



Onconova Therapeutics, Inc.
375 Pheasant Run
Newtown, PA 18940 USA

January 13, 2021

Dear Stockholder:

You are cordially invited to attend a Special Meeting of Stockholders of Onconova Therapeutics, Inc. (“Onconova” or the “Company”), a Delaware corporation, to be held at 9:00 a.m. Eastern Time on March 4, 2021. The Special Meeting of Stockholders will be held virtually via the Internet at www.virtualshareholdermeeting.com/ONTX2021SM (the “Special Meeting”). There will not be a physical meeting location, and stockholders will not be able to attend the Special Meeting in person. Instructions on how to participate in the Special Meeting and demonstrate proof of stock ownership are posted at www.virtualshareholdermeeting.com/ONTX2021SM and are included on your proxy card. This means that you can attend the Special Meeting online, vote your shares electronically during the meeting and submit questions during the online meeting by visiting the above-mentioned website. We believe that hosting a “virtual meeting” will enable greater stockholder attendance and participation from any location around the world, while promoting the health of our stockholders and employees. The attached Notice of Special Meeting and Proxy Statement describes the business we will conduct at the meeting and provides information about Onconova Therapeutics, Inc. that you should consider when you vote your shares.

The year 2021 is an important one as we position Onconova to execute on our mission to develop novel therapies to treat cancer, and the Special Meeting will play an important role in advancing the Company’s goals. Our lead compound ON 123300, a proprietary, first-in-class multi-kinase CDK 4/6 inhibitor has been cleared by the U.S. Food and Drug Administration to begin a Phase 1 trial in the United States. We anticipate the trial will commence in the first half of 2021, while an ongoing Phase 1 trial in China with ON 123300 continues to enroll patients. The Special Meeting is focused on changing the capital structure of the Company through a reverse stock split. This important action is expected to increase the attractiveness of Company to a broader set of institutional investors while protecting the liquidity of all stockholders to re-establish compliance with Nasdaq standards. We believe that maintaining our Nasdaq listing and attracting investor support is of utmost importance to continue our work to potentially advance cancer care with ON 123300 and any other therapeutics we may choose to develop.

Your vote is very important, regardless of the number of shares you hold. Whether or not you plan to attend the meeting (via the virtual meeting), please carefully review the enclosed Proxy Statement and submit your proxy.

We hope that you will join us virtually on March 4, 2021.

Sincerely,

/s/ Steven M. Fruchtman, M.D.

Steven M. Fruchtman, M.D.

President and Chief Executive Officer

Onconova Therapeutics, Inc.
375 Pheasant Run
Newtown, PA 18940

NOTICE OF SPECIAL MEETING OF STOCKHOLDERS
To Be Held on March 4, 2021

NOTICE IS HEREBY GIVEN of a Special Meeting of Stockholders (the "Special Meeting") of Onconova Therapeutics, Inc., a Delaware corporation (the "Company").

Date: March 4, 2021

Time: 9:00 a.m. Eastern Time

Place: www.virtualshareholdermeeting.com/ONTX2021SM

- Purposes:*
1. To consider and vote upon an amendment to our Tenth Amended and Restated Certificate of Incorporation, as amended, to combine outstanding shares of our common stock into a lesser number of outstanding shares, or a "Reverse Stock Split", by a ratio of not less than one-for-five and not more than one-for-fifteen, with the exact ratio to be set within this range by our Board of Directors in its sole discretion (the "Reverse Stock Split Proposal");
 2. To approve an amendment to the Company's Tenth Amended and Restated Certificate of Incorporation, as amended, to decrease, concurrent with and conditioned upon the effectiveness of the Reverse Stock Split, the number of authorized shares of capital stock from 255,000,000 to 130,000,000 shares in order to decrease the number of authorized shares of common stock from 250,000,000 to 125,000,000 shares (the "Authorized Shares Decrease Proposal"); and
 3. To authorize one or more adjournments of the meeting, if necessary, to solicit additional proxies if there are insufficient votes in favor of the Reverse Stock Split and/or Authorized Shares Decrease Proposal at the Special Meeting or any adjournment(s) thereof.

Record Date: The Board of Directors has fixed the close of business January 12, 2021 as the record date for determining stockholders entitled to notice of, and to vote at, the Special Meeting or any adjournment or postponement thereof.

A list of stockholders of record will be available during the Special Meeting for inspection by stockholders at www.onconova.com.

The Company has enclosed a copy of the proxy statement and the proxy card. The proxy statement, the proxy card and the Annual Report are also available on the Company's website at www.onconova.com.

Your vote is important. Whether or not you plan to attend the meeting, we urge you to submit your proxy as soon as possible. You may submit your proxy three different ways: by mail, via the internet, or by telephone. You may also be entitled to vote in person (via the virtual meeting) at the meeting. Please refer to detailed instructions included in the accompanying proxy statement.

By order of the Board of Directors

/s/ Steven M. Fruchtman, M.D.

Steven M. Fruchtman, M.D.

President and Chief Executive Officer

Newtown, PA
January 13, 2021

Onconova Therapeutics, Inc.
375 Pheasant Run
Newtown, PA 18940

PROXY STATEMENT
FOR A SPECIAL MEETING OF STOCKHOLDERS

To be held on March 4, 2021

QUESTIONS AND ANSWERS ABOUT THESE PROXY MATERIALS AND VOTING

Why did I receive these proxy materials?

We have sent you this proxy statement and the enclosed proxy card because the Board of Directors (the “Board”) of Onconova Therapeutics, Inc. (the “Company,” “Onconova,” “we” or “us”) is soliciting your proxy to vote at a Special Meeting of Stockholders (the “Special Meeting”), including any adjournments or postponements of the Special Meeting, pursuant to rules adopted by the Securities and Exchange Commission (the “SEC”).

We intend to mail these proxy materials on or about January 13, 2021 to all stockholders of record entitled to vote at the Special Meeting.

Who can vote at the Special Meeting?

Only record holders of common stock at the close of business on January 12, 2021 (the “Record Date”) will be entitled to vote at the Special Meeting or any adjournment or postponement thereof. On the Record Date, there were 206,694,391 shares of common stock outstanding and entitled to vote. Holders of the Company’s Series A Convertible Preferred Stock (“Series A Preferred Stock”) or Series B Convertible Preferred Stock (“Series B Preferred Stock”) are not entitled to vote on the three proposals at the Special Meeting.

Stockholder of Record: Shares Registered in Your Name

If on the Record Date your shares were registered directly in your name with Onconova’s transfer agent, EQ Shareowner Services, then you are a stockholder of record. As a stockholder of record, you may vote in person at the Special Meeting or vote by proxy. Whether or not you plan to attend the Special Meeting, we urge you to submit your proxy pursuant to the instructions set forth below to ensure your vote is counted.

Beneficial Owner: Shares Registered in the Name of a Broker or Bank

If on the Record Date your shares were held, not in your name, but rather in an account at a brokerage firm, bank, dealer, or other similar organization, then you are the beneficial owner of shares held in “street name” and these proxy materials are being forwarded to you by that organization. The organization holding your account is considered to be the stockholder of record for purposes of voting at the Special Meeting. As a beneficial owner, you have the right to direct your broker or other agent on how to vote the shares in your account. You are also invited to attend the Special Meeting. However, because you are not the stockholder of record, you may not vote your shares in person at the Special Meeting unless you request and obtain a valid proxy from your broker or other agent. Your bank, broker or other agent has enclosed a voting instruction form for you to use to direct the bank, broker or other agent as to how to vote your shares. Please refer to the voting instruction form provided by your bank, broker or other agent for instructions on the voting methods they offer.

What am I voting on?

The Company is presenting three proposals for stockholder vote.

1. To consider and vote upon an amendment to our Tenth Amended and Restated Certificate of Incorporation, as amended, to combine outstanding shares of our common stock into a lesser number of outstanding shares, or a "Reverse Stock Split", by a ratio of not less than one-for-five and not more than one-for-fifteen, with the exact ratio to be set within this range by our Board of Directors in its sole discretion (the "Reverse Stock Split Proposal");
2. To approve an amendment to the Company's Tenth Amended and Restated Certificate of Incorporation, as amended, to decrease, concurrent with and conditioned upon the effectiveness of the Reverse Stock Split, the number of authorized shares of capital stock from 255,000,000 to 130,000,000 shares in order to decrease the number of authorized shares of common stock from 250,000,000 to 125,000,000 shares (the "Authorized Shares Decrease Proposal"); and
3. To authorize one or more adjournments of the meeting, if necessary, to solicit additional proxies if there are insufficient votes in favor of the Reverse Stock Split and/or Authorized Shares Decrease Proposal at the Special Meeting or any adjournment(s) thereof (the "Adjournment Proposal").

For each proposal, you may vote "For" such proposal, vote "Against" such proposal or "Abstain" from voting on such proposal.

The Board unanimously recommends a vote FOR each of the foregoing proposals.

What if another matter is properly brought before the Special Meeting?

The Board knows of no other matters that will be presented for consideration at the Special Meeting. If any other matters are properly brought before the Special Meeting, it is the intention of the persons named in the proxy to vote on those matters in accordance with their best judgment.

How do I vote?

You may vote your shares of common stock in person (all references to "present" or "in person" in this proxy statement relate to the virtual presence at the Special Meeting) or by proxy. You may submit your proxy by telephone, via the Internet or by completing the enclosed proxy card and mailing it in the envelope provided. Stockholders who hold shares in "street name" should refer to their proxy card or the information forwarded by their bank, broker or other nominee for instructions on the voting options available to them. To vote in person at the virtual meeting, you may attend the Special Meeting and vote your shares electronically during the virtual meeting.

How many votes do I have?

On each matter to be voted upon, you have one vote for each share of common stock you owned as of the Record Date.

What if I return a proxy card or otherwise vote by proxy but do not make specific choices?

If submitted your proxy without marking any voting selections, then the proxy holders will vote your shares as recommended by the Board on all matters presented in this Proxy Statement, and as the proxy holders may vote in their discretion with respect to any other matters properly presented for a vote at the Special Meeting.

Who is paying for this proxy solicitation?

We will bear the cost of this solicitation, including amounts paid to banks, brokers and other nominees to reimburse them for their expenses in forwarding solicitation materials regarding the Special Meeting to beneficial owners of common stock. The solicitation will be by mail, with the materials being forwarded to stockholders of record and certain other beneficial owners of our common stock, and by our officers and other regular employees (at no additional compensation). Our officers and employees may also solicit

proxies from stockholders by personal contact, by telephone, or by other means if necessary in order to assure sufficient representation at the Special Meeting.

Broadridge Financial Solutions has been retained to act as inspector of elections at the Special Meeting. We expect to pay Broadridge Financial Solutions approximately \$9,000 for these services. In addition, we engaged McKenzie Partners to assist with proxy solicitation at a cost not to exceed \$15,000.

What does it mean if I receive more than one proxy card?

If you receive more than one proxy card, your shares are registered in more than one name or are registered in different accounts. Please follow the voting instructions with respect to **each** proxy card to ensure that all of your shares are voted.

Can I change my vote after submitting my proxy?

Yes. You can revoke your proxy at any time before the closing of the polls at the Special Meeting. If you are a stockholder of record, you may revoke your proxy at any time before it is exercised by providing written notice to our Secretary at Onconova Therapeutics, Inc., 375 Pheasant Run, Newtown PA 18940, by delivery to us of a properly executed proxy bearing a later date, or by voting in person electronically by virtually attending the meeting. Simply attending the Special Meeting virtually will not, by itself, revoke your proxy.

If your shares are held by your broker or bank as a nominee or agent, you should follow the instructions provided by your broker or bank.

What is the quorum requirement?

A quorum of stockholders is necessary to hold a valid Special Meeting. A quorum will be present if at least the holders of a majority of the outstanding shares entitled to vote are represented by stockholders present at the Special Meeting or by proxy. On the Record Date, there were 206,694,391 shares outstanding and entitled to vote. Thus, 103,347,196 shares must be represented by stockholders present at the Special Meeting or by proxy to have a quorum.

Your shares will be counted towards the quorum only if you submit a valid proxy (or one is submitted on your behalf by your broker, bank or other nominee) or if you vote in person electronically at the Special Meeting. Abstentions will be counted towards the quorum requirement. If there is no quorum, the chairman of the Special Meeting or the holders of a majority of the outstanding shares entitled to vote present in person or by proxy at the Special Meeting may adjourn the meeting to another date.

What are “broker non-votes”?

A broker non-vote occurs when shares held by a broker are not voted with respect to a proposal because (1) the broker has not received voting instructions from the stockholder who beneficially owns the shares and (2) the broker lacks the authority to vote the shares at their discretion. A broker does not have the authority, unless the stockholder provides the broker with voting instructions, to vote on non-routine matters. If a stockholder does not provide the broker with voting instructions, a broker does have discretionary authority to vote your shares with respect to routine matters

Because the Reverse Stock Split Proposal, the Authorized Shares Decrease Proposal and the Adjournment Proposal are “routine” matters, a broker will be permitted to exercise its discretion to vote uninstructed shares on such proposals. As a result, we do not expect there to be any broker non-votes.

How are votes counted?

Votes will be counted by the inspector of election appointed for the Special Meeting, who will separately count “For” and “Against” votes, abstentions and, if any, broker non-votes. See below for further explanation on vote requirement for each proposal.

How many votes are needed to approve the Reverse Stock Split Proposal?

The affirmative vote of the holders of a majority of the outstanding shares of our common stock is required to approve the Reverse Stock Split Proposal. Abstentions will have the same effect as “Against”

votes. If you are a stockholder of record and you fail to submit your proxy or to vote at the meeting, it will have the same effect as an “Against” vote. If you are a stockholder of record and return a signed and dated proxy card without providing specific voting instructions on the Reverse Stock Split Proposal, or do not specify your vote on the Reverse Stock Split Proposal when submitting your proxy via the telephone or internet, your shares will be voted “For” the Reverse Stock Split Proposal in accordance with the recommendations of the Board of Directors.

We believe that the Reverse Stock Split Proposal is deemed to be a “routine” matter. Therefore, if you are a beneficial owner of shares registered in the name of your broker or other nominee and you fail to provide instructions to your broker or nominee as to how to vote your shares on the Reverse Stock Split Proposal, your broker or nominee will have the discretion to vote your shares on the Reverse Stock Split Proposal. Accordingly, if you fail to provide voting instructions to your broker or nominee, your broker or nominee can vote your shares on the Reverse Stock Split Proposal in a manner that may be contrary to what you intend. For example, if you are against the approval of the Reverse Stock Split Proposal but you do not provide any voting instructions to your broker, your broker can nonetheless vote your shares “For” the Reverse Stock Split Proposal. If you do not provide voting instructions and your broker or nominee fails to vote your shares, this will have the same effect as an “Against” vote. If you are a beneficial owner of shares registered in the name of your broker or other nominee, we strongly encourage you to provide voting instructions to the broker or nominee that holds your shares to ensure that your shares are voted in the manner in which you want them to be voted.

How many votes are needed to approve the Authorized Shares Decrease Proposal?

The affirmative vote of the holders of a majority of the outstanding shares of our common stock is required to approve the Authorized Shares Decrease Proposal. Abstentions will have the same effect as “Against” votes. If you are a stockholder of record and you fail to return your proxy card or to vote at all using the telephone or internet, it will have the same effect as an “Against” vote. If you are a stockholder of record and return a signed and dated proxy card without providing specific voting instructions on the Authorized Shares Decrease Proposal, or do not specify your vote on the Authorized Shares Decrease Proposal when voting using the telephone or internet, your shares will be voted “For” the Authorized Shares Decrease Proposal in accordance with the recommendations of the Board.

We believe that the Authorized Shares Decrease Proposal is deemed to be a “routine” matter. Therefore, if you are a beneficial owner of shares registered in the name of your broker or other nominee and you fail to provide instructions to your broker or nominee as to how to vote your shares on the Authorized Shares Decrease Proposal, your broker or nominee will have the discretion to vote your shares on the Authorized Shares Decrease Proposal. Accordingly, if you fail to provide voting instructions to your broker or nominee, your broker or nominee can vote your shares on the Authorized Shares Decrease Proposal in a manner that is contrary to what you intend. For example, if you are against the approval of the Authorized Shares Decrease Proposal but you do not provide any voting instructions to your broker, your broker can nonetheless vote your shares “For” the Authorized Share Decrease Proposal. While we do not expect any broker non-votes on the Authorized Shares Decrease Proposal, if you do not provide voting instructions and your broker or nominee fails to vote your shares, this will have the same effect as an “Against” vote. If you are a beneficial owner of shares registered in the name of your broker or other nominee, we strongly encourage you to provide voting instructions to the broker or nominee that holds your shares to ensure that your shares are voted in the manner in which you want them to be voted.

How many votes are needed to approve the Adjournment Proposal?

The affirmative vote of a majority of the votes cast is required to approve the Adjournment Proposal. Abstentions are not considered to be votes cast and will have no effect on the outcome of the vote. If you are a stockholder of record and you return your signed and dated proxy card without providing specific voting instructions on the Adjournment Proposal, or do not specify your vote on the Adjournment Proposal when submitting your proxy using the telephone or internet, your shares will be voted “For” the Adjournment Proposal in accordance with the recommendations of the Board. If you are a stockholder of record and you fail to return your proxy card, to submit your proxy using the telephone or internet or to vote at the Meeting, it will have no effect.

We believe that the Adjournment Proposal is deemed to be a “routine” matter. Therefore, if you are a beneficial owner of shares registered in the name of your broker or other nominee and you fail to provide instructions to your broker or nominee as to how to vote your shares on the Adjournment Proposal, your broker or nominee will have the discretion to vote your shares on the Adjournment Proposal.

How can I find out the results of the voting at the Special Meeting?

Preliminary voting results will be announced at the Special Meeting. Final voting results will be published in a current report on Form 8-K that we expect to file no later than four business days after the conclusion of the Special Meeting. If final voting results are not available to us in time to file a Form 8-K on or before the fourth business day after the Special Meeting, we intend to file a Form 8-K to publish preliminary results and, within four business days after the final results are known to us, file an additional Form 8-K to publish the final results.

When are stockholder proposals due for 2021 Annual Meeting of Stockholders?

Rule 14a-8 under the Securities Exchange Act of 1934, as amended (the “Exchange Act”) requires that, in order for a stockholder proposal to be considered for inclusion in a public company’s annual meeting proxy statement, the proposal must be received at the company’s principal executive offices not less than 120 calendar days before the date of the company’s proxy statement released to shareholders in connection with the previous year’s annual meeting. However, if the company did not hold an annual meeting the previous year, or if the date of this year’s annual meeting has been changed by more than 30 days from the date of the previous year’s meeting, then the deadline is a reasonable time before the company begins to print and send its proxy materials.

In accordance with Rule 14a-8, in order for a stockholder proposal to be considered for inclusion in our proxy statement for the 2021 Annual Meeting of Stockholders, the written proposal must be received at our principal executive offices on or before December 24, 2020. The proposal should be addressed to Secretary, Onconova Therapeutics, Inc., 375 Pheasant Run, Newtown PA 18940. The proposal must comply with SEC regulations regarding the inclusion of stockholder proposals in company-sponsored proxy materials.

In addition, in accordance with Section 2.2 of our bylaws, a stockholder who wishes to present a director nomination or proposal for consideration at the 2021 Annual Meeting of Stockholders must deliver a notice of the matter the stockholder wishes to present to our principal executive offices in Newtown, PA, at the address identified in the preceding paragraph, not less than 90 nor more than 120 days prior to the first anniversary of the date of our 2020 Annual Meeting of Stockholders. Accordingly, any notice given by or on behalf of a stockholder pursuant to these provisions of our bylaws (and not pursuant to Rule 14a-8 of the SEC) must be received no earlier than January 27, 2021 and no later than February 26, 2021 (except that in the event that the date of the 2021 Annual Meeting of Stockholders is advanced by more than 30 days, or delayed by more than 60 days, from the first anniversary of the meeting of stockholders, a stockholder’s notice must be so received no earlier than the 120th day prior to the 2021 Annual Meeting of Stockholders and not later than the close of business on the later of (A) the 90th day prior to the 2021 Annual Meeting of Stockholders or (B) the tenth day following the day on which public disclosure of the date of the 2021 Annual Meeting of Stockholders was made. The notice must include the information and otherwise satisfy the requirements set forth in our Bylaws.

Who can answer stockholder questions?

If you have any questions, require assistance with voting your proxy card, or need additional copies of proxy material, please contact our proxy solicitor, MacKenzie Partners, Inc., as follows:

MacKenzie Partners, Inc.
1407 Broadway, 27th Floor
New York, NY 10018
proxy@mackenziepartners.com
(212) 929-5500 or (800) 322-2885

PROPOSAL ONE

APPROVAL OF AN AMENDMENT TO OUR CERTIFICATE OF INCORPORATION TO COMBINE OUTSTANDING SHARES OF OUR COMMON STOCK INTO A LESSER NUMBER OF OUTSTANDING SHARES, OR A “REVERSE STOCK SPLIT,” BY A RATIO OF NOT LESS THAN ONE-FOR-FIVE AND NOT MORE THAN ONE-FOR-FIFTEEN, WITH THE EXACT RATIO TO BE SET WITHIN THIS RANGE BY OUR BOARD OF DIRECTORS IN ITS SOLE DISCRETION

Introduction

The Board of Directors has approved and declared advisable an amendment to our Tenth Amended and Restated Certificate of Incorporation, as amended, to combine the outstanding shares of our common stock into a lesser number of outstanding shares, a so-called “Reverse Stock Split.” If approved by the stockholders as proposed, the Board of Directors would have the sole discretion to effect the Reverse Stock Split at any time within 90 days after our Special Meeting and to fix the specific ratio for the Reverse Stock Split, provided that the ratio would be not less than one-for-five and not more than one-for-fifteen. The Board of Directors would also have the discretion to abandon the Reverse Stock Split prior to its effectiveness. The Board of Directors is hereby soliciting stockholder approval for the Reverse Stock Split Proposal.

If approved by our stockholders, the Reverse Stock Split would permit (but not require) the Board of Directors to effect a reverse stock split of the outstanding shares of our common stock at any time by a ratio of not less than one-for-five and not more than one-for-fifteen, with the specific ratio to be fixed within this range by the Board of Directors in its sole discretion without further stockholder approval. We believe that enabling the Board of Directors to fix the specific ratio of the Reverse Stock Split within the stated range will provide us with the flexibility to implement it in a manner designed to maximize the anticipated benefits for our stockholders. In fixing the ratio, the Board of Directors may consider, among other things, factors such as: the historical trading price and trading volume of our common stock; the number of shares of our common stock outstanding; the then-prevailing trading price and trading volume of our common stock; the anticipated impact of the Reverse Stock Split on the trading market for our common stock; potential financing opportunities; and prevailing general market and economic conditions.

The Reverse Stock Split, if approved by our stockholders, would become effective upon the filing of a Certificate of Amendment setting forth the Reverse Stock Split (the “Certificate of Amendment”) with the Secretary of State of the State of Delaware, or at the later time set forth in the Certificate of Amendment. The exact timing of the amendment will be determined by the Board of Directors based on its evaluation as to when such action will be the most advantageous to our Company and our stockholders. In addition, the Board of Directors reserves the right, notwithstanding stockholder approval and without further action by the stockholders, to abandon the Reverse Stock Split if, at any time prior to the effectiveness of the filing of the amendment with the Secretary of State, the Board of Directors, in its sole discretion, determines that it is no longer in our best interest and the best interests of our stockholders to proceed.

The proposed form of amendment to our Certificate of Incorporation to effect the Reverse Stock Split is attached as Appendix A to this proxy statement. Any amendment to our Certificate of Incorporation to effect the reverse stock split will include the reverse stock split ratio fixed by the Board of Directors, within the range approved by our stockholders.

Reasons for the Reverse Stock Split

Our common stock is listed on the Nasdaq Capital Market, which has as one of its continued listing requirements a minimum bid price of at least \$1.00 per share. Recently our common stock has traded significantly below \$1.00 per share. On October 6, 2020, we received a letter from The Nasdaq Stock Market LLC (“Nasdaq”) indicating that we failed to comply with the minimum bid price requirement, and that we have been provided with a 180-day grace period (which expires on April 5, 2021) to regain compliance. If we are not in compliance by April 5, 2021, we may be afforded a second 180-day period to regain compliance. We will regain compliance if the bid price of our common stock closes at \$1.00 per share or more for a minimum of ten consecutive trading days. The Reverse Stock Split Proposal is intended primarily to increase our per share bid price and satisfy the Nasdaq Capital Market continued listing requirement.

Reducing the number of outstanding shares of our common stock should, absent other factors, increase the per share market price of our common stock, although we cannot provide any assurance that we will be able to meet or maintain a bid price over the minimum bid price requirement for continued listing on the Nasdaq Capital Market or any other exchange.

The delisting of our common stock from the Nasdaq Capital Market may result in decreased liquidity, increased volatility in our common stock, a loss of current or future coverage by certain sell-side analysts and/or a diminution of institutional investor interest. Delisting could also cause a loss of confidence of our collaborators, vendors and employees, which could harm our business and future prospects. If our common stock were delisted from the Nasdaq Capital Market, it may qualify for quotation on the OTC Bulletin Board or other over-the-counter marketplace.

In evaluating the Reverse Stock Split, in addition to the considerations described above, the Board of Directors also took into account various negative factors associated with reverse stock splits generally. These factors include: the negative perception of reverse stock splits held by some investors, analysts, and other stock market participants; the fact that the stock price of some companies that have effected reverse stock splits has subsequently declined in share price and corresponding market capitalization; the adverse effect on liquidity that might be caused by a reduced number of shares outstanding; and the costs associated with implementing a reverse stock split.

We also believe that the low market price of our common stock impairs its acceptability to important segments of the institutional investor community and the investing public. Many investors look upon low-priced stock as speculative in nature and, as a matter of policy, avoid investment in such stocks. Moreover, the low market price of our common stock may have reduced the effective marketability of our shares because of the reluctance of many brokerage firms to recommend low-priced stock to their clients. Further, a variety of brokerage house policies and practices tend to discourage individual brokers within those firms from dealing in low-priced stocks. Some of those policies and practices pertain to the payment of brokers' commissions and to time-consuming procedures that function to make the handling of low-priced stocks unattractive to brokers from an economic standpoint. In addition, the structure of trading commissions also tends to have an adverse impact upon holders of low-priced stock because the brokerage commission on a sale of low-priced stock generally represents a higher percentage of the sales price than the commission on a relatively higher-priced issue.

In order to provide flexibility, the Board of Directors is seeking stockholder approval for a range of reverse split ratios of not less than one-for-five and not more than one-for-fifteen. The need for the range is due to the volatility of our stock price, which ranged from a high of \$1.56 per share to a low of \$0.19 per share between January 12, 2020 and January 12, 2021.

We believe that enabling the Board of Directors to set the exact reverse split ratio within the stated range will provide us with the flexibility to implement the Reverse Stock Split in a manner designed to maximize the anticipated benefits for our stockholders. In determining whether to implement the Reverse Stock Split and selecting the exchange ratio, the Board of Directors will consider factors such as:

- The total number of shares of common stock outstanding;
- The Nasdaq Capital Market requirements for the continued listing of our common stock;
- The historical trading price and trading volume of our common stock;
- The then prevailing trading price and trading volume for our common stock;
- The anticipated impact of the Reverse Stock Split on the trading price of and market for our common stock;
- Potential financing opportunities; and
- Prevailing general market and economic conditions.

Reducing the number of outstanding shares of our common stock through a Reverse Stock Split is intended, absent other factors, to increase the per share market price of our common stock. However, other factors, such as our financial results, market conditions and the market perception of our business may

adversely affect the market price of our common stock. As a result, there can be no assurance that the Reverse Stock Split, if completed, will result in the intended benefits described above, that the market price of our common stock will increase following the Reverse Stock Split or that the market price of our common stock will not decrease in the future. Additionally, we cannot assure you that the market price per share of our common stock after a Reverse Stock Split will increase in proportion to the reduction in the number of shares of our common stock outstanding before the Reverse Stock Split. Accordingly, the total market capitalization of our common stock after the Reverse Stock Split may be lower than the total market capitalization before the Reverse Stock Split.

The Board of Directors will have sole discretion as to any implementation of, and the exact timing and actual ratio of, the Reverse Stock Split within the range of ratios specified in this Proposal One and within 90 days after the date of the Special Meeting. The Board of Directors may also determine that the Reverse Stock Split is no longer in the best interests of our Company and our stockholders and decide to abandon the Reverse Stock Split at any time before, during or after the Special Meeting and prior to its effectiveness, without further action by the stockholders.

The reverse stock split alone would have no effect on our authorized capital stock, and the total number of authorized shares would remain the same as before the reverse stock split. This would have the effect of increasing the number of shares of common stock available for issuance. As of the Record Date, the number of authorized shares of our common stock was 250,000,000 shares, which will not be affected by the reverse stock split.

The additional available shares would be available for issuance from time to time at the discretion of the Board of Directors when opportunities arise, without further stockholder action or the related delays and expenses, except as may be required for a particular transaction by law, the rules of any exchange on which our securities may then be listed, or other agreements or restrictions. There are no preemptive rights relating to the common stock. As such, any issuance of additional shares of common stock would increase the number of outstanding shares of common stock and (unless such issuance was pro-rata among existing stockholders) the percentage ownership of existing stockholders would be diluted accordingly.

We are exploring various sources of financing, including through potential future sales of common stock or other securities. There can be no assurance, however, even if the Reverse Stock Split is approved and implemented, that any financing transaction would be undertaken or completed. If we are unable to successfully raise sufficient additional capital, through future sales of common stock or other securities or through strategic and collaborative arrangements, we will not have sufficient cash to fund our planned business operations and or may not be able to continue as a going concern.

As of the Record Date, we had 206,694,391 shares of common stock issued and outstanding, 958,770 shares of common stock reserved for issuance upon the exercise of outstanding options, 7,218,111 shares of common stock reserved for issuance upon the exercise of outstanding common stock warrants, and 95,414 shares of common stock reserved for future issuances under our 2018 Equity Compensation Plan. As of the Record Date, we had no shares of Series A Convertible Preferred Stock or Series B Convertible Preferred Stock issued and outstanding, and 1,806,104 shares of common stock reserved for outstanding preferred stock warrants exercisable to Series A Convertible Preferred Stock or Series B Convertible Preferred Stock and convertible into common stock.

Potential Effects of Proposed Amendment

If our stockholders approve the Reverse Stock Split and the Board of Directors effects it, the number of shares of common stock authorized and issued and outstanding will be reduced due to the Reverse Stock Split, depending upon the ratio determined by the Board of Directors. The Reverse Stock Split will affect all holders of our common stock uniformly and will not affect any stockholder's percentage ownership interest in the Company, except that as described below in "Fractional Shares," record holders of common stock otherwise entitled to a fractional share as a result of the Reverse Stock Split because they hold a number of shares not evenly divisible by the Reverse Stock Split ratio will automatically be entitled to receive an additional fraction of a share of common stock to round up to the next whole share. In addition, the Reverse Stock Split will not affect any stockholder's proportionate voting power (subject to the treatment of fractional shares).

The Reverse Stock Split will not change the terms of the common stock. After the Reverse Stock Split, the shares of common stock will have the same voting rights and rights to dividends and distributions and will be identical in all other respects to the common stock now authorized. The common stock will remain fully paid and non-assessable.

The Reverse Stock Split may result in some stockholders owning “odd-lots” of less than 100 shares of our common stock. Brokerage commissions and other costs of transactions in odd-lots are generally higher than the costs of transactions in “round-lots” of even multiples of 100 shares.

After the effective time of the Reverse Stock Split we will continue to be subject to the periodic reporting and other requirements of the Exchange Act. Subject to our compliance with applicable continued listing requirements, our common stock will continue to be listed on the Nasdaq Capital Market and traded under the symbol “ONTX,” although the exchange will add the letter “D” to the end of the trading symbol for a period of 20 trading days after the effective time to indicate that a Reverse Stock Split has occurred. The Reverse Stock Split is not intended as, and will not have the effect of, a “going private transaction” as described by Rule 13e-3 under the Exchange Act.

After the effective time of a Reverse Stock Split, the post-split market price of our common stock may be less than the pre-split price multiplied by the reverse stock split ratio. In addition, a reduction in number of shares outstanding may impair the liquidity for our common stock, which may reduce the value of our common stock.

Beneficial Holders of Common Stock

Upon the implementation of the Reverse Stock Split, we intend to treat shares held by stockholders through a bank, broker or other nominee in the same manner as registered stockholders whose shares are registered in their names. Banks, brokers or other nominees will be instructed to effect the Reverse Stock Split for their beneficial holders holding our common stock in street name. However, these banks, brokers or other nominees may have different procedures than registered stockholders for processing the Reverse Stock Split. Stockholders who hold shares of our common stock with a bank, broker or other nominee and who have any questions in this regard are encouraged to contact their banks, brokers or other nominees.

Registered “Book-Entry” Holders of Common Stock

Certain of our registered holders of common stock may hold some or all of their shares electronically in book-entry form with the transfer agent. These stockholders do not have stock certificates evidencing their ownership of the common stock. They are, however, provided with statements reflecting the number of shares registered in their accounts.

Stockholders who hold shares electronically in book-entry form with the transfer agent will not need to take action to receive evidence of their shares of post- Reverse Stock Split common stock.

Holders of Certificated Shares of Common Stock

Stockholders holding shares of our common stock in certificated form will be sent a transmittal letter by the transfer agent after the effective time of the Reverse Stock Split. The letter of transmittal will contain instructions on how a stockholder should surrender his, her or its certificate(s) representing shares of our common stock (the “Old Certificates”) to the transfer agent. Unless a stockholder specifically requests a new paper certificate or holds restricted shares, upon the stockholder’s surrender of all of the stockholder’s Old Certificates to the transfer agent, together with a properly completed and executed letter of transmittal, the transfer agent will register the appropriate number of shares of post- Reverse Stock Split common stock electronically in book-entry form and provide the stockholder with a statement reflecting the number of shares registered in the stockholder’s account. No stockholder will be required to pay a transfer or other fee to exchange his, her or its Old Certificates. Until surrendered, we will deem outstanding Old Certificates held by stockholders to be cancelled and only to represent the number of shares of post- Reverse Stock Split common stock to which these stockholders are entitled. Any Old Certificates submitted for exchange, whether because of a sale, transfer or other disposition of stock, will automatically be exchanged for

appropriate number of shares of post- Reverse Stock Split common stock. If an Old Certificate has a restrictive legend on its reverse side, a new certificate will be issued with the same restrictive legend on its reverse side.

STOCKHOLDERS SHOULD NOT DESTROY ANY STOCK CERTIFICATE(S) AND SHOULD NOT SUBMIT ANY STOCK CERTIFICATE(S) UNTIL REQUESTED TO DO SO.

Fractional Shares

We will not issue fractional shares in connection with the Reverse Stock Split. Instead, stockholders who otherwise would be entitled to receive fractional shares because they hold a number of shares not evenly divisible by the reverse stock split ratio will automatically be entitled to receive an additional fraction of a share of common stock to round up to the next whole share.

Effect of the Reverse Stock Split on Outstanding Stock Options, Warrants, Convertible Preferred Stock and Employee Plans

Based upon the reverse stock split ratio, proportionate adjustments are generally required to be made to the per share exercise price and the number of shares issuable upon the exercise of all outstanding options, warrants and convertible preferred stock entitling the holders to purchase shares of common stock. This would result in approximately the same aggregate price being required to be paid under such options, warrants or convertible preferred stock upon exercise, and approximately the same value of shares of common stock being delivered upon such exercise immediately following the Reverse Stock Split as was the case immediately preceding the Reverse Stock Split. The number of shares reserved for issuance pursuant to these securities will be reduced proportionately based upon the reverse stock split ratio.

Accounting Matters

The proposed amendment to our Certificate of Incorporation will not affect the par value of our common stock. As a result, at the effective time of the Reverse Stock Split, the stated capital on our balance sheet attributable to the common stock will be reduced in the same proportion as the reverse stock split ratio, and the additional paid-in capital account will be credited with the amount by which the stated capital is reduced. The per share net income or loss and net book value of the common stock will be reclassified for prior periods to conform to the post- Reverse Stock Split presentation.

Certain Federal Income Tax Consequences of the Reverse Stock Split

The following summary describes certain U.S. federal income tax consequences of the Reverse Stock Split to holders of our common stock. This summary addresses the tax consequences only to a U.S. holder, which is a beneficial owner of our common stock that is either:

- an individual citizen or resident of the United States;
- a corporation, or other entity taxable as a corporation for U.S. federal income tax purposes, created or organized in or under the laws of the United States or any state thereof or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income taxation regardless of its source; or
- a trust, if: (i) a court within the United States is able to exercise primary jurisdiction over its administration and one or more U.S. persons has the authority to control all of its substantial decisions or (ii) it was in existence before August 20, 1996 and a valid election is in place under applicable Treasury regulations to treat such trust as a U.S. person for U.S. federal income tax purposes.

This summary is based on the provisions of the Internal Revenue Code of 1986, as amended (the "Code"), U.S. Treasury regulations, administrative rulings and judicial authority, all as in effect as of the date of this proxy statement. Subsequent developments in U.S. federal income tax law, including changes in law or differing interpretations, which may be applied retroactively, could have a material effect on the U.S. federal income tax consequences of the Reverse Stock Split.

This summary does not address all of the tax consequences that may be relevant to any particular investor, including tax considerations that arise from rules of general application to all taxpayers or to certain classes of taxpayers or that are generally assumed to be known by investors. This summary also does not address the tax consequences to (i) persons that may be subject to special treatment under U.S. federal income tax law, such as banks, insurance companies, thrift institutions, regulated investment companies, real estate investment trusts, tax-exempt organizations, U.S. expatriates, persons subject to the alternative minimum tax, persons whose functional currency is not the U.S. dollar, partnerships or other pass-through entities, traders in securities that elect to mark to market and dealers in securities or currencies, (ii) persons that hold our common stock as part of a position in a “straddle” or as part of a “hedging transaction,” “conversion transaction” or other integrated investment transaction for federal income tax purposes or (iii) persons that do not hold our common stock as “capital assets” (generally, property held for investment). This summary does not address backup withholding and information reporting. This summary does not address U.S. holders who beneficially own common stock through a “foreign financial institution” (as defined in Code Section 1471(d)(4)) or certain other non-U.S. entities specified in Code Section 1472. This summary does not address tax considerations arising under any state, local or foreign laws, or under federal estate or gift tax laws.

If a partnership (or other entity classified as a partnership for U.S. federal income tax purposes) is the beneficial owner of our common stock, the U.S. federal income tax treatment of a partner in the partnership will generally depend on the status of the partner and the activities of the partnership. Partnerships that hold our common stock, and partners in such partnerships, should consult their own tax advisors regarding the U.S. federal income tax consequences of the Reverse Stock Split.

General Tax Treatment of the Reverse Stock Split

The Reverse Stock Split is intended to qualify as a “reorganization” under Section 368 of the Code that should constitute a “recapitalization” for U.S. federal income tax purposes. Assuming the Reverse Stock Split qualifies as a reorganization, a U.S. holder generally will not recognize gain or loss upon the exchange of our ordinary shares for a lesser number of ordinary shares, based upon the reverse stock split ratio. A U.S. holder’s aggregate tax basis in the lesser number of ordinary shares received in the Reverse Stock Split will be the same such U.S. holder’s aggregate tax basis in the shares of our common stock that such U.S. holder owned prior to the Reverse Stock Split. The holding period for the ordinary shares received in the Reverse Stock Split will include the period during which a U.S. holder held the shares of our common stock that were surrendered in the Reverse Stock Split. The United States Treasury regulations provide detailed rules for allocating the tax basis and holding period of the shares of our common stock surrendered to the shares of our common stock received pursuant to the Reverse Stock Split. U.S. holders of shares of our common stock acquired on different dates and at different prices should consult their tax advisors regarding the allocation of the tax basis and holding period of such shares.

THE FOREGOING IS A SUMMARY OF CERTAIN FEDERAL INCOME TAX CONSEQUENCES OF THE REVERSE STOCK SPLIT, AND DOES NOT CONSTITUTE A TAX OPINION. EACH HOLDER OF OUR COMMON SHARES SHOULD CONSULT ITS OWN TAX ADVISOR REGARDING THE TAX CONSEQUENCES OF THE REVERSE STOCK SPLIT AND FOR REFERENCE TO APPLICABLE PROVISIONS OF THE CODE.

Amendment Effective Date

If the proposed amendment to the Certificate of Incorporation as described in this Proposal One is approved by the stockholders, the Company will file the Certificate of Amendment reflecting the adopted amendment with the Secretary of State of the State of Delaware. The Certificate of Amendment will be effective upon its filing or at such later time as specified in the Certificate of Amendment. If the stockholders do not approve this Proposal One, the Certificate of Amendment will not be filed with the Secretary of State of the State of Delaware.

Dissenters’ Rights

No dissenters’ rights are available under the General Corporation Law of the State of Delaware or under the Certificate of Incorporation or the Bylaws to any stockholder who dissents from this Proposal One.

Interests of Directors and Executive Officers

Our directors and executive officers do not have substantial interest, directly or indirectly, in the matters set forth in this proposal except to the extent of their ownership of shares of common stock or any other of our securities.

Vote Required

The affirmative vote of the holders of a majority of the outstanding shares of our common stock is required to approve this Proposal One.

**THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS
A VOTE “FOR” THE PROPOSAL TO AMEND OUR CERTIFICATE OF INCORPORATION TO
COMBINE OUTSTANDING SHARES OF OUR COMMON STOCK INTO A LESSER NUMBER OF
OUTSTANDING SHARES, OR A “REVERSE STOCK SPLIT,” BY A RATIO OF NOT LESS THAN ONE-
FOR-FIVE AND NOT MORE THAN ONE-FOR-FIFTEEN, WITH THE EXACT RATIO TO BE SET
WITHIN THIS RANGE BY OUR BOARD OF DIRECTORS IN ITS SOLE DISCRETION.**

PROPOSAL TWO

APPROVAL OF AN AMENDMENT TO OUR CERTIFICATE OF INCORPORATION TO DECREASE, CONCURRENT WITH AND CONDITIONED UPON THE EFFECTIVENESS OF THE REVERSE STOCK SPLIT, THE NUMBER OF AUTHORIZED SHARES OF COMMON STOCK

General

The Board of Directors has approved and declared advisable an amendment to our Tenth Amended and Restated Certificate of Incorporation, as amended, to decrease, concurrent with and conditioned upon the effectiveness of the Reverse Stock Split, the number of authorized shares of capital stock from 255,000,000 to 130,000,000 shares in order to decrease the number of authorized shares of common stock from 250,000,000 to 125,000,000 shares.

As of the Record Date, we had 206,694,391 shares of common stock issued and outstanding, 958,770 shares of common stock reserved for issuance upon the exercise of outstanding options, 7,218,111 shares of common stock reserved for issuance upon the exercise of outstanding common stock warrants, and 95,414 shares of common stock reserved for future issuances under our 2018 Equity Compensation Plan. As of the Record Date, we had no shares of Series A Convertible Preferred Stock or Series B Convertible Preferred Stock issued and outstanding, and 1,806,104 shares of common stock reserved for outstanding preferred stock warrants exercisable to Series A Convertible Preferred Stock or Series B Convertible Preferred Stock and convertible into common stock.

Reason for the Proposal

As a matter of Delaware law, implementation of the Reverse Stock Split does not require a change in the total number of shares of common stock authorized under the Certificate of Incorporation. If the number of outstanding shares of common stock resulting from the reverse stock split in Proposal One is approved by the stockholders and implemented by the Board, the Company may no longer have a need for 250,000,000 authorized shares of common stock. This need will depend on the ratio that the Board deems to be in the best interest of the Company and its stockholders.

The proposed authorization to reduce the number of authorized shares of common stock is also intended to conform to the requirements of certain entities that make recommendations to stockholders regarding proposals submitted by the Company and to ensure that the Company does not have what some stockholders might view as an unreasonably high number of authorized but unissued shares of common stock. In the event that we need to increase our authorized shares of common stock in the future, we may, subject to stockholder approval, seek to amend the Certificate of Incorporation to increase the number of authorized shares of common stock. In addition, the Board believes that the reduction in the number of authorized shares of common stock may also reduce certain of our costs, such as annual franchise taxes paid to the State of Delaware.

If our stockholders approve the Reverse Stock Split and the Board chooses to effect it, the Board would decrease the number of authorized shares by filing the amendment to our Certificate of Incorporation, which is set forth in Appendix B to this proxy statement.

Description of the Amendment

Subject to stockholder approval of Proposal One and this Proposal Two, and concurrent with and conditioned upon the effectiveness of the Reverse Stock Split, Article IV, Section A, of the Certificate of Incorporation is hereby amended and restated in its entirety as follows:

“A. Classes of Stock. The Corporation is authorized to issue two classes of capital stock to be designated, respectively, “Common Stock” and “Preferred Stock”, each of which shall have a par value of \$0.01 per share. The total number of shares which the Corporation is authorized to issue is 130,000,000 shares, of which (i) 125,000,000 shares shall be designated as Common Stock and (ii) 5,000,000 shares shall be designated as Preferred Stock. Such stock may be issued from time to time by the Corporation for such consideration as may be fixed by the board of directors of the Corporation (the “Board of Directors”).”

Amendment Effective Date

Concurrent with and conditioned upon the effectiveness of the Reverse Stock Split, if the proposed amendment to the Certificate of Incorporation as described in this Proposal Two is approved by the stockholders, the Company will file the Certificate of Amendment reflecting the adopted amendment with the Secretary of State of the State of Delaware. The Certificate of Amendment will be effective upon its filing. If the stockholders do not approve this Proposal Two, the Certificate of Amendment will not be filed with the Secretary of State of the State of Delaware.

Dissenters' Rights

No dissenters' rights are available under the General Corporation Law of the State of Delaware or under the Certificate of Incorporation or the Bylaws to any stockholder who dissents from this Proposal Two.

Interests of Directors and Executive Officers

Our directors and executive officers do not have substantial interest, directly or indirectly, in the matters set forth in this proposal except to the extent of their ownership of shares of common stock, Series B Preferred Stock (if any) or any other of our securities.

Vote Required

The affirmative vote of the holders of a majority of the outstanding shares of our common stock is required to approve this Proposal Two.

**THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS
A VOTE "FOR" THE PROPOSAL TO AMEND OUR CERTIFICATE OF INCORPORATION TO
DECREASE, CONCURRENT WITH AND CONDITIONED UPON THE EFFECTIVENESS OF THE
REVERSER STOCK SPLIT, THE NUMBER OF AUTHORIZED SHARES OF COMMON STOCK.**

PROPOSAL THREE

AUTHORIZATION TO ADJOURN THE SPECIAL MEETING

General

If the Special Meeting is convened and a quorum is present, but there are not sufficient votes to approve the Reverse Stock Split Proposal and/or the Authorized Shares Decrease Proposal, our proxy holders may move to adjourn the Special Meeting at that time in order to enable the Board to solicit additional proxies.

In this proposal, we are asking our stockholders to authorize one or more adjournments of the meeting to another time and place, if necessary, to solicit additional proxies in the event there are not sufficient votes to approve the Reverse Stock Split Proposal and/or the Authorized Shares Decrease Proposal. If our stockholders approve this proposal, we could adjourn the Special Meeting and any adjourned session of the Special Meeting and use the additional time to solicit additional proxies, including the solicitation of proxies from our stockholders that have previously voted. Among other things, approval of this proposal could mean that, even if we had received proxies representing a sufficient number of votes to defeat Proposal One, we could adjourn the Special Meeting without a vote on such proposal and seek to convince our stockholders to change their votes in favor of such proposal.

If it is necessary to adjourn the Special Meeting, no notice of the adjourned meeting is required to be given to our stockholders, other than an announcement at the Special Meeting of the time and place to which the Special Meeting is adjourned, so long as the meeting is adjourned for 30 days or less and no new Record Date is fixed for the adjourned meeting. At the adjourned meeting, we may transact any business which might have been transacted at the original meeting.

Vote Required

The affirmative vote of a majority of the votes cast is required to approve this Proposal Three.

THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS A VOTE “FOR” THE APPROVAL OF THE PROPOSAL TO AUTHORIZE ONE OR MORE ADJOURNMENTS THE SPECIAL MEETING, IF NECESSARY, TO SOLICIT ADDITIONAL PROXIES IN THE EVENT THAT THERE ARE NOT SUFFICIENT VOTES AT THE TIME OF THE SPECIAL MEETING OR ANY ADJOURNMENT(S) THEREOF TO APPROVE THE REVERSE STOCK SPLIT PROPOSAL AND/OR THE AUTHORIZED SHARES DECREASE PROPOSAL.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information regarding the beneficial ownership of common stock as of the Record Date by (a) each person known by us to be the beneficial owner of more than 5% of the outstanding shares of common stock, (b) each of our named executive officers, (c) each of our directors, and (d) all of our executive officers and directors as a group.

The percentage of common stock outstanding is based on 206,694,391 shares of common stock outstanding as of the Record Date. For purposes of the table below, and in accordance with the rules of the SEC, we deem shares of common stock subject to warrants and options that are currently exercisable or exercisable within sixty days of the Record Date to be outstanding and to be beneficially owned by the person holding the warrants and options for the purpose of computing the percentage ownership of that person, but we do not treat them as outstanding for the purpose of computing the percentage ownership of any other person. Except as otherwise noted, each of the persons or entities in this table has sole voting and investing power with respect to all of the shares of common stock beneficially owned by him, her or it, subject to community property laws, where applicable. Except as otherwise noted below, the street address of each beneficial owner is c/o Onconova Therapeutics, Inc., 375 Pheasant Run, Newtown, PA 18940.

Name and Address of Beneficial Owner	Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned
5% or greater stockholders:		
Lincoln Park Capital Fund, LLC, Lincoln Park Capital, LLC, Rockledge Capital Corporation, Joshua B. Scheinfeld, Alex Noah Investors, Inc., Jonathan I. Cope 440 North Wells, Suite 410 Chicago, Illinois 60654 ⁽¹⁾	13,639,411	6.52%
Other Directors, Director Nominees and Named Executive Officers:		
Jerome E. Groopman, M.D. ⁽²⁾	22,336	*
Manoj Maniar, Ph.D. ⁽³⁾	6,855	*
James J. Marino ⁽⁴⁾	367,748	*
Steven M. Fruchtman, M.D. ⁽⁵⁾	474,869	*
Viren Mehta ⁽⁶⁾	512,985	*
Jack E. Stover ⁽⁷⁾	15,106	*
Terri Shoemaker	20,000	*
Richard C. Woodman, M.D. ⁽⁸⁾	42,752	*
Mark Guerin ⁽⁹⁾	270,897	*
All current executive officers, directors and director nominees as a group (9 persons) ⁽¹⁰⁾	1,976,258	1.0%

* Represents a beneficial ownership of less than one percent of our outstanding common stock.

(1) Based solely on a Schedule 13G filed with the SEC on January 8, 2021. The Schedule 13G was filed by Lincoln Park Capital Fund, LLC, Lincoln Park Capital, LLC, Rockledge Capital Corporation, Joshua B. Scheinfeld, Alex Noah Investors, Inc. and Jonathan I. Cope. According to the Schedule 13G, as of January 7, 2021, Lincoln Park Capital Fund, LLC, Lincoln Park Capital, LLC, Rockledge Capital Corporation, Joshua B. Scheinfeld, Alex Noah Investors, Inc. and Jonathan I. Cope have shared voting power and shared dispositive power with regard to 13,639,411 of Common Stock, representing approximately 6.52% of the Common Stock.

As previously disclosed on the Company's Current Report on Form 8-K filed with the SEC on January 8, 2021, in connection with a registered direct offering of an aggregate of 19,551,124 shares of common stock (the "Offering") pursuant to a purchase agreement dated January 7, 2021, by and among the Company, to Lincoln Park and certain other investors, Lincoln Park has agreed to vote all

of the shares of the common stock beneficially owned by and entitled to vote at the Special Meeting in favor of each Company proposal that is submitted by the Company to its stockholders for a vote at the Special Meeting.

- (2) Includes 12,335 shares of common stock issuable upon the exercise of options that are currently exercisable or exercisable within sixty days of the record date.
- (3) Includes 6,851 shares of common stock issuable upon the exercise of options that are currently exercisable or exercisable within sixty days of the record date. Manoj Maniar, Ph.D. resigned as Senior Vice President, Product Development of the Company on December 15, 2020.
- (4) Includes 162,032 shares of common stock issuable upon the exercise of warrants and options that are currently exercisable or exercisable within sixty days of the record date.
- (5) Includes 258,643 shares of common stock issuable upon the exercise of warrants and options that are currently exercisable or exercisable within sixty days of the record date.
- (6) Includes (i) 54 shares of common stock held by Mehta Partners, LLC, (ii) 56 shares of common stock held by Viram Foundation and (iii) 262,030 shares of common stock issuable upon the exercise of warrants and options that are currently exercisable or exercisable within sixty days of the record date. Dr. Mehta, as managing member, has voting and dispositive power with regard to the shares held by Mehta Partners, LLC. Dr. Mehta, as trustee has voting and dispositive power with regard to the shares held by Viram Foundation.
- (7) Includes 11,965 shares of common stock issuable upon the exercise of options that are currently exercisable or exercisable within sixty days of the record date.
- (8) Includes 42,752 shares of common stock issuable upon the exercise of options that are currently exercisable or exercisable within sixty days of the record date.
- (9) Includes 140,684 shares of common stock issuable upon the exercise of warrants and options that are currently exercisable or exercisable within sixty days of the record date.
- (10) Includes 1,000,006 shares of common stock issuable upon the exercise of warrants and options that are currently exercisable or exercisable within sixty days of the record date.

HOUSEHOLDING OF PROXY MATERIALS

Certain banks, brokers, broker-dealers and other similar organizations acting as nominee record holders may be participating in the practice of “householding” proxy materials. This means that only one copy of this proxy statement may have been sent to multiple stockholders in your household. If you would prefer to receive separate copies of this proxy statement for other stockholders in your household, either now or in the future, please contact your bank, broker, broker-dealer or other similar organization serving as your nominee. Upon written or oral request to our Secretary at Onconova Therapeutics, Inc., 375 Pheasant Run, Newtown PA 18940, or via telephone to our Secretary at 267-759-3680, we will promptly provide separate copies of this proxy statement. Stockholders sharing an address who are receiving multiple copies of this proxy statement and who wish to receive a single copy of these materials in the future will need to contact their bank, broker, broker-dealer or other similar organization serving as their nominee to request that only a single copy of each document be mailed to all stockholders at the shared address in the future.

OTHER MATTERS

We do not know of any business other than that described in this Proxy Statement that will be presented for consideration or action by the stockholders at the Special Meeting. If, however, any other business is properly brought before the Special Meeting, shares represented by proxies will be voted in accordance with the best judgment of the persons named in the proxies or their substitutes.

By Order of the Board of Directors

/s/ Steven M. Fruchtman, M.D.

Steven M. Fruchtman, M.D.

President and Chief Executive Officer

Newtown, PA

January 13, 2021

Appendix A

**CERTIFICATE OF AMENDMENT
TO
TENTH AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF
ONCONOVA THERAPEUTICS, INC.**

ONCONOVA THERAPEUTICS, INC., a corporation organized and existing under the General Corporation Law of the State of Delaware (the "Corporation"), does hereby certify as follows:

FIRST: The name of the Corporation is Onconova Therapeutics, Inc. The Tenth Amended and Restated Certificate of Incorporation was originally filed with the Secretary of State of the State of Delaware (the "Secretary of State") on July 30, 2013, and has been amended by a Certificate of Amendment to the Tenth Amended and Restated Certificate of Incorporation filed with the Secretary of State on May 31, 2016, a Certificate of Designation of Preference, Rights and Limitations of Series A Convertible Preferred Stock filed with the Secretary of State on February 8, 2018, a Certificate of Amendment to the Tenth Amended and Restated Certificate of Incorporation, as amended, filed with the Secretary of State on March 21, 2018, a Certificate of Amendment to the Tenth Amended and Restated Certificate of Incorporation, as amended, filed with the Secretary of State on June 7, 2018, a Certificate of Designation of Preference, Rights and Limitations of Series B Convertible Preferred Stock filed with the Secretary of State on April 27, 2018 and a Certificate of Amendment to the Tenth Amended and Restated Certificate of Incorporation, as amended, filed with the Secretary of State on September 25, 2018 (the Tenth Amended and Restated Certificate of Incorporation, as so amended, the "Certificate of Incorporation").

SECOND: Article IV, Section A, of the Certificate of Incorporation is hereby amended and restated in its entirety as follows:

"A. Classes of Stock. The Corporation is authorized to issue two classes of capital stock to be designated, respectively, "*Common Stock*" and "*Preferred Stock*", each of which shall have a par value of \$0.01 per share. The total number of shares which the Corporation is authorized to issue is 255,000,000 shares, of which (i) 250,000,000 shares shall be designated as Common Stock and (ii) 5,000,000 shares shall be designated as Preferred Stock. Such stock may be issued from time to time by the Corporation for such consideration as may be fixed by the board of directors of the Corporation (the "*Board of Directors*").

Reverse Stock Split. Upon the filing and effectiveness (the "*Effective Time*") of this Certificate of Amendment pursuant to the Section 242 of the General Corporation Law of the State of Delaware, each () shares of the Corporation's common stock, par value of \$0.01 per share, issued and outstanding (or held in treasury) immediately prior to the Effective Time (the "*Old Common Stock*") shall automatically without further action on the part of the Corporation or any holder of Old Common Stock, be reclassified, combined, converted and changed into one (1) fully paid and nonassessable share of common stock, par value of \$0.01 per share (the "*New Common Stock*"), subject to the treatment of fractional share interests as described below (the "*reverse stock split*"). The conversion of the Old Common Stock into New Common Stock will be deemed to occur at the Effective Time. From and after the Effective Time, certificates representing the Old Common Stock shall represent the number of shares of New Common Stock into which such Old Common Stock shall have been converted pursuant to this Certificate of Amendment. Holders who otherwise would be entitled to receive fractional share interests of New Common Stock upon the effectiveness of the reverse stock split shall be entitled to receive a whole share of New Common Stock in lieu of any fractional share created as a result of such reverse stock split."

THIRD: The stockholders of the Corporation have duly approved the foregoing amendment in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, the Corporation has caused this Certificate of Amendment to be duly adopted and executed in its corporate name and on its behalf by its duly authorized officer as of the day of _____, 2021.

ONCONOVA THERAPEUTICS, INC.

By: _____

Name: Steven M. Fruchtman, M.D.

Title: *President and Chief Executive Officer*

Appendix B

**CERTIFICATE OF AMENDMENT
TO
TENTH AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF
ONCONOVA THERAPEUTICS, INC.**

ONCONOVA THERAPEUTICS, INC., a corporation organized and existing under the General Corporation Law of the State of Delaware (the "Corporation"), does hereby certify as follows:

FIRST: The name of the Corporation is Onconova Therapeutics, Inc. The Tenth Amended and Restated Certificate of Incorporation was originally filed with the Secretary of State of the State of Delaware (the "Secretary of State") on July 30, 2013, and has been amended by a Certificate of Amendment to the Tenth Amended and Restated Certificate of Incorporation filed with the Secretary of State on May 31, 2016, a Certificate of Designation of Preference, Rights and Limitations of Series A Convertible Preferred Stock filed with the Secretary of State on February 8, 2018, a Certificate of Amendment to the Tenth Amended and Restated Certificate of Incorporation, as amended, filed with the Secretary of State on March 21, 2018 and a Certificate of Designation of Preference, Rights and Limitations of Series B Convertible Preferred Stock filed with the Secretary of State on April 27, 2018, a Certificate of Amendment to the Tenth Amended and Restated Certificate of Incorporation, as amended, filed with the Secretary of State on September 25, 2018 and a Certificate of Amendment to the Tenth Amended and Restated Certificate of Incorporation, as amended, filed with the Secretary of State on _____, 2021 (the Tenth Amended and Restated Certificate of Incorporation, as so amended, the "Certificate of Incorporation").

SECOND: Article IV, Section A, of the Certificate of Incorporation is hereby amended and restated in its entirety as follows:

"A. Classes of Stock. The Corporation is authorized to issue two classes of capital stock to be designated, respectively, "Common Stock" and "Preferred Stock", each of which shall have a par value of \$0.01 per share. The total number of shares which the Corporation is authorized to issue is 130,000,000 shares, of which (i) 125,000,000 shares shall be designated as Common Stock and (ii) 5,000,000 shares shall be designated as Preferred Stock. Such stock may be issued from time to time by the Corporation for such consideration as may be fixed by the board of directors of the Corporation (the "Board of Directors")."

THIRD: The stockholders of the Corporation have duly approved the foregoing amendment in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, the Corporation has caused this Certificate of Amendment to be duly adopted and executed in its corporate name and on its behalf by its duly authorized officer as of the day of _____, 2021.

ONCONOVA THERAPEUTICS, INC.

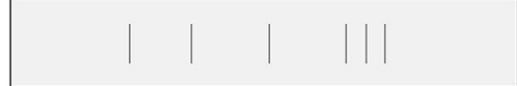
By: _____

Name: Steven M. Fruchtman, M.D.

Title: *President and Chief Executive Officer*

ONCONOVA THERAPEUTICS, INC.
 375 PHEASANT RUN
 NEWTOWN, PA 18940

Investor Address Line 1
 Investor Address Line 2
 Investor Address Line 3
 Investor Address Line 4
 Investor Address Line 5
 John Sample
 1234 ANYWHERE STREET
 ANY CITY, ON A1A 1A1



VOTE BY INTERNET - www.proxyvote.com
 Use the Internet to transmit your voting instructions and for electronic delivery of information. Vote by 11:59 P.M. ET on 03/03/2021. Have your proxy card in hand when you access the web site and follow the instructions to obtain your records and to create an electronic voting instruction form.

During The Meeting - Go to www.virtualshareholdermeeting.com/ONTX2021SM

You may attend the meeting via the Internet and vote during the meeting. Have the information that is printed in the box marked by the arrow available and follow the instructions.

VOTE BY PHONE - 1-800-690-6903
 Use any touch-tone telephone to transmit your voting instructions. Vote by 11:59 P.M. ET on 03/03/2021. Have your proxy card in hand when you call and then follow the instructions.

VOTE BY MAIL
 Mark, sign and date your proxy card and return it in the postage-paid envelope we have provided or return it to Vote Processing, c/o Broadridge, 51 Mercedes Way, Edgewood, NY 11717.



NAME
 THE COMPANY NAME INC. - COMMON
 THE COMPANY NAME INC. - CLASS A
 THE COMPANY NAME INC. - CLASS B
 THE COMPANY NAME INC. - CLASS C
 THE COMPANY NAME INC. - CLASS D
 THE COMPANY NAME INC. - CLASS E
 THE COMPANY NAME INC. - CLASS F
 THE COMPANY NAME INC. - 401 K

CONTROL # → 0000000000000000

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PAGE 1 OF 2

TO VOTE, MARK BLOCKS BELOW IN BLUE OR BLACK INK AS FOLLOWS:

KEEP THIS PORTION FOR YOUR RECORDS
 DETACH AND RETURN THIS PORTION ONLY

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

The Board of Directors recommends you vote FOR proposals 1, 2 and 3.

<p>1. To consider and vote upon an amendment to our Tenth Amended and Restated Certificate of Incorporation, as amended, to combine outstanding shares of our common stock into a lesser number of outstanding shares, or a "Reverse Stock Split", by a ratio of not less than one-for-five and not more than one-for-fifteen, with the exact ratio to be set within this range by our Board of Directors in its sole discretion.</p>	For	Against	Abstain
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>2. To approve an amendment to the Company's Tenth Amended and Restated Certificate of Incorporation, as amended, to decrease, concurrent with and conditioned upon the effectiveness of the Reverse Stock Split, the number of authorized shares of capital stock from 255,000,000 to 130,000,000 shares in order to decrease the number of authorized shares of common stock from 250,000,000 to 125,000,000 shares.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>3. Proposal to adjourn the Special Meeting, if necessary, to solicit additional proxies in the event there are not sufficient votes at the time of the Special Meeting to approve proposals 1 and 2.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

NOTE: Such other business as may properly come before the meeting or any adjournment thereof.

Please sign exactly as your name(s) appear(s) hereon. When signing as attorney, executor, administrator, or other fiduciary, please give full title as such. Joint owners should each sign personally. All holders must sign. If a corporation or partnership, please sign in full corporate or partnership name, by authorized officer.

Investor Address Line 1
 Investor Address Line 2
 Investor Address Line 3
 Investor Address Line 4
 Investor Address Line 5
 John Sample
 1234 ANYWHERE STREET
 ANY CITY, ON A1A 1A1

Signature [PLEASE SIGN WITHIN BOX] Date

Signature (Joint Owners) Date

SHARES
CUSIP #
SEQUENCE #

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ONCONOVA THERAPEUTICS, INC.
Special Meeting of Stockholders
Thursday, March 4, 2021 9:00 AM ET
This proxy is solicited by the Board of Directors

The stockholder(s) hereby appoint(s) Mark Guerin and Steven M. Fruchtman, or either of them, as proxies, each with the power to appoint his substitute, and hereby authorize(s) them to represent and to vote, as designated on the reverse side of this ballot, all of the shares of common stock of ONCONOVA THERAPEUTICS, INC. that the stockholder(s) is/are entitled to vote at the Special Meeting of Stockholders to be held at 9:00 AM, ET on Thursday, March 4, 2021, via a live webcast at www.virtualshareholdermeeting.com/ONTX2021SM, and any adjournment or postponement thereof.

This proxy, when properly executed, will be voted in the manner directed herein. If no such direction is made, this proxy will be voted in accordance with the Board of Directors' recommendations.

Continued and to be signed on reverse side

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