

PROSPECTUS



Onconova Therapeutics, Inc.

Up to 30,250,000 Units (each Unit contains one share of Common Stock and one Warrant to purchase one share of Common Stock)

Up to 24,750,000 Pre-Funded Units (each Pre-Funded Unit contains one Pre-Funded Warrant to purchase one share of Common Stock and one Warrant to purchase one share of Common Stock)

(Up to 24,750,000 shares of Common Stock Underlying the Pre-Funded Warrants) and

(Up to 55,000,000 shares of Common Stock Underlying the Warrants)

We are offering up to 30,250,000 Units ("Units," each Unit consisting of one share of Common Stock, par value \$0.01 per share ("Common Stock") and one warrant (the "Warrant") to purchase one share of Common Stock. Each Warrant contained in a Unit has an exercise price of \$0.20 per one share of Common Stock, representing 100% of the public offering price of a Unit. The Warrants contained in the Units will be exercisable immediately and will expire five years from the date of issuance.

We are also offering the shares of Common Stock that are issuable from time to time upon exercise of the Warrants contained in the Units.

We are also offering to each purchaser whose purchase of Units in this offering would otherwise result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% of our outstanding Common Stock immediately following the consummation of this offering, 24,750,000 pre-funded units ("Pre-Funded Units," each Pre-Funded Unit consisting of one Pre-Funded Warrant ("Pre-Funded Warrant") to purchase one share of Common Stock and one Warrant to purchase one share of Common Stock) in lieu of Units that would otherwise result in the purchaser's beneficial ownership exceeding 4.99% of our outstanding Common Stock (or at the election of the purchaser, 9.99%). Each Pre-Funded Warrant contained in a Pre-Funded Unit will be exercisable into one share of Common Stock. The purchase price of each Pre-Funded Unit will equal the price per Unit being sold to the public in this offering minus \$0.0001, and the exercise price of each Pre-Funded Warrant included in the Pre-Funded Unit will be \$0.0001 per share of Common Stock. This offering also relates to the shares of Common Stock issuable upon exercise of any Pre-Funded Warrants contained in the Pre-Funded Units sold in this offering. Each Warrant contained in a Pre-Funded Unit has an exercise price of \$0.20 per share of Common Stock, representing 100% of the public offering price of a Unit. The Warrants contained in the Pre-Funded Units will be exercisable immediately and will expire five years from the date of issuance. We are also offering the shares of Common Stock that are issuable from time to time upon exercise of the Warrants contained in the Pre-Funded Units.

Our Common Stock is listed on the Nasdaq Capital Market under the symbol "ONTX." On November 20, 2019, the last reported sale price of Common Stock on the Nasdaq Capital Market was \$0.30 per share. We do not intend to apply for listing of the Pre-Funded Warrants or Warrants on any securities exchange or other nationally recognized trading system. There is no established public trading market for the Pre-Funded Warrants or Warrants, and we do not expect a market to develop.

The Units and the Pre-Funded Units will not be issued or certificated. The shares of Common Stock or Pre-Funded Warrants, as the case may be, and the Warrants can only be purchased together in this offering but the securities contained in the Units or Pre-Funded Units will be issued separately.

While none of our directors or executive officers has entered into any binding commitment or agreement to purchase Units sold in this offering, our directors and executive officers have indicated interests in subscribing for up to an aggregate of approximately one percent (1%) of the total offering price of the Units, subject to potential proration.

You should rely only on the information contained herein or incorporated by reference in this prospectus. We have not authorized any other person to provide you with different information.

Investing in our securities involves risks. See "Risk Factors" beginning on page 8 of this prospectus and in the documents incorporated by reference into this prospectus.

	Per Unit	Per Pre-Funded Unit	Total
Public offering price	\$ 0.20	\$ 0.1999	\$ 10,997,525
Placement agent fees (1)	\$ 0.014	\$ 0.014	\$ 750,000(3)
Proceeds, before expenses, to us (2)	\$ 0.186	\$ 0.1859	\$ 10,227,525

(1) In addition, we have agreed to pay the placement agent a management fee in the amount of 1% of the aggregate offering price and to reimburse the placement agent for certain expenses. See "Plan of Distribution" for additional information.

(2) Excludes potential proceeds from the exercise of the Warrants or the Pre-Funded Warrants being offered pursuant to this prospectus.

(3) Adjusted for a reduced placement agent fee with respect to certain investors.

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.

We have engaged H.C. Wainwright & Co., LLC as our exclusive placement agent to use its reasonable best efforts to solicit offers to purchase Units in this offering. The placement agent has no obligation to buy any of the securities from us or to arrange for the purchase or sale of any specific number or dollar amount of the securities. The securities are expected to be delivered to purchasers on or about November 25, 2019.

H.C. Wainwright & Co.

The date of this prospectus is November 21, 2019.

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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 our securities. 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. Neither we nor the placement agent have 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.

PROSPECTUS SUMMARY

The following summary highlights certain information contained elsewhere in this prospectus and the documents incorporated by reference herein. This summary does not contain all the information you will need in making your investment decision. You should carefully read this entire prospectus and the documents incorporated by reference herein. You should pay special attention to the “Risk Factors” section of this prospectus and the financial statements and other information incorporated by reference in this prospectus. Onconova Therapeutics, Inc. is sometimes referred to as “we” or the “Company.”

Our Business

Overview

We are a clinical-stage biopharmaceutical company focused on discovering and developing novel small molecule product candidates primarily to treat cancer. Using our proprietary chemistry platform, we have created a library of targeted anti-cancer agents designed to work against specific cellular pathways that are important to cancer cells. We believe that the product 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 has been studied 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 has been tested in an intravenous formulation as a single agent for patients with higher-risk myelodysplastic syndromes (“MDS”), and an oral formulation as a single agent in lower risk MDS or in combination with azacitidine for patients with higher-risk MDS.

In December 2015, we enrolled the first patient into our INSPIRE trial, a randomized controlled Phase 3 clinical trial of intravenous rigosertib (“rigosertib IV”) in a population of patients with higher-risk MDS after failure of hypomethylating agent (“HMA”) therapy. The primary endpoint of INSPIRE is improvement in overall survival. An interim analysis of the trial was performed in January 2018. We anticipate completion of the INSPIRE Trial in the first half of 2020 based on approaching 90 percent or 324 randomized patients of the required 360 randomized patients, and the number of confirmed death events reached to date. We are planning to open new trial sites in Brazil in November 2019 and China thereafter. We believe the addition of sites in Brazil, China, and other additional new sites, could contribute significantly to achieving our timelines for completing enrollment and for reporting survival top-line data.

Our net losses were \$15.8 million and \$14.8 million for the nine months ended September 30, 2019 and 2018, respectively. As of September 30, 2019, we had an accumulated deficit of \$397.7 million. We expect to incur significant expenses and operating losses for the foreseeable future as we continue the development and clinical trials of, and seek regulatory approval for, our product candidates, even if milestones under our license and collaboration agreements may be met. As of September 30, 2019, we had \$4.8 million in cash and cash equivalents.

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. The information on, or that can be accessed through, our website is not part of this prospectus.

THE OFFERING

Units offered by us in this offering	30,250,000 Units, each consisting of one share of Common Stock and one Warrant to purchase one share of Common Stock.
Pre-Funded Units offered by us in this offering	We are also offering 24,750,000 Pre-Funded Units to Purchasers whose purchase of Units in this offering would otherwise result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% of our outstanding Common Stock immediately following the consummation of this offering (each Pre-Funded Unit consisting of one Pre-Funded Warrant to purchase one share of Common Stock and one Warrant to purchase one share of Common Stock) in lieu of Units that would otherwise result in the purchaser's beneficial ownership exceeding 4.99% of our outstanding Common Stock (or at the election of the purchaser, 9.99%). Each Pre-Funded Warrant contained in a Pre-Funded Unit will be exercisable for one share of Common Stock. The purchase price of each Pre-Funded Unit will equal the price per Unit being sold to the public in this offering minus \$0.0001, and the exercise price of each Pre-Funded Warrant included in the Pre-Funded Unit will be \$0.0001 per share of Common Stock. This offering also relates to the shares of Common Stock issuable upon exercise of any Pre-Funded Warrants contained in the Pre-Funded Units sold in this offering. Because we will issue a Warrant as part of each Unit or Pre-Funded Unit, the number of Warrants sold in this offering will not change as a result of a change in the mix of the Units and Pre-Funded Units sold.
Warrants offered by us in this offering	Warrants to purchase an aggregate of 55,000,000 shares of Common Stock. Each Unit and each Pre-Funded Unit includes a Warrant to purchase one share of Common Stock. Each Warrant contained in a Unit has an exercise price of \$0.20 per share of Common Stock, representing 100% of the public offering price of a Unit, will be immediately separable from the Common Stock or Pre-Funded Warrant, as the case may be, will be exercisable immediately and will expire five years from the date of issuance.
Insider Participation	While none of our directors or executive officers has entered into any binding commitment or agreement to purchase Units sold in this offering, our directors and executive officers have indicated interests in subscribing for up to an aggregate of approximately one percent (1%) of the total offering price of the Units, subject to potential proration.
Offering Price	\$0.20 per Unit \$0.1999 per Pre-Funded Unit
Common stock to be outstanding after this offering	63,197,462 shares of Common Stock (assuming the full exercise of the Pre-Funded Warrants sold in this offering).
Use of proceeds	The net proceeds to us from this offering will be approximately \$9.7 million based on the sale of 30,250,000 Units at the public offering price of \$0.20 per Unit and the sale of 24,750,000 Pre-Funded Units at the public offering price of \$0.1999 per Pre-Funded Unit assuming the full exercise of the Pre-Funded Warrants sold in this offering, after deducting estimated placement agent fees and estimated

offering expenses payable by us, and excluding the proceeds, if any, from the exercise of the Warrants. However, because this is a best efforts offering and there is no minimum offering amount required as a condition to the closing of this offering, the actual offering amount, placement agent fees and net proceeds to us are not presently determinable and may be substantially less than the maximum amounts set forth on the cover page of this prospectus. We intend to use the net proceeds from this offering to fund the development of our clinical and preclinical programs, for other research and development activities and for general corporate purposes, which may include capital expenditures and funding working capital needs.

See “Use of Proceeds” on page 13.

Risk factors	You should read the “Risk Factors” section of this prospectus and in the documents incorporated by reference into this prospectus for a discussion of factors to consider before deciding to invest in our securities.
Listing	Common Stock is listed on the Nasdaq Capital Market under the symbol “ONTX.” We do not intend to apply for listing of the Pre-Funded Warrants or Warrants on any securities exchange or other nationally recognized trading system. There is no established public trading market for the Pre-Funded Warrants or Warrants, and we do not expect a market to develop.

The number of shares of Common Stock outstanding after the offering is based on 8,197,462 shares outstanding as of November 20, 2019, and excludes as of such date:

- 394,788 shares of Common Stock issuable upon the exercise of stock options outstanding at November 20, 2019 with a weighted average exercise price of approximately \$69.36 per share;
- 5,614,307 shares of Common Stock issuable upon the exercise of outstanding or issuable warrants at November 20, 2019 with a weighted average exercise price of approximately \$7.08 per share (includes Common Stock issuable for warrants which are exercisable for our Series A or Series B Convertible Preferred Stock, each of which is convertible to Common Stock);
- 55,000,000 shares of Common Stock issuable upon the exercise of Warrants to be issued to investors in this offering at an exercise price of \$0.20 per share;
- 1,525,000 shares of Common Stock issuable upon exercise of the warrants being issued to the placement agent in connection with this offering; and
- 659,396 shares of Common Stock reserved for future issuance under our 2018 Equity Compensation Plan, as amended, at November 20, 2019.

As of November 20, 2019, the total number of our outstanding shares of Common Stock was 8,197,462. All share and per share data has been restated to reflect our one-for-fifteen reverse stock split effective September 25, 2018, subject to final adjustments for treatment of fractional share interests.

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 [Annual Report on Form 10-K, as filed with the SEC on April 1, 2019](#), and our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2019, June 30, 2019 and September 30, 2019, as filed with the SEC on [May 15, 2019](#), [August 14, 2019](#) and [November 12, 2019](#), respectively, which are incorporated by reference into this prospectus, as well as any amendment or update to our risk factors reflected in subsequent filings with the SEC, 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 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 Associated with this Offering

Our management will have broad discretion over the use of any net proceeds from this offering, you may not agree with how we use the proceeds, and the proceeds may not be invested successfully.

Our management will have broad discretion as to the use of any net proceeds from this offering and could use them for purposes other than those contemplated at the time of this offering. Accordingly, you will be relying on the judgment of our management with regard to the use of any proceeds from the sale of shares of our securities in this offering, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. It is possible that the proceeds will be invested in a way that does not yield a favorable, or any, return for you.

We may be required to raise additional financing by issuing new securities with terms or rights superior to those of our existing securityholders, which could adversely affect the market price of shares of Common Stock and our business.

We will require additional financing to fund future operations, including expansion in current and new markets, development and acquisition, capital costs and the costs of any necessary implementation of technological innovations or alternative technologies. We may not be able to obtain financing on favorable terms, if at all. If we raise additional funds by issuing equity securities, the percentage ownership of our current stockholders will be reduced, and the holders of the new equity securities may have rights superior to those of our existing securityholders, which could adversely affect the market price of Common Stock and the voting power of shares of Common Stock. If we raise additional funds by issuing debt securities, the holders of these debt securities would similarly have some rights senior to those of our existing securityholders, and the terms of these debt securities could impose restrictions on operations and create a significant interest expense for us which could have a materially adverse effect on our business.

You will experience immediate and substantial dilution in the net tangible book value per share of Common Stock included in the Units or issuable upon exercise of the Pre-Funded Warrants in this offering.

Since the effective price per share of Common Stock included in the Units or issuable upon exercise of the Pre-Funded Warrants being offered is substantially higher than the net tangible book

deficit per share of Common Stock outstanding prior to this offering, you will suffer immediate and substantial dilution in the net tangible book value of Common Stock included in the Units or issuable upon the exercise of the Pre-Funded Warrants issued in this offering. See the section titled "Dilution" below for a more detailed discussion of the dilution you will incur if you purchase Units in this offering. To the extent outstanding stock options or warrants to purchase Common Stock are exercised, or outstanding warrants to purchase shares of our Series A or Series B Convertible Preferred Stock are exercised and the resulting shares of Series A or Series B Convertible Preferred Stock are converted into shares of Common Stock, there will be further dilution to new investors.

Our shareholders may experience significant dilution as a result of future equity offerings or issuances and exercise of outstanding options and warrants.

In order to raise additional capital or pursue strategic transactions, we may in the future offer, issue or sell additional shares of Common Stock or other securities convertible into or exchangeable for shares of Common Stock. We cannot assure you that we will be able to sell shares or other securities in any other transaction at a price per share or that have an exercise price or conversion price per share that is equal to or greater than the price for the securities purchased by investors in this offering, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders. The price per share at which we sell or issue additional shares of Common Stock or other securities convertible into or exchangeable for Common Stock future transactions may be higher or lower than such price.

There is no public market for the Warrants or the Pre-Funded Warrants.

There is no established public trading market for the Warrants or the Pre-Funded Warrants, and we do not expect a market to develop. In addition, we do not intend to apply to list the Warrants or the Pre-Funded Warrants on any national securities exchange or other nationally recognized trading system, including The Nasdaq Capital Market. Without an active market, the liquidity of the Warrants and the Pre-Funded Warrants.

The Warrants and the Pre-Funded Warrants in this offering are speculative in nature.

Neither the Warrants nor the Pre-Funded Warrants in this offering confer any rights of Common Stock ownership on its holders, such as voting rights or the right to receive dividends, but rather merely represent the right to acquire shares of Common Stock at a fixed price, as the case maybe. In addition, following this offering, the market value of the Warrants and the Pre-Funded Warrants, if any, is uncertain and there can be no assurance that the market value of the Warrants or the Pre-Funded Warrants will equal or exceed their imputed offering price. Neither the Warrants nor the Pre-Funded Warrants will be listed or quoted for trading on any market or exchange.

Sales of a significant number of shares of Common Stock in the public markets, or the perception that such sales could occur, could depress the market price of Common Stock.

Sales of a substantial number of shares of Common Stock or securities convertible or exchangeable into Common Stock in the public markets could depress the market price of Common Stock and impair our ability to raise capital through the sale of additional equity securities. We cannot predict the effect that future sales of Common Stock would have on the market price of Common Stock.

Upon completion of this offering, based on our shares outstanding as of November 20, 2019, we will have 63,197,462 shares of Common Stock outstanding based on the issuance and sale of 30,250,000 Units and 24,750,000 Pre-Funded Units in this offering. Of these shares, only 278,917 shares are subject to a contractual lock-up with the placement agent for this offering for a period of 90 days following this offering. These shares can be sold, subject to any applicable volume limitations under federal securities laws, after the earlier of the expiration of, or release from, the 90-day lock-up period. The balance of our outstanding shares of Common Stock, including any shares of Common Stock included in the Units or issuable upon the exercise of the Pre-Funded Warrants or Warrants, purchased in this offering other than shares acquired by our current stockholders who are also subject to the contractual lock-up, may be resold into the public market immediately without restriction, unless owned or purchased by our affiliates. Moreover, some of the holders of Common Stock have the right, subject to specified conditions, to require us to file registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders.

As of November 20, 2019, there were approximately 659,396 shares subject to outstanding options or that are otherwise issuable under our 2018 Equity Compensation Plan, as amended, all of which shares we have registered under the Securities Act of 1933, as amended, or the Securities Act, on a registration statement on Form S-8. These shares can be freely sold in the public market

upon issuance, subject to volume limitations applicable to affiliates and the lock-up agreements described above, to the extent applicable.

We do not intend to pay any cash dividends on Common Stock in the foreseeable future and, therefore, any return on your investment in Common Stock must come from increases in the fair market value and trading price of Common Stock.

We do not intend to pay any cash dividends on Common Stock in the foreseeable future and, therefore, any return on your investment in Common Stock must come from increases in the fair market value and trading price of Common Stock.

Future issuances of preferred stock may adversely affect the market price for Common Stock.

Additional issuances and sales of preferred stock, or the perception that such issuances and sales could occur, may cause prevailing market prices for Common Stock to decline and may adversely affect our ability to raise additional capital in the financial markets at times and prices favorable to us.

This is a best efforts offering, no minimum amount of securities is required to be sold, and we may not raise the amount of capital we believe is required for our business plans.

The placement agent has agreed to use its reasonable best efforts to solicit offers to purchase the securities in this offering. The placement agent has no obligation to buy any of the securities from us or to arrange for the purchase or sale of any specific number or dollar amount of the securities. There is no required minimum number of securities that must be sold as a condition to completion of this offering. Because there is no minimum offering amount required as a condition to the closing of this offering, the actual offering amount, placement agent fees and proceeds to us are not presently determinable and may be substantially less than the maximum amounts set forth above. We may sell fewer than all of the securities offered hereby, which may significantly reduce the amount of proceeds received by us, and investors in this offering will not receive a refund in the event that we do not sell an amount of securities sufficient to fund our clinical and preclinical programs and research and development activities.

We are not in compliance with the Nasdaq continued listing requirements. If we are unable to comply with the continued listing requirements of the Nasdaq Capital Market, Common Stock could be delisted, which could affect Common Stock's market price and liquidity and reduce our ability to raise capital.

We are required to meet certain qualitative and financial tests to maintain the listing of our securities on The Nasdaq Capital Market. As previously reported in a Current Report on Form 8-K filed with the Securities and Exchange Commission on May 24, 2019, we were notified on May 21, 2019 by Nasdaq that we were not in compliance with the minimum stockholders' equity requirement under Nasdaq Listing Rule 5550(b) for continued listing on The Nasdaq Capital Market because our stockholders' deficit of approximately \$1.5 million, as reported in our Quarterly Report on Form 10-Q for the period ended March 31, 2019, is below the required minimum stockholders' equity of \$2.5 million, and as of the date of the notification, we did not meet the alternatives of market value of listed securities or net income from continuing operations. In accordance with Nasdaq Listing Rules, the Company had 45 calendar days, or until July 5, 2019, to submit a plan to regain compliance.

In order to maintain its listing, we submitted a plan of compliance addressing how we intended to regain compliance with Nasdaq Listing Rule 5550(b) within 180 days of notification, or by November 18, 2019, which was accepted by Nasdaq on July 26, 2019.

As previously reported in a Current Report on Form 8-K filed with the Securities and Exchange Commission on November 19, 2019, the Nasdaq Staff (the "Staff") notified us that the Company had not been able to regain compliance with Nasdaq's \$2.5 million minimum stockholders' equity requirement, and that the Staff had determined to seek to delist our securities from Nasdaq unless we request a hearing before the Nasdaq Hearings Panel (the "Panel"). Accordingly, we intend to request a hearing before the Panel, which has the authority to grant the Company an additional extension of time of up to 180 calendar days from November 19, 2019 to regain compliance. The hearing request will stay any suspension or delisting action pending the hearing and the expiration of any additional extension period granted by the Panel following the hearing. The Company is working with its advisors to prepare a plan of compliance to be reviewed with the Panel. Even if we assume all of the units offered in this prospectus are sold, no assurance can be given that the proceeds of this offering will enable us to achieve the minimum stockholders' equity requirement and there can be no guarantee that we will be able to maintain our Nasdaq listing.

If we cease to be eligible to trade on Nasdaq:

- We may have to pursue trading on a less recognized or accepted market, such as the OTC Bulletin Board or the "pink sheets."
- Shares of our common stock could be less liquid and marketable, thereby reducing the ability of stockholders to purchase or sell our shares as quickly and as inexpensively as they have done historically. If our stock is traded as a "penny stock," transactions in our stock would be more difficult and cumbersome.
- We may be unable to access capital on favorable terms or at all, as companies trading on alternative markets may be viewed as less attractive investments with higher associated risks, such that existing or prospective institutional investors may be less interested in, or prohibited from, investing in our common stock. This may also cause the market price of our common stock to decline.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference herein and therein contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. All statements, other than statements of historical facts, contained in this prospectus and the documents incorporated by reference herein regarding our strategy, future operations, financial position, future revenues, projected costs, prospects, plans and objectives of management are forward-looking statements. We may, in some cases, use terms such as "believes," "estimates," "anticipates," "expects," "plans," "intends," "may," "could," "might," "will," "should," "approximately" or other words that convey uncertainty of future events or outcomes to identify these forward-looking statements. Forward-looking statements appear in a number of places throughout this prospectus and the documents incorporated by reference herein, and include statements regarding our intentions, beliefs, projections, outlook, analyses or current expectations concerning, among other things, our ongoing and planned preclinical development and clinical trials, the timing of and our ability to make regulatory filings and obtain and maintain regulatory approvals for our product candidates, protection of our intellectual property portfolio, the degree of clinical utility of our products, particularly in specific patient populations, our ability to develop commercial and manufacturing functions, expectations regarding clinical trial data, our results of operations, cash needs, financial condition, liquidity, prospects, growth and strategies, the industry in which we operate and the trends that may affect the industry or us.

By their nature, forward-looking statements involve risks and uncertainties because they relate to events, competitive dynamics and industry change, and depend on the economic circumstances that may or may not occur in the future or may occur on longer or shorter timelines than anticipated. Although we believe that we have a reasonable basis for each forward-looking statement contained in this prospectus and in documents incorporated by reference herein, we caution you that forward-looking statements are not guarantees of future performance and that our actual results of operations, financial condition and liquidity, and the development of the industry in which we operate may differ materially from the forward-looking statements contained in this prospectus.

Actual results could differ materially and adversely from our forward-looking statements due to a number of factors, including, without limitation, risks related to:

- our need for additional financing for our INSPIRE trial and other operations, and our ability to obtain sufficient funds on acceptable terms when needed, and our plans and future needs to scale back operations if adequate financing is not obtained;
- our ability to continue as a going concern;
- our estimates regarding expenses, future revenues, capital requirements and needs for additional financing;
- the success and timing of our preclinical studies and clinical trials, including site initiation and patient enrollment, and regulatory approval of protocols for future clinical trials;
- our ability to enter into, maintain and perform collaboration agreements with other pharmaceutical companies, for funding and commercialization of our clinical product candidates or preclinical compounds, and our ability to achieve certain milestones under those agreements;
- the difficulties in obtaining and maintaining regulatory approval of our product candidates, and the labeling under any approval we may obtain;
- our plans and ability to develop, manufacture and commercialize our product candidates;
- our failure to recruit or retain key scientific or management personnel or to retain our executive officers;
- the size and growth of the potential markets for our product candidates and our ability to serve those markets;
- regulatory developments in the United States and foreign countries;
- the rate and degree of market acceptance of any of our product candidates;
- obtaining and maintaining intellectual property protection for our product candidates and our proprietary technology;
- the successful development of our commercialization capabilities, including sales and marketing capabilities;
- recently enacted and future legislation and regulation regarding the healthcare system;
- the success of competing therapies and products that are or may become available;
- our ability to maintain the listing of our securities on a national securities exchange;
- the potential for third party disputes and litigation;
- the performance of third parties, including contract research organizations (“CROs”) and third-party manufacturers; and
- our expectations regarding CRO transition.

Any forward-looking statements that we make in this prospectus and the documents incorporated by reference herein speak only as of the date of such statement, and we undertake no obligation to update such statements whether as a result of any new information, future events, changed circumstances or otherwise. Comparisons of results for current and any prior periods are not intended to express any future trends or indications of future performance, unless expressed as such, and should only be viewed as historical data.

You should also read carefully the factors described in the “Risk Factors” section of this prospectus and in documents incorporated by reference herein, to better understand the risks and uncertainties inherent in our business and underlying any forward-

looking statements. As a result of these factors, we cannot assure you that the forward-looking statements in this prospectus and in documents incorporated by reference herein will prove to be accurate. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified timeframe, or at all.

We obtained the industry, market and competitive position data in this prospectus and in documents incorporated by reference herein from our own internal estimates and research as well as from industry and general publications and research surveys and studies conducted by third parties. Industry publications and surveys generally state that the information contained therein has been obtained from sources believed to be reliable. We believe this data is accurate in all material respects as of the date of this prospectus.

USE OF PROCEEDS

Net proceeds to us from this offering will be approximately \$9.7 million, based on the sale of 30,250,000 Units at the public offering price of \$0.20 per Unit and the sale of 24,750,000 Pre-Funded Units at the public offering price of \$0.1999 per Pre-Funded Unit assuming the full exercise of the Pre-Funded Warrants sold in this offering, after deducting placement agent fees and estimated offering expenses payable by us, and excluding the proceeds, if any, from the exercise of the Warrants issued pursuant to this offering.

We intend to use the net proceeds from this offering to fund the development of our clinical and preclinical programs, for other research and development activities and for general corporate purposes, which may include capital expenditures and funding working capital needs.

The amounts actually expended for each purpose may vary significantly depending upon numerous factors, including the amount and timing of the proceeds from this offering and progress with the clinical development of our product candidates. Expenditures will also depend upon the establishment of collaborative arrangements with other companies, the availability of additional financing and other factors. Investors will be relying on the judgment of our management regarding the application of the proceeds of any sale of shares of our securities.

As of the date of this prospectus, we cannot specify with certainty all of the particular uses of the proceeds from this offering. Accordingly, we will retain broad discretion over the use of such proceeds. Pending the use of the net proceeds from this offering as described above, we intend to invest the net proceeds in investment-grade, interest-bearing securities.

These estimates exclude the proceeds, if any, from the exercise of the Warrants in this offering. If all of the Warrants sold in this offering were to be exercised in cash at an exercise price of \$0.20 per share of Common Stock, we would receive additional net proceeds of approximately \$11.0 million. However, the Warrants contain a cashless exercise provision that permits exercise of the Warrants on a cashless basis (i) at any time when there is no effective registration statement under the Securities Act of 1933, as amended, covering the issuance of the underlying shares of Common Stock or (ii) on the expiration date of the Warrant. We cannot predict when or if the Warrants will be exercised or whether they will be exercised for cash. It is possible that the Warrants may be exercised solely on a cashless basis.

CAPITALIZATION

The following table presents our cash, cash equivalents and capitalization, as of September 30, 2019:

- on an actual basis; and
- on an as adjusted basis to give further effect to the sale of 30,250,000 Units in this offering at the public offering price of \$0.20 per Unit, and the sale of 24,750,000 Pre-Funded Units at the public offering price of \$0.1999 per Pre-Funded Unit and assuming the full exercise of the Pre-Funded Warrants sold in this offering, after deducting estimated placement agent fees and estimated offering expenses payable by us, and excluding the proceeds, if any, from the exercise of the Warrants issued pursuant to this offering.

You should read this information in conjunction with our consolidated financial statements and notes thereto incorporated by reference into this prospectus.

	<u>Actual</u>	<u>as Adjusted</u>
Cash and cash equivalents	\$ 4,821,000	\$ 14,527,000
Long-term liabilities	3,848,000	\$ 3,848,000
Stockholders' equity*:		
Preferred stock, \$0.01 par value, 5,000,000 authorized at September 30, 2019 and September 30, 2019 as Adjusted, none issued and outstanding at September 30, 2019	—	—
Common stock, \$0.01 par value, 250,000,000 authorized at September 30, 2019 and September 30, 2019 as Adjusted; 8,197,462 shares issued and outstanding at September 30, 2019 and 63,197,462 shares issued and outstanding at September 30, 2019 as Adjusted	82,000	632,000
Additional paid-in capital	391,556,000	400,712,000
Accumulated other comprehensive loss	(27,000)	(27,000)
Accumulated deficit	(397,652,000)	(397,652,000)
Total Onconova Therapeutics, Inc. stockholders' (deficit) equity	(6,041,000)	3,665,000
Non-controlling interest	—	—
Total stockholders' (deficit) equity	(6,041,000)	3,665,000

*

The above table is based on 8,197,462 shares of Common Stock outstanding as of September 30, 2019 and excludes:

- 409,788 shares of common stock issuable upon the exercise of stock options outstanding at September 30, 2019 with a weighted average exercise price of approximately \$66.09 per share;
- 5,614,307 shares of common stock issuable upon the exercise of outstanding or issuable warrants at September 30, 2019 with a weighted average exercise price of approximately \$7.08 per share (includes common stock issuable for warrants which are exercisable for our Series A or Series B Convertible Preferred Stock, each of which is convertible to common stock); and
- 644,396 shares of common stock reserved for future issuance under our 2018 Equity Compensation Plan, as amended, at September 30, 2019.

DILUTION

If you invest in Common Stock in this offering, your interest will be diluted to the extent of the difference between the effective public offering price per share of Common Stock included in the Units or issuable upon the exercise of the Pre-Funded Warrants and the as adjusted net tangible book value per share of Common Stock after this offering. As of September 30, 2019, our historical net tangible book value (deficit) was \$(6,041,000), or \$(0.737) per share, based on 8,197,462 shares of Common Stock outstanding as of September 30, 2019. Our historical net tangible book value per share represents the amount of our total tangible assets reduced by the amount of our total liabilities, divided by the total number of shares of Common Stock outstanding as of September 30, 2019.

After giving effect to our sale in this offering of 30,250,000 Units at the public offering price per Unit of \$0.20 and the sale of 24,750,000 Pre-Funded Units at the public offering price of \$0.1999 per Pre-Funded Unit and assuming the full exercise of the Pre-Funded Warrants sold in this offering, and after deducting the placement agent fees and estimated offering expenses payable by us, and excluding the proceeds, if any, from the exercise of the Warrants issued in this offering, our as adjusted net tangible book value as of September 30, 2019 would be \$3,665,000, or \$0.058 per share. This represents an immediate increase of net tangible book value of \$0.795 per share to our existing stockholders and an immediate dilution of pro forma tangible book value of \$0.142 per share to investors purchasing Units in this offering. The following table illustrates this per share dilution.

Public offering price per Unit		\$	0.200
Historical net tangible book value (deficit) per share at September 30, 2019	\$	(0.737)	
Increase in net tangible book value per share attributable to investors purchasing Units in this offering		<u>0.795</u>	
As adjusted net tangible book value per share as of September 30, 2019 after giving effect to this offering			0.058
Dilution per share to investors purchasing Units in this offering		\$	<u>0.142</u>

The above discussion and table are based on 8,197,462 shares of Common Stock outstanding as of September 30, 2019 and exclude:

- 409,788 shares of common stock issuable upon the exercise of stock options outstanding at September 30, 2019 with a weighted average exercise price of approximately \$66.09 per share;
- 5,614,307 shares of common stock issuable upon the exercise of outstanding or issuable warrants at September 30, 2019 with a weighted average exercise price of approximately \$7.08 per share (includes common stock issuable for warrants which are exercisable for our Series A or Series B Convertible Preferred Stock, each of which is convertible to common stock); and
- 644,396 shares of common stock reserved for future issuance under our 2018 Equity Compensation Plan, as amended, at September 30, 2019

To the extent that outstanding options or warrants are exercised, you will experience further dilution. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

DESCRIPTION OF CAPITAL STOCK

Our authorized capital stock consists of 250,000,000 shares of Common Stock, par value \$0.01 per share, and 5,000,000 shares of preferred stock, par value \$0.01 per share. As of November 11, 2019, 8,197,462 shares of Common Stock, and no shares of our preferred stock, were outstanding.

Common Stock

Subject to the preferences that may be applicable to any outstanding preferred stock, holders of Common Stock are entitled to receive ratably any dividends that may be declared by our board of directors out of funds legally available for that purpose. Holders of Common Stock are entitled to one vote for each share on all matters voted on by stockholders, including the election of directors. Holders of Common Stock do not have any conversion, redemption, sinking fund or preemptive rights. In the event of our dissolution, liquidation or winding up, holders of Common Stock are entitled to share ratably in any assets remaining after the satisfaction in full of the prior rights of creditors and the aggregate liquidation preference of any preferred stock then outstanding. The rights, preferences and privileges of the holders of Common Stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that we may designate and issue in the future. All outstanding shares of Common Stock are, and any shares of Common Stock that we may issue in the future will be, fully paid and non-assessable.

Preferred Stock

We may issue any class of preferred stock in any series. Our board of directors has the authority, subject to limitations prescribed under Delaware law, to issue preferred stock in one or more series, to establish from time to time the number of shares to be included in each series and to fix the designation, powers, preferences and rights of the shares of each series and any of its qualifications, limitations and restrictions. Our board of directors can also increase or decrease the number of shares of any series, but not below the number of shares of that series then outstanding. Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of the common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in control of our company and may adversely affect the market price of our common stock and the voting and other rights of the holders of common stock.

Series A Convertible Preferred Stock

General

Our Board of Directors has designated 1,044,488 shares of preferred stock as Series A Convertible Preferred Stock, which we refer to herein as the Series A Preferred Stock. As of September 30, 2019, there were no shares of Series A Preferred Stock outstanding.

Rank

The Series A Preferred Stock ranks (1) on parity with common stock on an “as converted” basis, (2) senior to any series of our capital stock hereafter created specifically ranking by its terms junior to the Series A Preferred Stock, (3) on parity with any series of our capital stock hereafter created specifically ranking by its terms on parity with the Series A Preferred Stock, and (4) junior to any series of our capital stock hereafter created specifically ranking by its terms senior to the Series A Preferred Stock in each case, as to dividends or distributions of assets upon our liquidation, dissolution or winding up whether voluntary or involuntary.

Conversion

Each 0.1 share of the Series A Preferred Stock is convertible into one (1) share of common stock, provided that the holder will be prohibited from converting Series A Preferred Stock into shares of common stock if, as a result of such conversion, the holder would own more than 4.99% of the number of shares of common stock outstanding immediately after giving effect to the issuance of the shares of common stock issuable upon conversion of the Series A Preferred Stock, or, at the election of a holder, together with its affiliates, would own more than 9.99% of the number of shares of common stock outstanding immediately after giving effect to the issuance of the shares of common stock issuable upon conversion of the Series A Preferred Stock. The conversion rate of the Series A Preferred Stock is subject to proportionate adjustments for stock splits, reverse stock splits and similar events, but is not subject to adjustment based on price anti-dilution provisions.

Dividends

In addition to stock dividends or distributions for which proportionate adjustments will be made, holders of Series A Preferred Stock are entitled to receive dividends on shares of Series A Preferred Stock equal, on an as-if-converted-to-common-stock basis, to and in the same form as dividends actually paid on shares of the common stock when, as and if such dividends are paid on shares of the common stock. No other dividends are payable on shares of Series A Preferred Stock.

Voting Rights

Except as provided in the Certificate of Designation or as otherwise required by law, the holders of Series A Preferred Stock will have no voting rights. However, we may not, without the consent of holders of a majority of the outstanding shares of Series A Preferred Stock, alter or change adversely the powers, preferences or rights given to the Series A Preferred Stock, increase the number of authorized shares of Series A Preferred Stock, or enter into any agreement with respect to the foregoing.

Liquidation Rights

Upon any liquidation, dissolution or winding-up of the Company, whether voluntary or involuntary, the holders of Series A Preferred Stock are entitled to receive, pari passu with the holders of common stock, out of the assets available for distribution to stockholders an amount equal to such amount per share as would have been payable had all shares of Series A Preferred Stock been converted into common stock immediately before such liquidation, dissolution or winding up, without giving effect to any limitation on conversion as a result of the Beneficial Ownership Limitation, as described below.

Beneficial Ownership Limitation

We may not effect any conversion of the Series A Preferred Stock, and a holder does not have the right to convert any portion of the Series A Preferred Stock to the extent that, after giving effect to the conversion set forth in a notice of conversion such holder would beneficially own in excess of the Beneficial Ownership Limitation, or such holder, together with such holder's affiliates, and any persons acting as a group together with such holder or affiliates, would beneficially own in excess of the Beneficial Ownership Limitation. The "Beneficial Ownership Limitation" is 4.99% of the number of shares of the common stock outstanding immediately after giving effect to the issuance of shares of common stock issuable upon conversion of Series A Preferred Stock held by the applicable holder. A holder may, with 61 days prior notice to us, elect to increase or decrease the Beneficial Ownership Limitation; provided, however, that in no event may either the holder Beneficial Ownership Limitation or the affiliate Beneficial Ownership Limitation be 9.99% or greater.

Exchange Listing

Our Series A Preferred Stock is not listed on the Nasdaq Capital Market, any national securities exchange or other nationally recognized trading system. Our common stock issuable upon conversion of the Series A Preferred Stock is listed on the Nasdaq Capital Market.

Failure to Deliver Conversion Shares.

If we fail to timely deliver shares of common stock upon conversion of the Series A Preferred Stock (the "Conversion Shares") within the time period specified in the Certificate of Designation (within three trading days after delivery of the notice of conversion, or any shorter standard settlement period in effect with respect to trading market on the date notice is delivered), and if the holder has not exercised its Buy-In rights as described below with respect to such shares, then we are obligated to pay to the holder, as liquidated damages, an amount equal to \$50 per trading day (increasing to \$100 per trading day after the third trading day and \$200 per trading day after the tenth trading day) for each \$5,000 of Conversion Shares for which the Series A Preferred Stock converted which are not timely delivered. If we make such liquidated damages payments, we are not also obligated to make Buy-In payments with respect to the same Conversion Shares.

Compensation for Buy-In on Failure to Timely Deliver Shares

If we fail to timely deliver the Conversion Shares to the holder, and if after the required delivery date the holder is required by its broker to purchase (in an open market transaction or otherwise) or the holder or its brokerage firm otherwise purchases, shares of common stock to deliver in satisfaction of a sale by the holder of the Conversion Shares which the holder anticipated receiving upon such conversion or exercise (a "Buy-In"), then we are obligated to (A) pay in cash to the holder the amount, if any, by which (x) the holder's total purchase price (including brokerage commissions, if any) for the shares of common stock so purchased, minus any amounts paid to the holder by us as liquidated damages for late delivery of such shares, exceeds (y) the amount obtained by multiplying (1) the number of Conversion Shares that we were required to deliver times (2) the price at which the sell order giving rise to such purchase obligation was executed, and (B) at the option of the holder, either reinstate the portion of the Series A Preferred

Stock and equivalent number of Conversion Shares for which such conversion was not honored (in which case such conversion shall be deemed rescinded) or deliver to the holder the number of shares of common stock that would have been issued had we timely complied with its conversion and delivery obligations.

Subsequent Rights Offerings; Pro Rata Distributions

If we grant, issue or sell any common stock equivalents pro rata to the record holders of any class of shares of common stock (the “Purchase Rights”), then a holder of Series A Preferred Stock will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the holder could have acquired if the holder had held the number of shares of common stock acquirable upon conversion of the Series A Preferred Stock (without regard to any limitations on conversion). If we declare or make any dividend or other distribution of its assets (or rights to acquire its assets) to holders of common stock, then a holder of Series A Preferred Stock is entitled to participate in such distribution to the same extent as if the holder had held the number of shares of common stock acquirable upon complete conversion of the Series A Preferred Stock (without regard to any limitations on conversion).

Fundamental Transaction

If, at any time while the Series A Preferred Stock is outstanding, (i) the Company, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Company with or into another person, (ii) the Company, directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Company or another person) is completed pursuant to which holders of common stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding common stock, (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the common stock or any compulsory share exchange pursuant to which the common stock is effectively converted into or exchanged for other securities, cash or property, or (v) the Company, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with another person whereby such other person acquires more than 50% of the outstanding shares of common stock (not including any shares of common stock held by the other person or other persons making or party to, or associated or affiliated with the other persons making or party to, such stock or share purchase agreement or other business combination) (each a “Series A Preferred Stock Fundamental Transaction”), then the Series A Preferred Stock automatically converts and the holder will receive, for each Conversion Share that would have been issuable upon such conversion immediately prior to the occurrence of such Series A Preferred Stock Fundamental Transaction (without regard to the Beneficial Ownership Limitation), the number of shares of common stock of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and any additional consideration (the “Series A Preferred Stock Alternate Consideration”) receivable as a result of such Series A Preferred Stock Fundamental Transaction by a holder of the number of shares of common stock for which the Series A Preferred Stock is convertible immediately prior to such Series A Preferred Stock Fundamental Transaction (without regard to the Beneficial Ownership Limitation). For purposes of any such conversion, the determination of the conversion ratio will be appropriately adjusted to apply to such Series A Preferred Stock Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of common stock in such Series A Preferred Stock Fundamental Transaction. If holders of common stock are given any choice as to the securities, cash or property to be received in a Series A Preferred Stock Fundamental Transaction, then the holder will be given the same choice as to the Series A Preferred Stock Alternate Consideration it receives upon automatic conversion of the Series A Preferred Stock following such Fundamental Transaction.

Series B Convertible Preferred Stock

General

Our Board of Directors has designated 1,796,875 shares of preferred stock as Series B Convertible Preferred Stock, which we refer to herein as the Series B Preferred Stock. As of September 30, 2019, there were no shares of Series B Preferred Stock outstanding.

Rank

The Series B Preferred Stock ranks (1) on parity with common stock on an “as converted” basis, (2) senior to any series of our capital stock hereafter created specifically ranking by its terms junior to the Series B Preferred Stock, (3) on parity with Series A Preferred Stock and any series of our capital stock hereafter created specifically ranking by its terms on parity with the Series B Preferred Stock, and (4) junior to any series of our capital stock hereafter created specifically ranking by its terms senior to the Series B Preferred Stock in each case, as to dividends or distributions of assets upon our liquidation, dissolution or winding up whether voluntary or involuntary.

Conversion

Each 0.025 share of the Series B Preferred Stock is convertible into one (1) share of common stock, provided that the holder will be prohibited from converting Series B Preferred Stock into shares of common stock if, as a result of such conversion, the holder would own more than 4.99% of the number of shares of common stock outstanding immediately after giving effect to the issuance of the shares of common stock issuable upon conversion of the Series B Preferred Stock, or, at the election of a holder, together with its affiliates, would own more than 9.99% of the number of shares of common stock outstanding immediately after giving effect to the issuance of the shares of common stock issuable upon conversion of the Series B Preferred Stock. The conversion rate of the Series B Preferred Stock is subject to proportionate adjustments for stock splits, reverse stock splits and similar events, but is not subject to adjustment based on price anti-dilution provisions.

Dividends

In addition to stock dividends or distributions for which proportionate adjustments will be made, holders of Series B Preferred Stock are entitled to receive dividends on shares of Series B Preferred Stock equal, on an as-if-converted-to-common-stock basis, to and in the same form as dividends actually paid on shares of the common stock when, as and if such dividends are paid on shares of the Common Stock. No other dividends are payable on shares of Series B Preferred Stock.

Voting Rights

Except as provided in the Certificate of Designation or as otherwise required by law, the holders of Series B Preferred Stock will have no voting rights. However, we may not, without the consent of holders of a majority of the outstanding shares of Series B Preferred Stock, alter or change adversely the powers, preferences or rights given to the Series B Preferred Stock, increase the number of authorized shares of Series B Preferred Stock, or enter into any agreement with respect to the foregoing.

Liquidation Rights

Upon any liquidation, dissolution or winding-up of the Company, whether voluntary or involuntary, the holders of Series B Preferred Stock are entitled to receive, pari passu with the holders of common stock, out of the assets available for distribution to stockholders an amount equal to such amount per share as would have been payable had all shares of Series B Preferred Stock been converted into common stock immediately before such liquidation, dissolution or winding up, without giving effect to any limitation on conversion as a result of the Beneficial Ownership Limitation, as described below.

Beneficial Ownership Limitation

We may not effect any conversion of the Series B Preferred Stock, and a holder does not have the right to convert any portion of the Series B Preferred Stock to the extent that, after giving effect to the conversion set forth in a notice of conversion such holder would beneficially own in excess of the Beneficial Ownership Limitation, or such holder, together with such holder's affiliates, and any persons acting as a group together with such holder or affiliates, would beneficially own in excess of the Beneficial Ownership Limitation. The "Beneficial Ownership Limitation" is 4.99% of the number of shares of the common stock outstanding immediately after giving effect to the issuance of shares of common stock issuable upon conversion of Series B Preferred Stock held by the applicable holder. A holder may, with 61 days prior notice to us, elect to increase or decrease the Beneficial Ownership Limitation; provided, however, that in no event may either the holder Beneficial Ownership Limitation or the affiliate Beneficial Ownership Limitation be 9.99% or greater.

Exchange Listing

Our Series B Preferred Stock is not listed on the Nasdaq Capital Market, any national securities exchange or other nationally recognized trading system. Our common stock issuable upon conversion of the Series B Preferred Stock is listed on the Nasdaq Capital Market.

Failure to Deliver Conversion Shares.

If we fail to timely deliver shares of common stock upon conversion of the Series B Preferred Stock (the "Conversion Shares") within the time period specified in the Certificate of Designation (within three trading days after delivery of the notice of conversion, or any shorter standard settlement period in effect with respect to trading market on the date notice is delivered), and if the holder has not exercised its Buy-In rights as described below with respect to such shares, then we are obligated to pay to the holder, as liquidated damages, an amount equal to \$50 per trading day (increasing to \$100 per trading day after the third trading day and \$200

per trading day after the tenth trading day) for each \$5,000 of Conversion Shares for which the Series B Preferred Stock converted which are not timely delivered. If we make such liquidated damages payments, we are not also obligated to make Buy-In payments with respect to the same Conversion Shares.

Compensation for Buy-In on Failure to Timely Deliver Shares

If we fail to timely deliver the Conversion Shares to the holder, and if after the required delivery date the holder is required by its broker to purchase (in an open market transaction or otherwise) or the holder or its brokerage firm otherwise purchases, shares of common stock to deliver in satisfaction of a sale by the holder of the Conversion Shares which the holder anticipated receiving upon such conversion or exercise (a “Buy-In”), then we are obligated to (A) pay in cash to the holder the amount, if any, by which (x) the holder’s total purchase price (including brokerage commissions, if any) for the shares of common stock so purchased, minus any amounts paid to the holder by us as liquidated damages for late delivery of such shares, exceeds (y) the amount obtained by multiplying (1) the number of Conversion Shares that we were required to deliver times (2) the price at which the sell order giving rise to such purchase obligation was executed, and (B) at the option of the holder, either reinstate the portion of the Series B Preferred Stock and equivalent number of Conversion Shares for which such conversion was not honored (in which case such conversion shall be deemed rescinded) or deliver to the holder the number of shares of common stock that would have been issued had we timely complied with its conversion and delivery obligations.

Subsequent Rights Offerings; Pro Rata Distributions

If we grant, issue or sell any common stock equivalents pro rata to the record holders of any class of shares of common stock (the “Purchase Rights”), then a holder of Series B Preferred Stock will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the holder could have acquired if the holder had held the number of shares of common stock acquirable upon conversion of the Series B Preferred Stock (without regard to any limitations on conversion). If we declare or make any dividend or other distribution of its assets (or rights to acquire its assets) to holders of common stock, then a holder of Series B Preferred Stock is entitled to participate in such distribution to the same extent as if the holder had held the number of shares of common stock acquirable upon complete conversion of the Series B Preferred Stock (without regard to any limitations on conversion).

Fundamental Transaction

If, at any time while the Series B Preferred Stock is outstanding, (i) the Company, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Company with or into another person, (ii) the Company, directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Company or another person) is completed pursuant to which holders of common stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding common stock, (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the common stock or any compulsory share exchange pursuant to which the common stock is effectively converted into or exchanged for other securities, cash or property, or (v) the Company, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with another person whereby such other person acquires more than 50% of the outstanding shares of common stock (not including any shares of common stock held by the other person or other persons making or party to, or associated or affiliated with the other persons making or party to, such stock or share purchase agreement or other business combination) (each a “Series B Preferred Stock Fundamental Transaction”), then the Series B Preferred Stock automatically converts and the holder will receive, for each Conversion Share that would have been issuable upon such conversion immediately prior to the occurrence of such Series B Preferred Stock Fundamental Transaction (without regard to the Beneficial Ownership Limitation), the number of shares of common stock of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and any additional consideration (the “Series B Preferred Stock Alternate Consideration”) receivable as a result of such Series B Preferred Stock Fundamental Transaction by a holder of the number of shares of common stock for which the Series B Preferred Stock is convertible immediately prior to such Series B Preferred Stock Fundamental Transaction (without regard to the Beneficial Ownership Limitation). For purposes of any such conversion, the determination of the conversion ratio will be appropriately adjusted to apply to such Series B Preferred Stock Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of common stock in such Series B Preferred Stock Fundamental Transaction. If holders of common stock are given any choice as to the securities, cash or property to be received in a Series B Preferred Stock Fundamental Transaction, then the holder will be given the same choice as to the Series B Preferred Stock Alternate Consideration it receives upon automatic conversion of the Series B Preferred Stock following such Fundamental Transaction.

Other Currently Outstanding Warrants

On May 1, 2018, we issued pre-funded common stock and Series B Preferred Stock warrants, referred to as our “participating warrants,” to purchase up to 12,235,295 shares of our common stock and 1,470,588.225 shares of our Series B Preferred Stock at an exercise price equal to \$0.425 per 0.025 share of Series B Preferred Stock, subject to customary adjustments and as adjusted for our one-for-fifteen reverse stock split effective September 25, 2018. Subject to limited exceptions, a holder of participating warrants will not have the right to exercise any portion of its participating warrants if the holder, together with its affiliates, would beneficially own in excess of 9.99% of the number of shares of our common stock outstanding immediately after giving effect to such exercise.

On February 12, 2018, we issued pre-funded common stock and Series A Preferred Stock warrants, referred to as our “participating warrants,” to purchase up to 2,942,500 shares of our common stock and 865,000 shares of our Series A Preferred Stock at an exercise price equal to \$0.01 per share, subject to customary adjustments and as adjusted for our one-for-fifteen reverse stock split effective September 25, 2018. Subject to limited exceptions, a holder of participating warrants will not have the right to exercise any portion of its participating warrants if the holder, together with its affiliates, would beneficially own in excess of 9.99% of the number of shares of our common stock outstanding immediately after giving effect to such exercise.

On July 27, 2016, we issued common stock purchase warrants, referred to as our “participating warrants,” to purchase up to 3,192,140 shares of our common stock at an exercise price equal to \$5.88 per share, subject to customary adjustments and as adjusted for our one-for-fifteen reverse stock split effective September 25, 2018. Upon the terms and subject to the limitations on exercise and the conditions set forth in the participating warrants, the participating warrants are exercisable at any time on or after July 27, 2016 and on or prior to July 27, 2021. The participating warrants expire on July 27, 2021. The participating warrants entitle the holder to participate in any dividend or distribution, including any distribution of rights to purchase common stock, to the holders of our common stock. Subject to limited exceptions, a holder of participating warrants will not have the right to exercise any portion of its participating warrants if the holder, together with its affiliates, would beneficially own in excess of 9.99% of the number of shares of our common stock outstanding immediately after giving effect to such exercise.

On January 11, 2016, we issued common stock purchase warrants, referred to as our “participating warrants,” to purchase up to 96,842 shares of our common stock at an exercise price equal to \$11.50 per share, subject to customary adjustments and as adjusted for our one-for-fifteen reverse stock split effective September 25, 2018. Upon the terms and subject to the limitations on exercise and the conditions set forth in the participating warrants, the participating warrants are exercisable at any time on or after July 11, 2016 and on or prior to July 11, 2021. The participating warrants expire on July 11, 2021. The participating warrants entitle the holder to participate in any dividend or distribution, including any distribution of rights to purchase common stock, to the holders of our common stock. Subject to limited exceptions, a holder of participating warrants will not have the right to exercise any portion of its participating warrants if the holder, together with its affiliates, would beneficially own in excess of 9.99% of the number of shares of our common stock outstanding immediately after giving effect to such exercise.

The participating warrants and the shares of our common stock issuable upon exercise of the participating warrants were offered and sold without registration under the Securities Act of 1933, as amended (“the Securities Act”), or state securities laws, in reliance on the exemptions provided by Section 4(a)(2) of the Act and/or Regulation D promulgated thereunder and in reliance on similar exemptions under applicable state laws. Accordingly, neither the participating warrants nor the shares of our common stock underlying the participating warrants may be offered or sold except pursuant to an effective registration statement under the Securities Act or pursuant to an available exemption from, or in a transaction not subject to, the registration requirements of the Securities Act and in accordance with applicable state securities laws.

Delaware Anti-Takeover Law and Provisions in Our Certificate of Incorporation and Bylaws

Delaware Anti-Takeover Law

We are subject to Section 203 of the Delaware General Corporation Law. Section 203 generally prohibits a public Delaware corporation from engaging in a “business combination” with an “interested stockholder” for a period of three years after the date of the transaction in which the person became an interested stockholder, unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding specified shares; or
- at or subsequent to the date of the transaction, the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66²/₃% of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines a “business combination” to include:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, lease, exchange, mortgage, pledge, transfer or other disposition of 10% or more of the assets of the corporation to or with the interested stockholder;
- subject to exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- subject to exceptions, any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an “interested stockholder” as any person that is:

- the owner of 15% or more of the outstanding voting stock of the corporation;
- an affiliate or associate of the corporation who was the owner of 15% or more of the outstanding voting stock of the corporation at any time within three years immediately prior to the relevant date; or
- the affiliates and associates of the above.

Under specific circumstances, Section 203 makes it more difficult for an “interested stockholder” to effect various business combinations with a corporation for a three-year period, although the stockholders may, by adopting an amendment to the corporation’s certificate of incorporation or bylaws, elect not to be governed by this section, effective 12 months after adoption.

Our certificate of incorporation and bylaws do not exclude us from the restrictions of Section 203. We anticipate that the provisions of Section 203 might encourage companies interested in acquiring us to negotiate in advance with our board of directors since the stockholder approval requirement would be avoided if a majority of the directors then in office approve either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder.

Certificate of Incorporation and Bylaws

Provisions of our certificate of incorporation and bylaws may delay or discourage transactions involving an actual or potential change of control or change in our management, including transactions in which stockholders might otherwise receive a premium for their shares, or transactions that our stockholders might otherwise deem to be in their best interests. Therefore, these provisions could adversely affect the price of Common Stock. Among other things, our certificate of incorporation and bylaws will:

- permit our board of directors to issue up to 5,000,000 shares of preferred stock, with any rights, preferences and privileges as they may designate; 1,044,488 shares of preferred stock have been designated as Series A Preferred Stock and 1,796,875 shares of preferred stock have been designated as Series B Preferred Stock;

- provide that all vacancies on our board of directors, including as a result of newly created directorships, may, except as otherwise required by law, be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum;
- require that any action to be taken by our stockholders must be effected at a duly called annual or special meeting of stockholders and not be taken by written consent;
- provide that stockholders seeking to present proposals before a meeting of stockholders or to nominate candidates for election as directors at a meeting of stockholders must provide advance notice in writing, and also specify requirements as to the form and content of a stockholder's notice;
- not provide for cumulative voting rights, thereby allowing the holders of a majority of the shares of Common Stock entitled to vote in any election of directors to elect all of the directors standing for election; and
- provide that special meetings of our stockholders may be called only by the board of directors or by such person or persons requested by a majority of the board of directors to call such meetings.

Exclusive Forum Charter Provision

Our certificate of incorporation requires that the Court of Chancery of the State of Delaware will, to the fullest extent permitted by applicable law, be the sole and exclusive forum for the following:

- any derivative action or proceeding brought on behalf of the corporation;
- any action asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of the corporation to the corporation or the corporation's stockholders, creditors or other constituents;
- any action asserting a claim against the corporation arising pursuant to any provision of the Delaware General Corporation Law, the corporation's certificate of incorporation or the bylaws of the corporation; or
- any action asserting a claim against the corporation governed by the internal affairs doctrine, in each such case subject to said Court of Chancery having personal jurisdiction over the indispensable parties named as defendants therein.

Provided, that, if and only if the Court of Chancery of the State of Delaware dismisses any of the foregoing actions for lack of subject matter jurisdiction, any such action or actions may be brought in another state court sitting in the State of Delaware.

Because the applicability of the exclusive forum provision is limited to the extent permitted by applicable law, we do not intend that the exclusive forum provision would apply to suits brought to enforce any duty or liability created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction, and acknowledge that federal courts have concurrent jurisdiction over all suits brought to enforce any duty or liability created by the Securities Act. We note that there is uncertainty as to whether a court would enforce the provision and that investors cannot waive compliance with the federal securities laws and the rules and regulations thereunder. Although we believe this provision benefits us by providing increased consistency in the application of Delaware law in the types of lawsuits to which it applies, the provision may have the effect of discouraging lawsuits against our directors and officers.

Transfer Agent

The transfer agent and registrar for Common Stock is EQ Shareowner Services.

Listing

Our Common Stock is listed on the Nasdaq Capital Market under the symbol "ONTX."

DESCRIPTION OF SECURITIES WE ARE OFFERING

We are offering (i) up to 30,250,000 Units, each Unit consisting of one share of Common Stock and one Warrant to purchase one share of Common Stock, and (ii) up to 24,750,000 Pre-Funded Units, each Pre-Funded Unit consisting of one Pre-Funded Warrant to purchase one share of Common Stock and one Warrant to purchase one share of Common Stock. The share of Common Stock and accompanying Warrant included in each Unit will be issued separately, and the Pre-Funded Warrant to purchase one share of Common Stock and the accompanying Warrant included in each Pre-Funded Unit will be issued separately. Units or Pre-Funded Units will not be issued or certificated. We are also registering the shares of Common Stock included in the Units and the shares of Common Stock issuable from time to time upon exercise of the Pre-Funded Warrants included in Pre-Funded Units, the Warrants included in the Units and the Pre-Funded Units offered hereby, the Pre-Funded Warrants included in the Pre-Funded Units, and shares of Common Stock issuable upon the exercise of the Warrants.

Common Stock

The material terms and provisions of Common Stock and each other class of our securities which qualifies or limits Common Stock are described under the caption "Description of Capital Stock" in this prospectus.

The Warrants

The following is a summary of all material terms and provisions of the Warrants that are being offered hereby, the form of which has been filed as an exhibit to the registration statement of which this prospectus is a part. Prospective investors should carefully review the terms and provisions of the form of Warrant for a complete description of the terms and conditions of the Warrants.

Duration and Exercise Price

Each Warrant offered hereby will have an exercise price equal to \$0.20 per one share of Common Stock. The Warrants will be immediately exercisable and may be exercised until the fifth anniversary of the issuance date, at which time they will be automatically exercised on a cashless basis. The exercise price and number of shares of Common Stock issuable upon exercise is subject to appropriate adjustment in the event of stock dividends, stock splits, reorganizations or similar events affecting Common Stock and the exercise price. The Warrants will be issued separately from the Common Stock or Pre-Funded Warrants sold as part of the Units or Pre-Funded Units, respectively, and may be transferred separately immediately thereafter. Warrants will be issued in certificated form only.

Exercisability

The Warrants will be exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of Common Stock purchased upon such exercise (except in the case of a cashless exercise as discussed below).

Cashless Exercise

If, at the time a holder exercises its Warrants, a registration statement registering the issuance of the shares of Common Stock underlying the Warrants under the Securities Act is not then effective or available for the issuance of such shares, then in lieu of making the cash payment otherwise contemplated to be made to us upon such exercise in payment of the aggregate exercise price, the holder may elect instead to receive upon such exercise (either in whole or in part) the net number of shares of Common Stock determined according to a formula set forth in the Warrant. The Warrants will be automatically exercised on a cashless basis on the expiration date.

Fundamental Transactions

In the event of any fundamental transaction, as described in the Warrants and generally including any merger with or into another entity, sale of all or substantially all of our assets, tender offer or exchange offer, or reclassification of Common Stock, then upon any subsequent exercise of a Warrant, the holder will have the right to receive as alternative consideration, for each share of Common Stock that the holder would have received upon such holder's exercise of the Warrant into shares of Common Stock (without giving effect to any limitation as a result of the Beneficial Ownership Limitation) immediately prior to the occurrence of such fundamental transaction, the number of shares of common stock of the successor or acquiring corporation or of our company, if it is the surviving corporation, and any additional consideration receivable upon or as a result of such transaction by a holder of the number of shares of Common Stock for which the holder would have received upon such holder's exercise of the Warrant into shares of Common Stock (without giving effect to any limitation as a result of the Beneficial Ownership Limitation) immediately prior to the occurrence of such fundamental transaction. In addition, in certain circumstances, upon a fundamental transaction, the holder will have the right to require us to repurchase their warrants at their fair value using the Black Scholes option pricing formula.

Transferability

Subject to applicable laws and a standard legend with regard to restriction on transfer only in compliance with a public offering or an available exemption therefrom, the Warrant may be transferred at the option of the holder upon surrender of the Warrant to us together with the appropriate instruments of transfer.

No Listing

There is no established trading market for the Warrants, and we do not expect an active trading market to develop. We do not intend to apply to list the Warrants on any securities exchange or other trading market. Without a trading market, the liquidity of the Warrants will be extremely limited.

Right as a Stockholder

Except as otherwise provided in the Warrants or by virtue of the holder's ownership of shares of Common Stock, such holder of Warrants does not have the rights or privileges of a holder of a Common Stock, including any voting rights, until such holder exercises such holder's Warrants.

Waivers and Amendments

No term of the Warrants may be amended or waived without the written consent of the holder of such warrant.

Pre-Funded Warrants

The following is a summary of all material terms and provisions of the Pre-Funded Warrants that are being offered hereby, the form of which has been filed as an exhibit to the registration statement of which this prospectus is a part. Prospective investors should carefully review the terms and provisions of the form of Pre-Funded Warrant for a complete description of the terms and conditions of the Pre-Funded Warrants.

Pre-funded warrants provide any purchaser in this offering with the ability to purchase Pre-Funded Units (each Pre-Funded Unit consisting of one Pre-Funded Warrant to purchase one share of Common Stock and one Warrant to purchase one share of Common Stock) in lieu of Units that would otherwise result in the purchaser's beneficial ownership exceeding 4.99% of our outstanding Common Stock (or, at the election of the purchaser, 9.99%). This is accomplished through purchasing Pre-Funded Warrants at a price equal to the purchase price for Units, less \$0.0001, which \$0.0001 is the exercise price for the Pre-Funded Warrants. Each Pre-Funded Warrant is exercisable into one share of Common Stock as offered hereunder. Thus, the purchaser is paying essentially the purchase price for a Unit at closing of the offering but is not deemed to beneficially own the shares of Common Stock included in the Units until the purchaser exercises the Pre-Funded Warrant. Once purchased, the purchase price of the Pre-Funded Warrants is not refundable. While the Pre-Funded Warrants permit waiver of provisions by us and the holder of the Pre-Funded Warrants, this would not affect the pre-funding as that is the purchase price of the instrument which is paid at the time of closing and becomes part of our proceeds received from this offering. In addition, the Pre-Funded Warrants are perpetual and do not have an expiration date.

Duration and Exercise Price

Each Pre-Funded Warrant will have an outstanding exercise price per share equal to \$0.0001. The Pre-Funded Warrants will be immediately exercisable and may be exercised at any time until the Pre-Funded Warrants are exercised in full. The exercise price and number of shares of Common Stock issuable upon exercise is subject to appropriate adjustment in the event of stock dividends, stock splits, reorganizations or similar events affecting Common Stock and the exercise price. The Pre-Funded Warrants will be issued separately from the accompanying Warrants included in the Pre-Funded Units, and may be transferred separately immediately thereafter.

Exercisability

The Pre-Funded Warrants will be exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of Common Stock purchased upon such exercise (except in the case of a cashless exercise as discussed below). A holder (together with its affiliates) may not exercise any portion of the Pre-Funded Warrant to the extent that the holder would own more than 4.99% of the outstanding Common Stock immediately after exercise, except that upon at least 61 days' prior notice from the holder to us, the holder may increase the amount of ownership of outstanding Common Stock after exercising the holder's Pre-Funded Warrants up to 9.99% of the number of shares of Common Stock outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the Pre-Funded Warrants. Purchasers of Pre-Funded Units in this offering may also elect prior to the issuance of the Pre-Funded Warrants to have the initial exercise limitation set at 9.99% of our outstanding Common Stock.

Cashless Exercise

If, at the time a holder exercises its Pre-Funded Warrants, there is no effective registration statement registering, or the prospectus contained therein is not available for an issuance of the shares of Common Stock underlying the Pre-Funded Warrants to the holder, then in lieu of making the cash payment otherwise contemplated to be made to us upon such exercise in payment of the aggregate exercise price, the holder may elect instead to exercise its Pre-Funded Warrants on a cashless basis and receive upon such exercise (either in whole or in part) the net number of shares of Common Stock determined according to a formula set forth in the Pre-Funded Warrant.

Fundamental Transactions

In the event of any fundamental transaction, as described in the Pre-Funded Warrants and generally including any merger with or into another entity, sale of all or substantially all of our assets, tender offer or exchange offer, or reclassification of Common Stock, then upon any subsequent exercise of a Pre-Funded Warrant, the holder will have the right to receive as alternative consideration, for each share of Common Stock that would have been issuable upon such exercise immediately prior to the occurrence of such fundamental transaction, the number of shares of Common Stock of the successor or acquiring corporation or of our company, if it is the surviving corporation, and any additional consideration receivable upon or as a result of such transaction by a holder of the number of shares of Common Stock for which the Pre-Funded Warrant is exercisable immediately prior to such event.

Transferability

Subject to applicable laws, a Pre-Funded Warrant may be transferred at the option of the holder upon surrender of the Pre-Funded Warrant to us together with the appropriate instruments of transfer.

Fractional Shares

No fractional shares of Common Stock will be issued upon the exercise of the Pre-Funded Warrants. Rather, the number of shares of Common Stock to be issued will be rounded up to the nearest whole number.

Trading Market

There is no established trading market for the Pre-Funded Warrants on any securities exchange or nationally recognized trading system, and we do not expect an active trading market to develop. We do not intend to list the Pre-Funded Warrants on any securities exchange or other trading market. Without a trading market, the liquidity of the Pre-Funded Warrants will be extremely limited.

Right as a Stockholder

Except as otherwise provided in the Pre-Funded Warrants or by virtue of the holder's ownership of shares of Common Stock, such holder of Pre-Funded Warrants does not have the rights or privileges of a holder of Common Stock, including any voting rights, until such holder exercises such holder's Pre-Funded Warrants.

PLAN OF DISTRIBUTION

We have engaged H.C. Wainwright & Co., LLC, or the placement agent, to act as our exclusive placement agent in connection with this offering, on a reasonable best efforts basis, of our Units and Pre-Funded Units pursuant to this prospectus. The terms of this offering were subject to market conditions and negotiations between us, the placement agent and prospective investors. The engagement with the placement agent does not give rise to any commitment by the placement agent to purchase any of our Units, and the placement agent will have no authority to bind us by virtue of the engagement. Further, the placement agent does not guarantee that it will be able to raise new capital in any prospective offering. The placement agent may engage sub-agents or selected dealers to assist with the offering.

We will enter into a securities purchase agreement directly with certain institutional investors in connection with this offering. Investors who do not enter into a securities purchase agreement shall rely solely on this prospectus in connection with the purchase of our securities in this offering.

We will deliver the securities underlying Units and/or Pre-Funded Units being issued to the investors upon receipt of investor funds for the purchase of the Units and/or Pre-Funded Units offered pursuant to this prospectus. We expect to deliver the shares of our common stock being offered pursuant to this prospectus on or about November 25, 2019.

Fees and Expenses

We have agreed to pay to the placement agent a cash fee equal to 7% of the aggregate gross proceeds raised in this offering (other than with respect to certain investors). The following table shows the per Unit placement agent fees payable to the placement agent by us in connection with this offering.

	Per Unit	
Public offering price	\$	0.20
Placement Agent's fees payable by us	\$	0.014
Proceeds, before expenses, to us	\$	0.186

We estimate the total expenses payable by us for this offering to be approximately \$1.3 million, which amount includes (i) a placement agent's fee of \$750,000 (ii) a management fee of \$110,000; (iii) a \$50,000 non-accountable expense allowance payable to the placement agent; (iv) reimbursement of the accountable expenses of the placement agent equal to \$100,000 including the legal fees of the placement agent being paid by us (none of which has been paid in advance and \$10,000 for clearing expenses); and (v) other estimated expenses of approximately \$254,000 which include legal, accounting, printing costs and various fees associated with the registration and listing of our shares. In addition, we have agreed to issue the Placement Agent's Warrants to the placement agent. See "Placement Agent's Warrants" below for additional detail.

Placement Agent's Warrants

We have agreed to issue to the placement agent warrants to purchase a number of shares of Common Stock equal to 5% of the number of shares of Common Stock (other than with respect to certain investors) (i) included within the Units placed in this offering, and (ii) issuable upon the exercise of the Pre-Funded Warrants included within the Pre-Funded Units placed in this offering, if any. The Placement Agent Warrants will have substantially the same terms as the terms of the Warrants offered pursuant to this prospectus, except that the exercise price per share is equal to 125% of the public offering price per Unit in this offering (\$0.20 per share of Common Stock), and the exercise period of the Placement Agent Warrants shall be subject to the limitation on exercise set forth in FINRA Rule 5110 (f)(2)(G)(i). Pursuant to FINRA Rule 5110(g), the Placement Agent Warrants and any shares issued upon exercise of the Placement Agent Warrants shall not be sold, transferred, assigned, pledged, or hypothecated, or be the subject of any hedging, short sale, derivative, put or call transaction that would result in the effective economic disposition of the securities by any person for a period of 180 days immediately following the date of effectiveness or commencement of sales of this offering, except the transfer of any security: (i) by operation of law or by reason of our reorganization; (ii) to any FINRA member firm participating in the offering and the officers or partners thereof, if all securities so transferred remain subject to the lock-up restriction set forth above for the remainder of the time period; (iii) if the aggregate amount of our securities held by the placement agent or related persons do not exceed 1% of the securities being offered; (iv) that is beneficially owned on a pro rata basis by all equity owners of an investment fund, provided that no participating member manages or otherwise directs investments by the fund and the participating members in the aggregate do not own more than 10% of the equity in the fund; or (v) the exercise or conversion of any security, if all securities remain subject to the lock-up restriction set forth above for the remainder of the time period.

Right of First Refusal

We have also granted the placement agent, for a period of six months from the closing date of this offering, a right of first refusal to act as sole book-running manager for each and every future public or private equity or debt offering by us or any of our successors or subsidiaries. We have also agreed to a tail fee equal to the cash and warrant compensation in this offering if any investor to which the placement agent introduced us with respect to this offering during the term of its engagement provides us with further capital in a public or private offering or capital raising transaction, with certain exceptions, during the 6-month period following termination of our engagement of the placement agent.

Listing

Common Stock is currently traded on the Nasdaq Capital Market under the symbol "ONTX." On November 20, 2019, the last reported sale price of Common Stock was \$0.30 per share. We do not intend to apply for listing of the Pre-Funded Warrants or Warrants on any securities exchange or other nationally recognized trading system. There is no established public trading market for the Pre-Funded Warrants or Warrants, and we do not expect a market to develop.

Lock-up Agreements

Our officers and directors and certain of our stockholders have agreed with the placement agent to be subject to a lock-up period of 90 days following the date of this prospectus. This means that, during the applicable lock-up period, such persons may not offer for sale, contract to sell, sell, distribute, grant any option, right or warrant to purchase, pledge, hypothecate or otherwise dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into, or exercisable or exchangeable for, shares of Common Stock. Certain limited transfers are permitted during the lock-up period if the transferee agrees to these lock-up restrictions. We have also agreed in the securities purchase agreement, subject to certain exceptions, to similar lock-up restrictions on the issuance and sale of our securities for 90 days following the closing of this offering. The placement agent may, in its sole discretion and without notice, waive the terms of any of these lock-up agreements.

Insider Participation

While none of our directors or executive officers has entered into any binding commitment or agreement to purchase Units sold in this offering, our directors and executive officers have indicated interests in subscribing for up to an aggregate of one percent (1%) of the total offering price of the Units, subject to potential proration.

Stabilization, Short Positions and Penalty Bids

The placement agent may engage in syndicate covering transactions, stabilizing transactions and penalty bids or purchases for the purpose of pegging, fixing or maintaining the price of Common Stock:

- Syndicate covering transactions involve purchases of securities in the open market after the distribution has been completed in order to cover syndicate short positions. Such a naked short position would be closed out by buying securities in the open market. A naked short position is more likely to be created if the placement agent is concerned that there could be downward pressure on the price of the securities in the open market after pricing that could adversely affect investors who purchase in the offering.
- Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specific maximum.
- Penalty bids permit the placement agent to reclaim a selling concession from a syndicate member when the securities originally sold by the syndicate member are purchased in a stabilizing or syndicate covering transaction to cover syndicate short positions.

These syndicate covering transactions, stabilizing transactions and penalty bids may have the effect of raising or maintaining the market prices of our securities or preventing or retarding a decline in the market prices of our securities. As a result, the price of Common Stock may be higher than the price that might otherwise exist in the open market. Neither we nor the placement agent make any representation or prediction as to the effect that the transactions described above may have on the price of Common Stock. These transactions may be effected on the Nasdaq Capital Market, in the over-the-counter market or on any other trading market and, if commenced, may be discontinued at any time.

In connection with this offering, the placement agent also may engage in passive market making transactions in Common Stock in accordance with Regulation M during a period before the commencement of offers or sales of shares of Common Stock in this offering and extending through the completion of the distribution. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for that security. However, if all independent bids are lowered below the passive market maker's bid that bid must then be lowered when specific purchase limits are exceeded. Passive market making may stabilize the market price of the securities at a level above that which might otherwise prevail in the open market and, if commenced, may be discontinued at any time.

Neither we nor the placement agent make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the prices of our securities. In addition, neither we nor the placement agent make any representation that the placement agent will engage in these transactions or that any transactions, once commenced, will not be discontinued without notice.

Indemnification

We have agreed to indemnify the placement agent against certain liabilities, including certain liabilities arising under the Securities Act, or to contribute to payments that the placement agent may be required to make for these liabilities.

Regulation M

The placement agent may be deemed to be an underwriter within the meaning of Section 2(a)(11) of the Securities Act and any fees received by it and any profit realized on the sale of the securities by it while acting as principal might be deemed to be underwriting discounts or commissions under the Securities Act. The placement agent will be required to comply with the requirements of the Securities Act and the Exchange Act including, without limitation, Rule 10b-5 and Regulation M under the Exchange Act. These rules and regulations may limit the timing of purchases and sales of our securities by the placement agent. Under these rules and regulations, the placement agent may not (i) engage in any stabilization activity in connection with our securities; and (ii) bid for or purchase any of our securities or attempt to induce any person to purchase any of our securities, other than as permitted under the Exchange Act, until they have completed their participation in the distribution.

Other Relationships

The placement agent and its respective affiliates have engaged in, and may in the future engage in, investment banking and other commercial dealings in the ordinary course of business with us or our affiliates. The placement agent has received, or may in the future receive, customary fees and commissions for these transactions. The placement agent of this offering also acted as placement agent in our offering consummated on September 25, 2019, for which it received compensation.

EXPERTS

The consolidated financial statements of Onconova Therapeutics, Inc. at December 31, 2018 and 2017, and for the years then ended, appearing in our [Annual Report \(Form 10-K\) for the year ended December 31, 2018](#) have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon (which contains an explanatory paragraph describing conditions that raise substantial doubt about the Company's ability to continue as a going concern as described in Note 1 to the consolidated financial statements) included therein and incorporated herein by reference. Such financial statements are incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

LEGAL MATTERS

The validity of the securities being offered by this prospectus will be passed upon by Morgan, Lewis & Bockius LLP, Philadelphia, Pennsylvania. The placement agent is being represented in connection with this offering by Lowenstein Sandler LLP, New York, New York.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy and information statements and other information with the SEC. Our SEC filings, including the registration statement, are available to the public from the SEC's website at www.sec.gov. To receive copies of public records not posted to the SEC's website at prescribed rates, you may complete an online form at www.sec.gov, send a fax to (202) 772-9337 or submit a written request to the SEC, Office of FOIA/PA Operations, 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information.

We also make available free of charge on our website, www.onconova.com, all materials that we file electronically with the SEC, including our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, Section 16 reports and amendments to those reports as soon as reasonably practicable after such materials are electronically filed with, or furnished to, the SEC. Information contained on our website or any other website is not incorporated by reference into this prospectus and does not constitute a part of this prospectus.

INCORPORATION BY REFERENCE

The SEC allows us to "incorporate by reference" the information we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below:

- [Our Annual Report on Form 10-K for the fiscal year ended December 31, 2018, which we filed with the SEC on April 1, 2019;](#)
- [Our Definitive Proxy Statement on Schedule 14A for our 2019 Annual Meeting of Stockholders held June 17, 2019, which we filed with the SEC on April 29, 2019;](#)

- Our Quarterly Reports on Form 10-Q for the fiscal periods ended March 31, 2019, June 30, 2019 and September 30, 2019, which we filed with the SEC on [May 15, 2019](#), [August 14, 2019](#) and [November 12, 2019](#), respectively;
- Our current reports on Form 8-K filed with the SEC on [January 15, 2019](#), [March 26, 2019](#), [May 14, 2019](#), [May 16, 2019](#), [May 17, 2019](#), [May 24, 2019](#), [June 19, 2019](#), [July 29, 2019](#), [September 13, 2019](#), [September 25, 2019](#), [October 24, 2019](#), [November 19, 2019](#) and [November 21, 2019](#);
- [The description of our common stock contained in our registration statement on Form 8-A filed on July 23, 2013 \(Registration no. 001-36020\) with the SEC, including any amendment or report filed for the purpose of updating such description](#);
- All documents filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, after the date of the initial filing of the registration statement of which this prospectus is a part and prior to the effectiveness of such registration statement; and
- All documents filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act on or after the date of this prospectus and before we stop offering the securities under this prospectus.

We will provide without charge to each person, including any beneficial owner, to whom this prospectus is delivered, upon his or her written or oral request, a copy of any or all documents referred to above which have been or may be incorporated by reference into this prospectus but not delivered with this prospectus excluding exhibits to those documents unless they are specifically incorporated by reference into those documents. You can request those documents from us, at no cost, by writing or telephoning us at: Onconova Therapeutics, Inc., 375 Pheasant Run, Newtown, Pennsylvania, 18940, (267) 759-3680, Attention: Suzanne Hutchinson.

The most recent information that we file with the SEC automatically updates and supersedes older information. The information contained in any such filing will be deemed to be a part of this prospectus, commencing on the date on which the filing is made.

Information furnished under Items 2.02 or 7.01 (or corresponding information furnished under Item 9.01 or included as an exhibit) in any past or future Current Report on Form 8-K that we file with the SEC, unless otherwise specified in such report, is not incorporated by reference in this prospectus.



Onconova Therapeutics, Inc.

Up to 30,250,000 Units (each Unit contains one share of Common Stock and one Warrant to purchase one share of Common Stock)

Up to 24,750,000 Pre-Funded Units (each Pre-Funded Unit contains one Pre-Funded Warrant to purchase one share of Common Stock and one Warrant to purchase one share of Common Stock)

(Up to 24,750,000 shares of Common Stock Underlying the Pre-Funded Warrants) and

(Up to 55,000,000 shares of Common Stock Underlying the Warrants)

PROSPECTUS

H.C. Wainwright & Co.

November 21, 2019
