROSPECTUS**

## **Onconova Therapeutics, Inc.**

We are distributing to holders of our common stock and to holders of certain of our outstanding warrants who are entitled to participate in this offering, at no charge, non-transferable subscription rights to purchase units. Each unit, which we refer to as a Unit, consists of \_\_\_\_\_ share of common stock and \_\_\_\_\_ 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 this prospectus as the Rights Offering.

In the Rights Offering, you will receive one subscription right 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 5, 2016, the record date of the Rights Offering, or the Record Date. The common stock and the Warrants comprising the Units will separate upon the effectiveness of the exercise of the rights and will be issued as separate securities, and the Units will not trade as a separate security. The subscription rights will not be tradable.

Each subscription right will entitle you to purchase one Unit, which we refer to as the Basic Subscription Right, at a subscription price per Unit of \$ \_\_\_\_\_, which we refer to as the Subscription Price. The Warrants entitle the holder to purchase one share of common stock at an exercise price of \$ \_\_\_\_\_ per share, 120% of the per Unit price, from the date of issuance through its expiration on \_\_\_\_\_, 2021. If you exercise your Basic Subscription Rights in full, and other shareholders or participating warrant holders do not, you will be entitled to an over-subscription privilege to purchase a portion of the unsubscribed Units at the Subscription Price, subject to proration, which we refer to as the Over-Subscription Privilege. Each subscription right consists of a Basic Subscription Right and an Over-Subscription Privilege, which we refer to as the Subscription Right.

For certain investors whose subscriptions may result in the purchaser beneficially owning more than 4.99% of our outstanding common stock, such investors may elect to receive in the Rights Offering, in lieu of shares of common stock, certain pre-funded warrants (which we refer to as the Pre-Funded Warrants) to purchase the same amount of shares of common stock. If you do not wish to exceed the ownership threshold, you may elect to receive a Pre-Funded Warrant in lieu of any share of common stock underlying the Units for which you have subscribed. You will not be eligible to elect to receive Pre-Funded Warrants, except to the extent that your beneficial ownership could exceed 4.99% of the shares of common stock outstanding following the consummation of the Rights Offering. Each Pre-Funded Warrant will have an exercise price of \$0.01, and the subscription price per Unit for any such electing investors will be reduced to \$ \_\_\_\_\_ (which equals the Subscription Price for the other Units sold in the Rights Offering, less the \$0.01 exercise price for each Pre-Funded Warrant). The Pre-Funded Warrants do not confer upon the holder any voting or any other rights of a shareholder of the Company.

This prospectus also relates to the offering of the shares of common stock issuable upon exercise of these Pre-Funded Warrants.

The Subscription Rights will expire if they are not exercised by 5:00 PM Eastern Time, on July 19, 2016. We may extend the Rights Offering for additional periods in our sole discretion. Once made, all exercises of Subscription Rights are irrevocable.

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. While none of our directors or executive officers has entered into any binding commitment or agreement to exercise Subscription Rights received in the Rights Offering, our directors and executive officers have indicated interests in subscribing for up to an aggregate of \$ \_\_\_\_\_ million in the Rights Offering, subject to potential proration.

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 this prospectus. You should carefully consider these risk factors, as well as the information contained in this prospectus, before you invest.**

Wells Fargo Bank, N.A. will serve as the Subscription Agent for the Rights Offering. The Subscription Agent will hold the funds we receive from subscribers until we complete, abandon or terminate the Rights Offering. If you want to participate in this Rights Offering and you are the record holder of your

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shares or participating warrants, we recommend that you submit your subscription documents to the Subscription Agent well before the deadline. If you want to participate in this Rights Offering and you hold shares through your broker, dealer, bank, or other nominee, you should promptly contact your broker, dealer, bank, or other nominee and submit your subscription documents in accordance with the instructions and within the time period provided by your broker, dealer, bank, or other nominee. For a more detailed discussion, see "The Rights Offering The Subscription Rights."

Our board of directors reserves the right to terminate the Rights Offering for any reason any time before the completion of the Rights Offering. If we terminate the Rights Offering, all subscription payments received will be returned as soon as practicable, without interest or penalty.

Our common stock is listed on the NASDAQ Capital Market, or NASDAQ, under the symbol "ONTX." On June 17, 2016, the last reported sale price of our common stock was \$5.79. We intend to apply to list the Warrants on NASDAQ following their issuance under the symbol "ONTXW." The Subscription Rights are non-transferrable 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	\$	\$
Dealer-Manager fees and expenses(1)	\$	\$
Proceeds to us, before expenses	\$	\$

(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."

(2) Assumes the Rights Offering is fully subscribed, but excludes proceeds from the exercise of Warrants included within the Units.

**Our board of directors is making no recommendation regarding your exercise of the Subscription Rights. You should carefully consider whether to exercise your Subscription Rights before the expiration date. You may not revoke or revise any exercises of Subscription Rights once made unless we terminate the Rights Offering.**

**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 this prospectus. Any representation to the contrary is a criminal offense.**

*Dealer-Manager*

### Maxim Group LLC

The date of this Prospectus is \_\_\_\_\_, 2016

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**ABOUT THIS PROSPECTUS**

Unless the context otherwise requires, references in this prospectus to "Onconova," "Onconova Therapeutics," "Company," "we," "us" and "our" refer to Onconova Therapeutics, Inc. and its consolidated subsidiaries. This prospectus is part of a registration statement that we have filed with the Securities and Exchange Commission, which we refer to as the SEC or the Commission, utilizing a registration process. It is important for you to read and consider all of the information contained in this prospectus and any applicable prospectus before making a decision whether to invest in the common stock. You should also read and consider the information contained in the exhibits filed with our registration statement, of which this prospectus is a part, as described in "Where You Can Find More Information" in this prospectus.

You should rely only on the information contained in this prospectus and any applicable prospectus supplement, including the information incorporated by reference. We have not authorized anyone to provide you with different information. We are not offering to sell or soliciting offers to buy, and will not sell, any securities in any jurisdiction where it is unlawful. You should assume that the information contained in this prospectus or any prospectus supplement, as well as information contained in a document that we have previously filed or in the future will file with the SEC is accurate only as of the date of this prospectus, the applicable prospectus supplement or the document containing that information, as the case may be.

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**QUESTIONS AND ANSWERS RELATING TO THE RIGHTS OFFERING**

*The following are examples of what we anticipate will be common questions about the Rights Offering. The answers are based on selected information included elsewhere in this prospectus. The following questions and answers do not contain all of the information that may be important to you and may not address all of the questions that you may have about the Rights Offering. This prospectus and the documents incorporated by reference into this prospectus contain more detailed descriptions of the terms and conditions of the Rights Offering and provide additional information about us and our business, including potential risks related to the Rights Offering, the Units offered hereby, and our business. We urge you to read this entire prospectus and the documents incorporated by reference into this prospectus.*

**Why are we conducting the Rights Offering?**

We are conducting the Rights Offering to raise additional capital:

to continue funding INSPIRE, our ongoing Phase 3 clinical trial of rigosertib IV in a population of patients with higher-risk myelodysplastic syndromes, or MDS, after failure of hypomethylating agent, or HMA, therapy, and

for general corporate purposes, including working capital, research and development, business development and operational purposes.

**What is the Rights Offering?**

We are distributing, at no charge, to record holders of our common stock and to holders of certain of our outstanding warrants who are entitled to participate in this Rights Offering pursuant to the terms of such warrants, non-transferable Subscription Rights to purchase Units at a price of \$ \_\_\_\_\_ per whole Unit. The Subscription Rights will not be tradable. Each Unit consists of \_\_\_\_\_ share of common stock and \_\_\_\_\_ Warrant representing the right to purchase one share of common stock at an exercise price of \$ \_\_\_\_\_ per share, 120% of the per Unit price. Upon the effectiveness of the exercise of the Subscription Rights, the common stock and Warrants will immediately separate and will be issued as separate securities. We intend to apply to list the Warrants on NASDAQ under the symbol "ONTXW." You will receive one Subscription Right for each share of common stock or each share of common stock underlying the participating warrants that you owned as of 5:00 PM Eastern Time, on the Record Date. Each Subscription Right entitles the record holder or holder of a participating warrant to a Basic Subscription Right and an Over-Subscription Privilege.

**What are the Basic Subscription Rights?**

For each whole share you owned or whole share underlying the participating warrants you owned as of the Record Date, you will receive one Basic Subscription Right, which gives you the opportunity to purchase \_\_\_\_\_ share of our common stock and to receive \_\_\_\_\_ Warrant to purchase one additional share of our common stock for a price of \$ \_\_\_\_\_ per Unit, 120% of the per Unit price. For example, if you owned 100 shares of common stock as of the Record Date, you will receive 100 Subscription Rights and will have the right to purchase \_\_\_\_\_ shares of our common stock and \_\_\_\_\_ Warrants to purchase one additional share of our common stock for \$ \_\_\_\_\_ per whole Unit (or a total payment of \$ \_\_\_\_\_). You may exercise all or a portion of your Basic Subscription Rights or you may choose not to exercise any Basic Subscription Rights at all.

If you are a record holder or a holder of participating warrants, the number of shares you may purchase pursuant to your Basic Subscription Rights is indicated on the enclosed Subscription Rights Statement. If you hold your shares in the name of a broker, dealer, bank, or other nominee who uses the services of the Depository Trust Company, or DTC, you will not receive a Subscription Rights Statement. Instead, DTC will issue one Subscription Right to your nominee record holder for each share of our common stock that you own as of the Record Date. If you are not contacted by your nominee, you should contact your nominee as soon as possible.

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**What is the Over-Subscription Privilege?**

If you exercise your Basic Subscription Rights in full, you may also choose to exercise your Over-Subscription Privilege to purchase a portion of any Units that the other record holders and participating warrant holders do not purchase through the exercise of their Basic Subscription Rights. You should indicate on your Subscription Rights Statement, or the form provided by your nominee if your shares are held in the name of a nominee, how many additional Units you would like to purchase pursuant to your Over-Subscription Privilege.

If sufficient Units are available, we will seek to honor your Over-Subscription request in full. If Over-Subscription requests exceed the number of Units available, however, we will allocate the available Units pro-rata among the record holders and participating warrant holders exercising the Over-Subscription Privilege in proportion to the number of shares of our common stock each of those record holders owned and the number of shares of our common stock underlying the participating warrants held by each of those warrant holders on the Record Date, relative to the number of shares owned and the number of shares underlying participating warrants held on the Record Date by all record holders and warrant holders exercising the Over-Subscription Privilege. If this pro-rata allocation results in any record holders or warrant holders receiving a greater number of Units than the record holder or warrant holder subscribed for pursuant to the exercise of the Over-Subscription Privilege, then such record holder or warrant holder will be allocated only that number of Units for which the record holder or warrant holder oversubscribed, and the remaining Units will be allocated among all other record holders and warrant holders exercising the Over-Subscription Privilege on the same pro rata basis described above. The proration process will be repeated until all Units have been allocated. See "The Rights Offering Limitation on the Purchase of Units" for a description of certain limitations on purchase.

To properly exercise your Over-Subscription Privilege, you must deliver to the Subscription Agent the subscription payment related to your Over-Subscription Privilege before the Rights Offering expires. See "The Rights Offering The Subscription Rights Over-Subscription Privilege." To the extent you properly exercise your Over-Subscription Privilege for an amount of Units that exceeds the number of unsubscribed Units available to you, any excess subscription payments will be returned to you as soon as practicable after the expiration of the Rights Offering, without interest or penalty.

Wells Fargo Bank, N.A., our Subscription Agent for the Rights Offering, will determine the Over-Subscription allocation based on the formula described above.

**What are the terms of the Warrants?**

Each Warrant entitles the holder to purchase one share of common stock at an exercise price of \$ \_\_\_\_\_ per share, 120% of the per Unit price, from the date of issuance through its expiration on \_\_\_\_\_, 2021. The Warrants will be exercisable by paying the exercise price in cash, or, solely during any period when a registration statement for the exercise of the Warrants is not in effect, exercisable on a cashless basis. 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 \$ \_\_\_\_\_ per share, 300% of the exercise price, for each of 10 consecutive trading days. Subject to certain exceptions, a holder may not exercise any portion of the Warrant to the extent that the holder would beneficially own more than 4.99% of the outstanding common stock after exercise.

**What are the terms of the Pre-Funded Warrants?**

The Pre-Funded Warrants will only be issued to certain investors whose subscriptions for Units in the Rights Offering may result in the purchaser beneficially owning more than 4.99% of our outstanding common stock following the consummation of the Rights Offering, and who elect to receive Pre-Funded Warrants in lieu of shares of common stock underlying the Units for which the



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investors have subscribed. You will not be eligible to elect to receive Pre-Funded Warrants, except to the extent that your beneficial ownership could exceed 4.99% of the shares of common stock outstanding following the consummation of the Rights Offering.

Each Pre-Funded Warrant entitles the holder to purchase one share of common stock at an exercise price of \$0.01 per share, and the subscription price per Unit for any such electing investors will be reduced to \$ (which equals the Subscription Price for the other Units sold in the Rights Offering, less the \$0.01 exercise price for each Pre-Funded Warrant). Each Pre-Funded Warrant will be exercisable from the date of issuance through its expiration on , 2021. The Pre-Funded Warrants will be exercisable by paying the exercise price in cash or on a cashless basis in accordance with the terms of the Pre-Funded Warrants. The Pre-Funded Warrants will not be listed for trading on any stock exchange or market. The Pre-Funded Warrants do not confer upon the holder any voting or any other rights of a shareholder of the Company.

**Will fractional shares be issued upon exercise of Subscription Rights or upon the exercise of Warrants?**

No. We will not issue fractional shares of common stock in the Rights Offering. Rights holders will only be entitled to purchase a number of Units representing a whole number of shares of common stock, rounded down to the nearest whole number of Units a holder would otherwise be entitled to purchase. Any excess subscription payments received by the Subscription Agent will be returned as soon as practicable after expiration of the Rights Offering, without interest or penalty. Similarly, no fractional shares of common stock will be issued in connection with the exercise of a Warrant. If, upon exercise of a Warrant, the holder thereof would be entitled to receive a fractional share of common stock, upon exercise, the holder will only be entitled to receive a whole number of shares of common stock, rounded down to the nearest whole number.

**What effect will the Rights Offering have on our outstanding common stock?**

After our one-for-ten reverse stock split on May 31, 2016, 2,740,212 shares of our common stock were outstanding, along with participating warrants to purchase 96,842 shares of common stock. Based on the foregoing, and assuming no other transactions by us involving our common stock prior to the expiration of the Rights Offering, if the Rights Offering is fully subscribed, approximately shares of our common stock will be issued and outstanding and Warrants to purchase approximately additional shares of our common stock will be outstanding (excluding the currently outstanding warrants). The exact number of shares and Warrants that we will issue in this Rights Offering will depend on the number of Units that are subscribed for in the Rights Offering.

**How was the Subscription Price determined?**

In determining the Subscription Price, the pricing committee of our board of directors is expected to consider, among other things, the following factors:

the current and historical trading prices of our common stock;

the price at which shareholders might be willing to participate in the Rights Offering;

the value of the Warrant being issued as a component of the Unit;

our need for additional capital and liquidity;

the cost of capital from other sources; and

comparable precedent transactions, including the percentage of shares offered, the terms of the subscription rights being offered, the subscription price and the discount that the subscription price represented to the immediately prevailing closing prices for those offerings.



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In conjunction with the review of these factors, our pricing committee will also review our history and prospects, including our past and present earnings and cash requirements, our prospects for the future, the outlook for our industry and our current financial condition. Our pricing committee believes that the Subscription Price should be designed to provide an incentive to our current shareholders and holders of the participating warrants to participate in the Rights Offering and exercise their Basic Subscription Right and their Over-Subscription Privilege.

The Subscription Price does not necessarily bear any relationship to any established criteria for value. You should not consider the Subscription Price as an indication of actual value of our company or our common stock. We cannot assure you that the market price of our common stock will not decline during or after the Rights Offering. You should obtain a current price quote for our common stock before exercising your Subscription Rights and make your own assessment of our business and financial condition, our prospects for the future, and the terms of this Rights Offering. Once made, all exercises of Subscription Rights are irrevocable.

**Am I required to exercise all of the Basic Subscription Rights I receive in the Rights Offering?**

No. You may exercise any number of your Basic Subscription Rights, or you may choose not to exercise any Basic Subscription Rights. If you do not exercise any Basic Subscription Rights, the number of shares of our common stock or number of shares underlying our warrants you own will not change. However, if you choose to not exercise your Basic Subscription Rights in full, your proportionate ownership interest in our company will decrease. If you do not exercise your Basic Subscription Rights in full, you will not be entitled to exercise your Over-Subscription Privilege.

**How soon must I act to exercise my Subscription Rights?**

If you received a Subscription Rights Statement and elect to exercise any or all of your Subscription Rights, the Subscription Agent must receive your completed and signed Subscription Rights Statement and payment for both your Basic Subscription Rights and any Over-Subscription Privilege you elect to exercise, including final clearance of any uncertified check, before the Rights Offering expires on July 19, 2016, at 5:00 PM Eastern Time. If you hold your shares in the name of a broker, dealer, custodian bank, or other nominee, your nominee may establish a deadline before the expiration of the Rights Offering by which you must provide it with your instructions to exercise your Subscription Rights, along with the required subscription payment.

**May I transfer my Subscription Rights?**

No. The Subscription Rights may be exercised only by the shareholders or participating warrant holders to whom they are distributed, and they may not be sold, transferred, assigned or given away to anyone else, other than by operation of law. As a result, a Subscription Rights Statement may be completed only by the shareholder or participating warrant holder who receives the statement. The Subscription Rights will not be listed for trading on any stock exchange or market.

**Will our directors and executive officers participate in the Rights Offering?**

To the extent they hold common stock as of the Record Date, our directors and executive officers will be entitled to participate in the Rights Offering on the same terms and conditions applicable to other Rights holders. While none of our directors or executive officers has entered into any binding commitment or agreement to exercise Subscription Rights received in the Rights Offering, our directors and executive officers have indicated interests in subscribing for up to an aggregate of \$        million in the Rights Offering, subject to potential proration.

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**Has the board of directors made a recommendation to shareholders and warrant holders regarding the Rights Offering?**

No. Our board of directors is not making a recommendation regarding your exercise of the Subscription Rights. Stockholders and holders of the participating warrants who exercise Subscription Rights will incur investment risk on new money invested. We cannot predict the price at which our shares of common stock will trade after the Rights Offering. On June 17, 2016, the closing price of our common stock was \$5.79 per share. The market price for our common stock may be above the Subscription Price or may be below the Subscription Price. If you exercise your Subscription Rights, you may not be able to sell the underlying shares of our common stock or Warrants in the future at the same price or a higher price. You should make your decision based on your assessment of our business and financial condition, our prospects for the future, the terms of the Rights Offering and the information contained in this prospectus. See "Risk Factors" for discussion of some of the risks involved in investing in our securities.

**How do I exercise my Subscription Rights?**

If you are a shareholder of record (meaning you hold your shares of our common stock in your name and not through a broker, dealer, bank, or other nominee) or a holder of the participating warrants and you wish to participate in the Rights Offering, you must deliver a properly completed and signed Subscription Rights Statement, together with payment of the Subscription Price for both your Basic Subscription Rights and any Over-Subscription Privilege you elect to exercise, to the Subscription Agent before 5:00 PM Eastern Time, on July 19, 2016. If you are exercising your Subscription Rights through your broker, dealer, bank, or other nominee, you should promptly contact your broker, dealer, bank, or other nominee and submit your subscription documents and payment for the Units subscribed for in accordance with the instructions and within the time period provided by your broker, dealer, bank or other nominee.

**What if my shares are held in "street name"?**

If you hold your shares of our common stock in the name of a broker, dealer, bank, or other nominee, then your broker, dealer, bank, or other nominee is the record holder of the shares you own. The record holder must exercise the Subscription Rights on your behalf. Therefore, you will need to have your record holder act for you.

If you wish to participate in this Rights Offering and purchase Units, please promptly contact the record holder of your shares. We will ask the record holder of your shares, who may be your broker, dealer, bank, or other nominee, to notify you of this Rights Offering.

**What form of payment is required?**

You must timely pay the full Subscription Price for the full number of Units you wish to acquire pursuant to the exercise of Subscription Rights by delivering to the Subscription Agent a:

cashier's check drawn on a U.S. bank; or

wire transfer.

If you send a payment that is insufficient to purchase the number of Units you requested, or if the number of Units you requested is not specified in the forms, the payment received will be applied to exercise your Subscription Rights to the fullest extent possible based on the amount of the payment received.

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**When will I receive my new shares of common stock and Warrants?**

The Subscription Agent will arrange for the issuance of the common stock and Warrants as soon as practicable after the expiration of the Rights Offering, payment for the Units subscribed for has cleared, and all prorating calculations and reductions contemplated by the terms of the Rights Offering have been effected. All shares and Warrants that you purchase in the Rights Offering will be issued in book-entry, or uncertificated, form meaning that you will receive a direct registration (DRS) account statement from our transfer agent reflecting ownership of these securities if you are a holder of record of shares or warrants. If you hold your shares in the name of a broker, dealer, bank, or other nominee, DTC will credit your account with your nominee with the securities you purchase in the Rights Offering.

**When will I receive my Pre-Funded Warrants?**

If you elect to receive any Pre-Funded Warrants, the Subscription Agent will arrange for the issuance of the Pre-Funded Warrants as soon as practicable after the expiration of the Rights Offering, payment for the Units subscribed for has cleared, and all prorating calculations and reductions contemplated by the terms of the Rights Offering have been effected. All Pre-Funded Warrants will be issued in physical form.

**After I send in my payment and Subscription Rights Statement to the Subscription Agent, may I cancel my exercise of Subscription Rights?**

No. Exercises of Subscription Rights are irrevocable unless the Rights Offering is terminated, even if you later learn information that you consider to be unfavorable to the exercise of your Subscription Rights. You should not exercise your Subscription Rights unless you are certain that you wish to purchase Units at the Subscription Price.

**How much will our company receive from the Rights Offering?**

Assuming that all Units are sold in the Rights Offering, we estimate that the net proceeds from the Rights Offering will be approximately \$ million, based on the Subscription Price of \$ per Unit, after deducting fees and expenses payable to the dealer-manager, and after deducting other expenses payable by us and excluding any proceeds received upon exercise of any Warrants issued in the Rights Offering.

**Are there risks in exercising my Subscription Rights?**

Yes. The exercise of your Subscription Rights involves risks. Exercising your Subscription Rights involves the purchase of additional shares of our common stock and Warrants to purchase common stock and you should consider this investment as carefully as you would consider any other investment. We cannot assure you that the market price of our common stock will exceed the Subscription Price, nor can we assure you that the market price of our common stock will not further decline during or after the Rights Offering. We also cannot assure you that you will be able to sell shares of our common stock or Warrants purchased in the Rights Offering at a price equal to or greater than the Subscription Price. In addition, you should carefully consider the risks described under the heading "Risk Factors" for discussion of some of the risks involved in investing in our securities.

**Can the board of directors terminate or extend the Rights Offering?**

Yes. Our board of directors may decide to terminate the Rights Offering at any time and for any reason before the expiration of the Rights Offering. We also have the right to extend the Rights Offering for additional periods in our sole discretion. We do not presently intend to extend the Rights

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Offering. We will notify shareholders and warrant holders if the Rights Offering is terminated or extended by issuing a press release.

**If the Rights Offering is not completed or is terminated, will my subscription payment be refunded to me?**

Yes. The Subscription Agent will hold all funds it receives in a segregated bank account until completion of the Rights Offering. If we do not complete the Rights Offering, all subscription payments received by the Subscription Agent will be returned as soon as practicable after the termination or expiration of the Rights Offering, without interest or penalty. If you own shares in "street name," it may take longer for you to receive your subscription payment because the Subscription Agent will return payments through the record holder of your shares.

**How do I exercise my Rights if I live outside the United States?**

The Subscription Agent will hold Subscription Rights Statements for shareholders having addresses outside the United States. To exercise Subscription Rights, foreign shareholders must notify the Subscription Agent and timely follow other procedures described in the section entitled "The Rights Offering Foreign Shareholders."

**What fees or charges apply if I purchase shares in the Rights Offering?**

We are not charging any fee or sales commission to issue Subscription Rights to you or to issue shares or Warrants to you if you exercise your Subscription Rights. If you exercise your Subscription Rights through a broker, dealer, custodian bank, or other nominee, you are responsible for paying any fees your broker, dealer, bank, or other nominee may charge you.

**What are the U.S. federal income tax consequences of exercising my Subscription Rights?**

For U.S. federal income tax purposes, we do not believe you should recognize income or loss in connection with the receipt or exercise of Subscription Rights in the Rights Offering. You should consult your tax advisor as to the tax consequences of the Rights Offering in light of your particular circumstances. For a more detailed discussion, see "Material U.S. Federal Income Tax Consequences."

**To whom should I send my forms and payment?**

If your shares are held in the name of a broker, dealer, bank, or other nominee, then you should send your subscription documents and subscription payment to that broker, dealer, bank, or other nominee. If you are the record holder or a holder of participating warrants, then you should send your Subscription Rights Statement and payment of your subscription price to the Subscription Agent hand delivery, first class mail or courier service to:

*By Mail:*

**Wells Fargo Bank, N.A.  
Shareowner Services  
Voluntary Corporate Actions  
P.O. Box 64858  
St. Paul, Minnesota 55164-0858**

*By Hand or Overnight Courier:*

**Wells Fargo Bank, N.A.  
Shareowner Services  
Voluntary Corporate Actions**

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**1110 Centre Pointe Curve, Suite 101  
Mendota Heights, Minnesota 55120**

You or, if applicable, your nominee are solely responsible for completing delivery to the Subscription Agent of your subscription documents, Subscription Rights Statement and payment. You should allow sufficient time for delivery of your subscription materials to the Subscription Agent before the expiration of the Rights Offering at 5:00 PM Eastern Time on July 19, 2016.

**Whom should I contact if I have other questions?**

If you have other questions or need assistance, please contact the dealer-manager for the Rights Offering:

**Maxim Group LLC  
405 Lexington Avenue  
New York, New York 10174  
Attention Syndicate Department  
Email: [syndicate@maximgrp.com](mailto:syndicate@maximgrp.com)  
Telephone: (212) 895-3745**

**Who is the dealer-manager?**

Maxim Group LLC will act as dealer-manager for the Rights Offering. Under the terms and subject to the conditions contained in the dealer-manager agreement, the dealer-manager will use its best efforts to solicit the exercise of Subscription Rights. We have agreed to pay the dealer-manager certain fees for acting as dealer-manager and to reimburse the dealer-manager for certain out-of-pocket expenses incurred in connection with this offering. The dealer-manager is not underwriting or placing any of the Subscription Rights or the Units, shares of common stock or Warrants being issued in this offering, and does not make any recommendation with respect to such Subscription Rights (including with respect to the exercise or expiration of such Subscription Rights), Units, shares of common stock or Warrants. See "Plan of Distribution" for a discussion of the fees and expenses to be paid to the dealer-manager in connection with this Rights Offering.

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**PROSPECTUS SUMMARY**

*The items in the following summary are described in more detail later in this prospectus and in the documents we incorporate by reference. This summary provides an overview of selected information and does not contain all of the information you should consider. Before investing in our common stock, you should read the entire prospectus carefully, including the information set forth under the headings "Risk Factors "and the consolidated financial statements and related notes and additional information included or incorporated by reference in this prospectus.*

**OUR COMPANY**

**Our Business**

Onconova Therapeutics, Inc., sometimes referred to as "we" or the "Company," is a clinical-stage biopharmaceutical company focused on discovering and developing novel small molecule drug candidates to treat cancer. Using our proprietary chemistry platform, we have created an extensive library of targeted anti-cancer agents designed to work against cellular pathways important to cancer cells. We believe that the drug candidates in our pipeline have the potential to be efficacious in a variety of cancers. We have one Phase 3 clinical-stage product candidate and two other clinical-stage product candidates (one of which is being developed for treatment of acute radiation syndromes) and several preclinical programs. Substantially all of our current effort is focused on our lead product candidate, rigosertib. Rigosertib is being tested in both intravenous and oral formulations as a single agent, and the oral formulation is also being tested in combination with azacitidine, in clinical trials for patients with myelodysplastic syndromes, or MDS, and related cancers.

In December 2015, we enrolled the first patient in a randomized controlled Phase 3 clinical trial of rigosertib IV in a population of patients with higher-risk MDS after failure of hypomethylating agent, or HMA, therapy. The trial, which we refer to as INSPIRE, is expected to enroll approximately 225 patients at more than 100 sites globally. The primary endpoint of INSPIRE is overall survival, and an interim analysis is anticipated. We anticipate reporting topline data from the INSPIRE trial in 2018.

In the first quarter of 2016, we took significant actions to conserve cash, including reduction in personnel and expenditures. While we will continue to take cash conservation actions where appropriate, our costs will increase in subsequent quarters as more INSPIRE sites open and more patients enroll in the INSPIRE trial. We believe that our cash and cash equivalents, prior to our receipt of any proceeds from this Rights Offering, together with anticipated contractual cost-sharing payments from Baxalta GmbH, or Baxalta, for a portion of the INSPIRE trial costs, will be sufficient to fund our ongoing trials and operations into the first quarter of 2017.

We are exploring various sources of funding for continued development of rigosertib in MDS and acute myelogenous leukemia, or AML, as well as our ongoing operations. Completion of the Rights Offering is not subject to us raising a minimum offering amount and therefore the net proceeds from the Rights Offering may be insufficient to meet our objectives. Even if we sell all of the Units subject to the Rights Offering, we will need to obtain additional financing in the future in order to fully fund rigosertib or any other product candidates through the regulatory approval process.

Due to our ongoing losses and our accumulated deficit in combination with other factors, the opinion of our independent registered public accounting firm on our audited consolidated financial statements for our fiscal year ended December 31, 2015 contains an explanatory paragraph regarding substantial doubt about our ability to continue as a going concern. Even if we sell all of the Units subject to the Rights Offering, if we are unable to obtain sufficient additional funding, through future financings or through strategic and collaborative transactions and arrangements, we may not have sufficient resources to complete our INSPIRE trial and we may continue to delay, scale-back or



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eliminate certain of our planned research, drug discovery and development activities and certain other aspects of our operations, or we may not be able to continue as a going concern.

***Rigosertib***

Rigosertib is a small molecule that inhibits cellular signaling by acting as a Ras mimetic. This is believed to be mediated by the binding of rigosertib to the Ras-binding domain, or RBD, found in many Ras effector proteins, including the Raf and PI3K kinases. This mechanism of action provides a new approach to block the interactions between Ras and its targets containing RBD sites. Rigosertib is being tested as a single agent and in combination with azacitidine, in clinical trials of patients with MDS and related cancers. We have enrolled more than 1,200 patients in rigosertib clinical trials. We are a party to a license and development agreement with Baxalta, which granted Baxalta certain rights to commercialize rigosertib in Europe. The Baxalta agreement is scheduled to terminate August 30, 2016, at which time the European rights will revert to us at no cost. We are also party to a collaboration agreement with SymBio Pharmaceuticals Limited, or SymBio, which grants SymBio certain rights to commercialize rigosertib in Japan and Korea. We have retained development and commercialization rights to rigosertib in the rest of the world, including in the United States, although we will consider licensing commercialization rights to other territories as a source of additional funding.

***Rigosertib IV for higher-risk MDS***

In early 2014, we announced topline survival results from our "ONTIME" trial, a multi-center Phase 3 clinical trial of rigosertib IV as a single agent. The ONTIME trial did not meet its primary endpoint in the intent-to-treat population, although improvements in median overall survival were observed in various pre-specified and exploratory subgroups of higher-risk MDS patients.

During 2014 and 2015, we held meetings with the U.S. Food and Drug Administration, or FDA, European Medicines Agency, or EMA, and several European national regulatory authorities to discuss and seek guidance on a path for approval of rigosertib IV in higher-risk MDS patients whose disease had failed HMA therapy. After discussions with the FDA and EMA, we refined our patient eligibility criteria by defining a more homogenous patient population. After regulatory feedback, input from key opinion leaders in the U.S. and Europe and based on learnings from the ONTIME study, we designed a new randomized controlled Phase 3 trial, referred to as INSPIRE, with overall survival as a primary endpoint. The INSPIRE trial is enrolling higher-risk MDS patients under 80 years of age who have progressed on, or failed to respond to, previous treatment with HMAs within the first nine months after initiation of HMA therapy, and had their last dose of HMA within six months prior to enrollment in the trial. The primary endpoint of this study is overall survival, and an interim analysis is anticipated. This randomized trial of approximately 225 patients is expected to be conducted at more than 100 sites globally. In August 2015, we submitted an updated investigational new drug application, or IND, to the FDA, and in August 2015 we submitted Clinical Trial Applications, or CTAs, with the United Kingdom, German and Austrian regulatory authorities for IV rigosertib as a treatment for higher-risk MDS after failure of HMA therapy. The first CTA has been cleared by the Medicines and Healthcare products Regulatory Agency. The first patient in the INSPIRE trial was enrolled at the MD Anderson Cancer Center in December 2015 and, as of May 18, 2016, 59 clinical sites are open (43 in the U.S. and Europe and 16 in Japan) and can recruit patients. The first patient in Europe was enrolled on March 18, 2016.

***Rigosertib oral in combination with azacitidine for MDS and AML***

We have completed enrollment in the Phase 2 portion of an open label Phase 1/2 clinical trial testing rigosertib oral in combination with the approved dose of injectable azacitidine for patients with higher-risk MDS and AML. This study is based on our published preclinical data demonstrating synergistic activity of this combination. The Phase 2 portion of the trial was designed to assess whether

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treatment with rigosertib, in combination with the approved dose of injectable azacitidine, reduces the number of bone marrow blasts, improves peripheral blood counts and can resensitize the marrow blast cells to azacitidine for patients who were previously exposed to azacitidine. Patient enrollment in the Phase 2 portion of this trial was completed in the fourth quarter of 2015 and interim data were summarized by way of an oral presentation at the ASH Annual Meeting in December 2015.

The Phase 2 trial included both front-line MDS patients (that is, patients not previously treated with HMAs) and MDS patients whose disease had failed prior HMA therapy (second-line patients). The presentation at ASH included results from a total of 37 MDS patients treated with the recommended Phase 2 dose of oral rigosertib (560 mg AM/280 mg PM) plus the full standard dose of injectable azacitidine. The combination of oral rigosertib and azacitidine was generally well tolerated, with a median duration of treatment of four months (range 1 to 27 months).

At the time of the presentation, 30 MDS patients were evaluable for efficacy assessment per 2006 IWG, criteria. Twenty-three of 30 patients (77%) responded to the combination therapy, including six patients who had complete remissions. Hematologic improvement was observed in 13 of 26 patients that were evaluable for this part of the analysis. Notably, 16 of 19 (84%) HMA-naïve patients had a response to the combination therapy and 7 of 11 (64%) patients whose disease had previously failed HMAs responded. As of December 2015, the median duration of these responses had not yet been reached. Additional data collection for efficacy and safety continues for the patients remaining on study and may impact the final results of the trial. Updated data from the Phase 2 Trial is expected to be presented at the European Hematology Association Meeting in June 2016.

*Rigosertib oral for lower-risk MDS*

Higher-risk MDS patients suffer from a shortfall in normal circulating blood cells, or cytopenias, as well as elevated levels of cancer cells, or blasts in their bone marrow and peripheral blood, whereas lower-risk MDS patients suffer mainly from cytopenias, that is low levels of red blood cells, white blood cells and/or platelets. Thus, lower-risk MDS patients depend on transfusions and growth factors or other therapies to improve their low blood counts.

We have explored single agent rigosertib oral as a treatment for lower-risk MDS in two Phase 2 clinical trials, 09-05 and 09-07. In December 2013, we presented data at the Annual ASH Meeting from the 09-05 Phase 2 trial. To date, Phase 2 clinical data have shown encouraging signs of efficacy of single agent oral rigosertib in transfusion-dependent, lower-risk MDS patients. Rigosertib has been generally well tolerated, except for urinary side effects at higher dose levels. Additional clinical testing will be needed to evaluate dosing and schedule modifications and their impact on efficacy and toxicity of oral rigosertib in lower-risk MDS patients.

Data presented from the 09-05 trial also suggested the potential of a genomic methylation assessment of bone marrow cells to prospectively identify lower-risk MDS patients likely to respond to oral rigosertib. We therefore expanded the 09-05 trial by adding an additional cohort of 20 patients to advance the development of this genomic methylation test. Enrollment in this expansion cohort has been completed. We are working with academic collaborators to refine this genomic methylation test.

*Other Programs*

The vast majority of the Company's efforts are now devoted to the advanced stage development of rigosertib for unmet medical needs of MDS patients. Other programs are either paused, inactive or require only minimal internal resources and efforts.

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*Briciclib*

Briciclib, another of our product candidates, is a small molecule targeting an important intracellular regulatory protein, cyclin D1, which is often found at elevated levels in cancer cells. Cyclin D1 expression is regulated through a process termed cap-dependent translation, which requires the function of eukaryotic initiation factor 4E protein, or eIF4E. In vitro evidence indicates briciclib binds to eIF4E, blocking cap-dependent translation of cyclin D1 and other cancer proteins, such as c-MYC, leading to tumor cell death. We have been conducting a Phase 1 multisite dose-escalation trial of briciclib in patients with advanced solid tumors refractory to current therapies. Safety and efficacy assessments are complete in six of the seven dose-escalation cohorts of patients in this trial. As of December 2015, the briciclib IND is on full clinical hold following a drug product lot testing failure. If we elect to continue development of briciclib, we would be required to undertake appropriate remedial actions prior to re-initiating the clinical trial and completing the final dose-escalation cohort.

*Recilisib*

Recilisib is a product candidate being developed in collaboration with the U.S. Department of Defense for acute radiation syndromes. We have completed four Phase 1 trials to evaluate the safety and pharmacokinetics of recilisib in healthy human adult subjects using both subcutaneous and oral formulations. We have also conducted animal studies and clinical trials of recilisib under the FDA's Animal Efficacy Rule, which permits marketing approval for new medical countermeasures for which conventional human efficacy studies are not feasible or ethical, by relying on evidence from studies in appropriate animal models to support efficacy in humans. Ongoing studies of recilisib, focusing on animal models and biomarker development to assess the efficacy of recilisib are being conducted by third parties with government funding. We anticipate that any future development of recilisib beyond these ongoing studies would be conducted solely with government funding or by collaboration.

*Preclinical Product Candidates*

In addition to our three clinical-stage product candidates, we have several product candidates that target kinases, cellular metabolism or cell division in preclinical development. We may explore additional collaborations to further the development of these product candidates as we focus internally on our more advanced programs. We presented data related to ON 0123300, our novel inhibitor of ARK5 and CDK4/6 at the American Association of Cancer Research (AACR) conference in April, 2016.

**Recent Developments**

We effected a one-for-ten reverse stock split of our common stock as of 5:00 PM Eastern Time on May 31, 2016. All share and per share data has been restated to reflect the one-for-ten reverse stock split.

**Corporate Information**

We were incorporated in Delaware in December 1998 and commenced operations in January 1999. Our principal executive offices are located at 375 Pheasant Run, Newtown, Pennsylvania 18940, and our telephone number is (267) 759-3680. Our website address is [www.onconova.com](http://www.onconova.com). The information on, or that can be accessed through, our website is not part of this prospectus.

**Implications of Being an Emerging Growth Company**

We qualify as an "emerging growth company" as defined in the Jumpstart our Business Startups Act of 2012, or the JOBS Act. An emerging growth company may take advantage of specified reduced

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reporting requirements and is relieved of certain other significant requirements that are otherwise generally applicable to public companies. As an emerging growth company,

we may present only two years of audited financial statements and only two years of related Management's Discussion & Analysis of Financial Condition and Results of Operations;

we are exempt from the requirement to obtain an attestation and report from our auditors on the assessment of our internal control over financial reporting pursuant to the Sarbanes-Oxley Act of 2002;

we are permitted to provide less extensive disclosure about our executive compensation arrangements;

we are not required to give our stockholders non-binding advisory votes on executive compensation or golden parachute arrangements; and

we have elected to use an extended transition period for complying with new or revised accounting standards.

We may take advantage of these provisions until July 24, 2018. However, if certain events occur prior to such date, including if we become a "large accelerated filer," our annual gross revenues exceed \$1.0 billion or we issue more than \$1.0 billion of non-convertible debt in any three-year period, we will cease to be an emerging growth company.

Table of Contents**SUMMARY CONSOLIDATED FINANCIAL DATA**

The following summary consolidated statements of operations data for the years ended December 31, 2015 and 2014 and the consolidated balance sheet data as of December 31, 2015, have been derived from our audited consolidated financial statements that are included in the documents incorporated by reference into this prospectus. The summary historical financial information as of and for the three months ended March 31, 2016 has been derived from our unaudited consolidated financial statements that are included in the documents incorporated by reference into this prospectus. The unaudited financial information as of and for the three months ended March 31, 2016 has been prepared on the same basis as our audited financial statements and includes, in the opinion of management, all adjustments, consisting of only normal recurring adjustments, necessary to fairly present the data for such periods. All share and per share data has been restated to reflect our one-for-ten reverse stock split effective May 31, 2016. The historical financial data presented below is not necessarily indicative of our financial results in future periods. You should read the summary consolidated financial data in conjunction with those financial statements and the accompanying notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the documents incorporated by reference into this prospectus. Our consolidated financial statements are prepared and presented in accordance with United States generally accepted accounting principles, or U.S. GAAP.

**Condensed Consolidated Statements of Operations Data:**

	<b>For the Years ended December 31,</b>		<b>For the three months ended March 31, 2016</b>
	<b>2015</b>	<b>2014</b>	
Revenue	\$ 11,456,000	\$ 800,000	\$ 1,474,000
Operating expenses:			
General and administrative	9,533,000	15,119,000	3,172,000
Research and development	25,895,000	49,425,000	5,822,000
Total operating expenses	35,428,000	64,544,000	8,994,000
Loss from operations	(23,972,000)	(63,744,000)	(7,520,000)
Change in fair value of warrant liability		20,000	271,000
Other income (expense), net	(35,000)	(52,000)	9,000
Net loss before income taxes	(24,007,000)	(63,776,000)	(7,240,000)
Income taxes	16,000	19,000	
Net loss	(24,023,000)	(63,795,000)	(7,240,000)
Net loss attributable to non-controlling interest	44,000	113,000	
Net loss attributable to Onconova Therapeutics, Inc	(23,979,000)	(63,682,000)	\$ (7,240,000)
Net loss per share of common stock, basic and diluted	\$ (10.54)	\$ (29.41)	\$ (2.65)
Basic and diluted weighted average shares outstanding	2,273,976	2,165,354	2,731,590



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(Stockholders' equity numbers have 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)

	December 31, 2015	March 31, 2016
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 19,799,000	\$ 16,835,000
Receivables	1,504,000	1,368,000
Prepaid expenses and other current assets	1,832,000	1,153,000
Restricted cash	50,000	50,000
<b>Total current assets</b>	<b>23,185,000</b>	<b>19,406,000</b>
Property and equipment, net	248,000	224,000
Other non-current assets	12,000	12,000
<b>Total assets</b>	<b>\$ 23,445,000</b>	<b>\$ 19,642,000</b>
<b>Liabilities and stockholders' equity</b>		
Current liabilities:		
Accounts payable	\$ 3,421,000	\$ 3,296,000
Accrued expenses and other current liabilities	3,729,000	3,891,000
Deferred revenue	455,000	455,000
<b>Total current liabilities</b>	<b>7,605,000</b>	<b>7,642,000</b>
Warrant liability		295,000
Deferred revenue, non-current	5,000,000	4,886,000
<b>Total liabilities</b>	<b>12,605,000</b>	<b>12,823,000</b>
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, \$0.01 par value, 5,000,000 authorized at March 31, 2016 and December 31, 2015, none issued and outstanding at March 31, 2016 and December 31, 2015		
Common stock, \$0.01 par value, 25,000,000 authorized at March 31, 2016 and December 31, 2015, 2,740,212 and 2,546,419 shares issued	25,000	27,000
Additional paid-in capital	328,564,000	331,775,000
Accumulated other comprehensive loss	(22,000)	(16,000)
Accumulated deficit	(318,557,000)	(325,797,000)
<b>Total Onconova Therapeutics, Inc. stockholders' equity</b>	<b>10,010,000</b>	<b>5,989,000</b>
Non-controlling interest	830,000	830,000
<b>Total stockholders' equity</b>	<b>10,840,000</b>	<b>6,819,000</b>
<b>Total liabilities and stockholders' equity</b>	<b>\$ 23,445,000</b>	<b>\$ 19,642,000</b>

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**SUMMARY OF THE RIGHTS OFFERING**

**Securities to be offered**

We are distributing to you, at no charge, one non-transferable Subscription Right to purchase one Unit for every share of our common stock that you owned on the Record Date, either as a holder of record or, in the case of shares held of record by brokers, banks, or other nominees, on your behalf, as a beneficial owner of such shares. Each Unit consists of \_\_\_\_\_ share of common stock and \_\_\_\_\_ Warrant representing the right to purchase one share of common stock at an exercise price of \$ \_\_\_\_\_ per share, 120% of the per Unit price.

For certain investors whose subscriptions may result in the purchaser beneficially owning more than 4.99% of our outstanding common stock, such investors may elect to receive in the Rights Offering, in lieu of shares of common stock, certain pre-funded warrants (which we refer to as the Pre-Funded Warrants) to purchase the same amount of shares of common stock. If you do not wish to exceed the ownership threshold, you may elect to receive a Pre-Funded Warrant in lieu of any share of common stock underlying the Units for which you have subscribed. You will not be eligible to elect to receive Pre-Funded Warrants, except to the extent that your beneficial ownership could exceed 4.99% of the shares of common stock outstanding following the consummation of the Rights Offering. Each Pre-Funded Warrant will have an exercise price of \$0.01, and the subscription price per Unit for any such electing investors will be reduced to \$ \_\_\_\_\_ (which equals the Subscription Price for the other Units sold in the Rights Offering, less the \$0.01 exercise price for each Pre-Funded Warrant). The Pre-Funded Warrants do not confer upon the holder any voting or any other rights of a shareholder of the Company.

Holders of our currently outstanding participating warrants will also be entitled, pursuant to the terms of such warrants, to receive one Subscription Right to purchase one Unit for every share of common stock as if each of such participating warrants had been exercised immediately prior to the record date for the Rights Offering.

**Size of offering**

\_\_\_\_\_ Units, each consisting of \_\_\_\_\_ share of common stock and \_\_\_\_\_ Warrant representing the right to purchase one share of common stock at an exercise price of \$ \_\_\_\_\_ per share, 120% of the per Unit price.

**Subscription Price Warrants**

\$ \_\_\_\_\_ per Unit. Each Warrant entitles the holder to purchase one share of common stock at an exercise price of \$ \_\_\_\_\_ per share, 120% of the per Unit price, from the date of issuance through its expiration on \_\_\_\_\_, 2021. The Warrants will be exercisable by paying the exercise price in cash, or, solely during any period when a registration statement for the exercise of the Warrants is not in effect, exercisable on a



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cashless basis. We intend to apply to list the Warrants on NASDAQ under the symbol "ONTXW," although there is no assurance that a sufficient number of Subscription Rights will be exercised so that the Warrants will meet the minimum listing criteria to be accepted for listing on NASDAQ. 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 \$ \_\_\_\_\_ per share, 300% of the exercise price, for each of 10 consecutive trading days.

**Pre-Funded Warrants**

Each Pre-Funded Warrant entitles the holder to purchase one share of common stock at an exercise price of \$0.01 per share, and the subscription price per Unit for any such electing investors will be reduced to \$ \_\_\_\_\_ (which equals the Subscription Price for the other Units sold in the Rights Offering, less the \$0.01 exercise price for each Pre-Funded Warrant). Each Pre-Funded Warrant will be exercisable from the date of issuance through its expiration on \_\_\_\_\_, 2021. The Pre-Funded Warrants will be exercisable by paying the exercise price in cash or on a cashless basis. The Pre-Funded Warrants will not be listed for trading on any stock exchange or market. The Pre-Funded Warrants do not confer upon the holder any voting or any other rights of a shareholder of the Company. See "Description of Securities Pre-Funded Warrants Issuable in the Rights Offering."

**Record Date**

5:00 PM Eastern Time, July 5, 2016.

**Subscription Right**

Each Subscription Right consists of a Basic Subscription Right and an Over-Subscription Privilege.

**Basic Subscription Rights**

Basic Subscription Right will entitle you to purchase one Unit at the Subscription Price.

**Over-Subscription Privilege**

If you exercise your Basic Subscription Rights in full, you may also choose to purchase a portion of any Units that are not purchased by our other shareholders or holders of participating warrants through the exercise of their Basic Subscription Rights. You may subscribe for additional Units pursuant to this Over-Subscription Privilege, subject to proration described elsewhere.

**Expiration date**

The Subscription Rights will expire at 5:00 PM Eastern Time, on July 19, 2016. We reserve the right to extend the expiration date in our sole discretion.

**Procedure for exercising Subscription Rights**

To exercise your Subscription Rights, you must take the following steps:

If you are a record holder of our common stock or a holder of participating warrants, you must deliver payment and a properly completed Subscription Rights Statement to the Subscription Agent to be received before 5:00 PM Eastern Time, on July 19, 2016. You may deliver the documents and

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	payments by first class mail or courier service. If you use first class mail for this purpose, we recommend using registered mail, properly insured, with return receipt requested.
	If you are a beneficial owner of shares that are registered in the name of a broker, dealer, custodian bank, or other nominee, you should instruct your broker, dealer, custodian bank, or other nominee to exercise your Subscription Rights on your behalf. Please follow the instructions of your nominee, who may require that you meet a deadline earlier than 5:00 PM Eastern Time, on July 19, 2016.
<b>Delivery of shares and Warrants</b>	As soon as practicable after the expiration of the Rights Offering, the Subscription Agent will arrange for the issuance of the shares of common stock and Warrants purchased pursuant to the Rights Offering. All shares and Warrants that are purchased in the Rights Offering will be issued in book-entry, or uncertificated, form meaning that you will receive a direct registration (DRS) account statement from our transfer agent reflecting ownership of these securities if you are a holder of record of shares or warrants. If you hold your shares in the name of a custodian bank, broker, dealer, or other nominee, DTC will credit your account with your nominee with the securities you purchased in the Rights Offering.
<b>Non-transferability of Subscription Rights</b>	The Subscription Rights may not be sold, transferred, assigned or given away to anyone. The Subscription Rights will not be listed for trading on any stock exchange or market.
<b>Transferability of Warrants</b>	The Warrants will be separately transferable following their issuance and through their expiration five years from the issuance date.
<b>No board recommendation</b>	Our board of directors is not making a recommendation regarding your exercise of the Subscription Rights. You are urged to make your decision to invest based on your own assessment of our business and the Rights Offering. Please see "Risk Factors" for a discussion of some of the risks involved in investing in our securities.
<b>Directors and Officers</b>	While none of our directors or executive officers has entered into any binding commitment or agreement to exercise Subscription Rights received in the Rights Offering, our directors and executive officers have indicated interests in subscribing for up to an aggregate of \$ million in the Rights Offering, subject to potential proration.
<b>No revocation</b>	All exercises of Subscription Rights are irrevocable, even if you later learn of information that you consider to be unfavorable to the exercise of your Subscription Rights.
<b>Use of proceeds</b>	We intend to use the net proceeds from this Rights Offering to continue funding INSPIRE, our ongoing Phase 3 clinical trial of rigosertib IV in a population of patients with

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	higher-risk MDS after failure of HMA therapy, and, to a lesser extent, for other development of our clinical and preclinical programs, other research and development activities, business development and general corporate purposes, which may include capital expenditures and funding our working capital needs. See "Use of Proceeds."
<b>Material U.S. federal income tax consequences</b>	For U.S. federal income tax purposes, we do not believe you should recognize income or loss upon receipt or exercise of a Subscription Right. You should consult your own tax advisor as to the tax consequences of the Rights Offering in light of your particular circumstances. See "Material U.S. Federal Income Tax Consequences."
<b>Extension and termination</b>	Although we do not presently intend to do so, we may extend the Rights Offering for additional time in our sole discretion. Our board of directors may for any reason terminate the Rights Offering at any time before the completion of the Rights Offering.
<b>Subscription Agent Questions</b>	Wells Fargo Bank, N.A. If you have any questions about the Rights Offering, please contact the dealer-manager, Maxim Group LLC, at 405 Lexington Avenue, New York, New York 10174, Attention Syndicate Department, email: syndicate@maximgrp.com or telephone: (212) 895-3745.
<b>Market for common stock</b>	Our common stock is listed on NASDAQ under the symbol "ONTX." See "Market Price of our Common Stock and Related Stockholder Matters."
<b>Risk factors</b>	Before you exercise your Subscription Rights to purchase Units, you should be aware that there are risks associated with your investment, and you should carefully read and consider risks described in the section captioned "Risk Factors" together with all of the other information included in this prospectus.
<b>Dealer-Manager Distribution arrangements</b>	Maxim Group LLC. Under the terms and subject to the conditions contained in the dealer-manager agreement, the dealer-manager will use its best efforts to solicit the exercise of Subscription Rights. We have agreed to pay the dealer-manager certain fees for acting as dealer-manager and to reimburse the dealer-manager for certain out-of-pocket expenses incurred in connection with this offering. The dealer-manager is not underwriting or placing any of the Subscription Rights or the Units, shares of common stock or Warrants being issued in this offering, and does not make any recommendation with respect to such Subscription Rights (including with respect to the exercise or expiration of such Subscription Rights), Units, shares of common stock or Warrants. See "Plan of Distribution" for a discussion of the fees and expenses to be paid to the dealer-manager.

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**RISK FACTORS**

*Our business is influenced by many factors that are difficult to predict, and that involve uncertainties that may materially affect actual operating results, cash flows and financial condition. Before making an investment decision, you should carefully consider these risks, including those set forth below and those described in the "Risk Factors" section of our most recent Annual Report on Form 10-K, filed with the Commission on March 28, 2016, as revised or supplemented by our Quarterly Reports on Form 10-Q filed with the SEC since the filing of our most recent Annual Report on Form 10-K, each of which is incorporated by reference into this prospectus, and you should also carefully consider any other information we include or incorporate by reference in this prospectus.*

*Any of the risks we describe below or in the information incorporated herein by reference in this prospectus could cause our business, financial condition or operating results to suffer. The market price of our common stock could decline if one or more of these risks and uncertainties develop into actual events. You could lose all or part of your investment.*

**Risks Related to the Rights Offering**

***We will incur substantial expenses in connection with the Rights Offering, which may not return adequate value if the Rights Offering is ultimately not consummated or successful.***

The estimated expenses for the Rights Offering are approximately \$446,141, excluding fees and expenses of the dealer-manager that we have engaged to assist us with the Rights Offering. If the registration statement of which this prospectus is a part is not declared effective, the Rights Offering is not commenced or the Rights Offering is not ultimately consummated or successful, we will incur these expenses nonetheless. 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."

***Your interest in our company may be diluted as a result of this Rights Offering.***

Shareholders who do not fully exercise their Subscription Rights should expect that they will, at the completion of this offering, own a smaller proportional interest in our company than would otherwise be the case had they fully exercised their Basic Subscription Right and Over-Subscription Privilege. Further, the shares issuable upon the exercise of the Warrants to be issued pursuant to the Rights Offering will dilute the ownership interest of shareholders not participating in this offering or holders of Warrants issued pursuant to this offering who have not exercised them.

Further, because the price per Unit being offered may be substantially higher than the net tangible book value per share of our common stock, you may suffer substantial dilution in the net tangible book value of the common stock you purchase in this offering. If you purchase Units in this offering at the Subscription Price, you may suffer immediate and substantial dilution in the net tangible book value of the common stock. See "Dilution" in this prospectus for a more detailed discussion of the dilution which may incur in connection with this offering.

***Completion of the Rights Offering is not subject to us raising a minimum offering amount and we will still need additional funding to carry out our proposed operating activities, including our INSPIRE trial, after the Rights Offering.***

Completion of the Rights Offering is not subject to us raising a minimum offering amount and therefore the net proceeds from the Rights Offering may be insufficient to meet our objectives, thereby

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increasing the risk to investors in this offering, including investing in a company that continues to require capital. Even if we sell all of the Units subject to the Rights Offering, we will need to obtain additional financing in the future in order to fully fund rigosertib or any other product candidates through the regulatory approval process.

Due to our ongoing losses and our accumulated deficit in combination with other factors, the opinion of our independent registered public accounting firm on our audited consolidated financial statements for our fiscal year ended December 31, 2015 contains an explanatory paragraph regarding substantial doubt about our ability to continue as a going concern. Even if we sell all of the Units subject to the Rights Offering, if we are unable to obtain sufficient additional funding, through future financings or through strategic and collaborative transactions and arrangements, we may not have sufficient resources to complete our INSPIRE trial and we may continue to delay, scale-back or eliminate certain of our planned research, drug discovery and development activities and certain other aspects of our operations, or we may not be able to continue as a going concern.

***This Rights Offering may cause the trading price of our common stock to decrease.***

The Subscription Price, together with the number of shares of common stock we propose to issue and ultimately will issue if this Rights Offering is completed, may result in an immediate decrease in the market price of our common stock. This decrease may continue after the completion of this Rights Offering. If that occurs, you may have committed to buy shares of common stock in the Rights Offering at a price greater than the prevailing market price. We cannot predict the effect, if any, that the availability of shares for future sale represented by the Warrants issued in connection with the Rights Offering, or the ability to trade the Warrants themselves, will have on the market price of our common stock from time to time. Further, if a substantial number of Subscription Rights are exercised and the holders of the shares received upon exercise of those Subscription Rights or the related Warrants choose to sell some or all of the shares underlying the Subscription Rights or the related Warrants, the resulting sales could depress the market price of our common stock. Following the exercise of your Subscription Rights you may not be able to sell your common stock at a price equal to or greater than the Subscription Price.

***Because the exercise of your Subscription Rights is not revocable, you could be committed to buying shares of common stock above the prevailing market price.***

Once you exercise your Subscription Rights, you may not revoke such exercise even if you later learn information that you consider to be unfavorable to the exercise of your Subscription Rights. The market price of our shares of common stock may decline prior to the expiration of this offering or a Subscribing Rights holder may not be able to sell shares of common stock purchased in this offering at a price equal to or greater than the Subscription Price. Until shares of our common stock are delivered upon expiration of the Rights Offering, you will not be able to sell or transfer the shares of our common stock that you purchase in the Rights Offering. Any such delivery will occur as soon as practicable after the Rights Offering has expired, payment for the shares of common stock and attached Warrants subscribed for has cleared, and all prorating calculations and reductions contemplated by the terms of the Rights Offering have been effected.

***If we terminate this offering for any reason, we will have no obligation other than to return subscription monies as soon as practicable.***

We may decide, in our sole discretion and for any reason, to cancel or terminate the Rights Offering at any time prior to the expiration date. If this offering is cancelled or terminated, we will have no obligation with respect to Subscription Rights that have been exercised except to return as soon as practicable, without interest, the subscription payments deposited with the Subsc