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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 14A

Proxy Statement Pursuant to Section 14(a) of
the Securities Exchange Act of 1934 (Amendment No.)

Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

- Preliminary Proxy Statement
- Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))**
- Definitive Proxy Statement
- Definitive Additional Materials
- Soliciting Material under §240.14a-12

ONCONOVA THERAPEUTICS, INC.

(Name of Registrant as Specified In Its Charter)

NOT APPLICABLE

(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check the appropriate box):

- No fee required.
- Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.
- (1) Title of each class of securities to which transaction applies: _____
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- Fee paid previously with preliminary materials.
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- (2) Form, Schedule or Registration Statement No.: _____

(3) Filing Party:

(4) Date Filed:

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Onconova Therapeutics, Inc.
375 Pheasant Run
Newtown, PA 18940 USA
Tel: 267-759-3680—Fax: 267-759-3681

April , 2016

Dear Stockholder,

We cordially invite you to attend our 2016 Annual Meeting of Stockholders to be held at 10:00 a.m. Eastern Daylight Time on Wednesday, May 18, 2016 at the offices of Pepper Hamilton LLP, The New York Times Building, 620 Eighth Avenue, 37th Floor, New York, NY 10018. The attached notice of annual 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.

Your vote is very important, regardless of the number of shares you hold. Whether or not you plan to attend the meeting, please carefully review the enclosed proxy statement and then cast your vote.

We hope that you will join us on May 18, 2016.

Sincerely,

/s/ RAMESH KUMAR PH.D.

Ramesh Kumar
President and Chief Executive Officer

PRELIMINARY COPY - SUBJECT TO COMPLETION

Onconova Therapeutics, Inc.

375 Pheasant Run

Newtown, PA 18940

Notice of 2016 Annual Meeting of Stockholders

NOTICE IS HEREBY GIVEN that the 2016 Annual Meeting of Stockholders of Onconova Therapeutics, Inc., a Delaware corporation (the "Company"), will be held on:

Date: May 18, 2016

Time: 10:00 a.m. Eastern Daylight Time

Place: Offices of Pepper Hamilton LLP
The New York Times Building
37th Floor
620 Eighth Avenue
New York, NY 10018
USA

- Purposes:**
1. To elect eight directors, each to hold office until the 2017 annual meeting of stockholders and until his or her successor is elected and qualified;
 2. To consider and vote upon a proposal to amend our certificate of incorporation to combine outstanding shares of our common stock into a lesser number of outstanding shares, a "reverse stock split," by a ratio of not less than one-for-eight and not more than one-for-twelve, with the exact ratio to be set within this range by our board of directors in its sole discretion;
 3. To consider and vote upon a proposal to approve, conditioned upon stockholder approval and implementation of the reverse stock split, an amendment to our certificate of incorporation to reduce the number of our authorized shares of common stock from 75,000,000 to 25,000,000;
 4. To consider and vote upon the ratification of the selection of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2016;
 5. To consider and vote upon a proposal to adjourn the annual meeting, if necessary, to solicit additional proxies in the event that there are not sufficient votes at the time of the annual meeting to approve the reverse stock split; and
 6. To transact such other business as may properly come before the meeting or any adjournments or postponements thereof.

Record Date: The Board of Directors has fixed the close of business on April 6, 2015 as the record date for determining stockholders entitled to notice of, and to vote at, the meeting or any adjournment or postponement thereof.

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The Company has enclosed a copy of the proxy statement, the proxy card and the Company's annual report to stockholders for the year ended December 31, 2015 (the "Annual Report"). The proxy statement, the proxy card and the Annual Report are also available on the Company's website at www.onconova.com. If you plan on attending the Annual Meeting and voting your shares in person, you will need to bring photo identification in order to be admitted to the Annual Meeting. To obtain directions to the Annual Meeting, please call the Company at 267-759-3680.

FOR THE BOARD OF DIRECTORS

/s/ RAMESH KUMAR

Ramesh Kumar
President and Chief Executive Officer

Newtown, PA
April , 2015

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Onconova Therapeutics, Inc.

375 Pheasant Run
Newtown, PA 18940

**PROXY STATEMENT
ANNUAL MEETING OF STOCKHOLDERS TO BE HELD MAY 18, 2016**

GENERAL INFORMATION

This Proxy Statement is furnished to stockholders of Onconova Therapeutics, Inc., a Delaware corporation ("we," "us," or the "Company"), in connection with the solicitation by our board of directors of proxies for use at our 2016 Annual Meeting of Stockholders. The annual meeting is scheduled to be held at 10:00 a.m. Eastern Daylight Time on Wednesday, May 18, 2016, at the offices of Pepper Hamilton LLP, The New York Times Building, 620 Eighth Avenue, 37th Floor, New York, NY 10018. We anticipate that this Proxy Statement and the enclosed form of proxy will be mailed to stockholders on or about April 13, 2016.

At the annual meeting, stockholders will be asked to consider and vote upon: (1) the election of eight directors, each to hold office until the 2017 annual meeting of stockholders and until his or her successor is elected and qualified; (2) a proposal to amend our certificate of incorporation to combine outstanding shares of our common stock into a lesser number of outstanding shares, a "reverse stock split," by a ratio of not less than one-for-eight and not more than one-for-twelve, with the exact ratio to be set within this range by our board of directors in its sole discretion; (3) a proposal to approve, conditioned upon stockholder approval and implementation of the reverse stock split, an amendment to our certificate of incorporation to reduce the number of our authorized shares of common stock from 75,000,000 to 25,000,000; (4) the ratification of the selection of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2016; (5) a proposal to adjourn the annual meeting, if necessary, to solicit additional proxies in the event that there are not sufficient votes at the time of the annual meeting to approve the reverse stock split; and (6) such other business as may properly come before the annual meeting or any adjournments or postponements thereof.

Our board of directors is recommending the reverse stock split proposal with the intent of increasing the per share price of our common stock and satisfying the minimum bid price requirement for continued listing on the NASDAQ Capital Market.

Voting Rights and Votes Required

The close of business on April 6, 2015 has been fixed as the record date for the determination of stockholders entitled to receive notice of and to vote at the Meeting. As of the close of business on such date, we had outstanding and entitled to vote 27,401,035 shares of our common stock, par value \$0.01 per share. You may vote your shares of common stock by in person 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.

The presence at the annual meeting, whether in person or by valid proxy, of a majority of the holders of our common stock will constitute a quorum, permitting us to conduct our business at the meeting. The record holder of each share of common stock entitled to vote at the annual meeting will have one vote for each share so held. Abstentions and broker non-votes will count for quorum purposes.

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Directors are elected by a plurality of the votes cast when a quorum is present. Stockholders may not cumulate their votes. The eight candidates receiving the highest number of votes will be elected. Because directors are elected by a plurality of the votes, votes withheld from a director nominee and broker non-votes will have no effect on the outcome of the vote.

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 and the proposal to reduce the number of our authorized shares of common stock. Because these proposals require the affirmative vote of a majority of the outstanding shares of our common stock, abstentions and broker non-votes have the same effect as votes against the proposals.

Approval of the proposals to ratify the selection of our independent registered public accounting firm and to adjourn the annual meeting each requires the affirmative vote of a majority of the votes cast. In tabulating the votes with respect to these proposals, abstentions and any broker non-votes will not be considered votes cast and, therefore, will have no effect on the outcome of the vote.

If your shares of common stock are held in street name by a bank, broker or other nominee, that bank, broker or other nominee, as the record holder of your shares, is required to vote your shares according to your instructions. If you do not instruct your bank, broker or other nominee how to vote, your bank, broker or other nominee may vote those shares only on "routine" matters, such as the ratification of the selection of our independent registered public accounting firm. On non-routine matters, such as the election of directors, banks, brokers or other nominees cannot vote. If shares held by a bank, broker or other nominee are represented at the meeting, but are not voted on a matter, there is a so-called "broker non-vote" on that matter.

Voting of Proxies

Most stockholders have three ways to submit a proxy: by telephone, via the Internet or by completing the enclosed proxy card and mailing it in the envelope provided. To submit a proxy by telephone or via the Internet, follow the instructions set forth on each proxy card you receive. To submit a proxy by mail, sign and date each proxy card you receive, mark the boxes indicating how you wish to vote and return the proxy card in the postage-paid envelope provided. Do not return the proxy card if you submit your proxy via the Internet or by telephone.

Our board of directors recommends a vote **FOR** the election of each director nominee, **FOR** the proposal to amend our certificate of incorporation to combine outstanding shares of our common stock into a lesser number of outstanding shares, a "reverse stock split," by a ratio of not less than one-for-eight and not more than one-for-twelve, with the exact ratio to be set within this range by our board of directors in its sole discretion; **FOR** the proposal, conditioned upon stockholder approval and implementation of the reverse stock split, to reduce the number of our authorized shares of common stock; **FOR** ratification of the selection of Ernst & Young LLP as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2016; and **FOR** the proposal to adjourn the annual meeting, if necessary, to solicit additional proxies in the event that there are not sufficient votes at the time of the annual meeting to approve the reverse stock split.

Revocation of Proxies

Any proxy given pursuant to this solicitation may be revoked by a stockholder at any time before it is exercised by providing written notice to our Secretary, by delivery to us of a properly executed proxy bearing a later date, or by voting in person at the annual meeting.

Solicitation of Proxies

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 annual meeting to beneficial owners of our 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 annual meeting.

Wells Fargo Shareowner Services, our transfer agent, has been retained to act as inspector of elections at the annual meeting. We will pay Wells Fargo \$1,200 for these services.

PROPOSAL ONE—ELECTION OF DIRECTORS

Pursuant to our bylaws, our directors are elected at each annual meeting of stockholders, and serve until their successors are elected and qualified at the next annual meeting of stockholders, or until their prior death, resignation, retirement, disqualification or other removal.

The eight persons listed in the table below have been nominated by our board of directors for election as directors with terms expiring at the 2017 annual meeting of stockholders. Unless a contrary direction is indicated, it is intended that proxies received will be voted for the election as directors of the eight nominees, each to hold office until the 2017 annual meeting of stockholders and until his or her successor is elected and qualified.

Each of the nominees has consented to being named in this Proxy Statement and to serve as a director if elected. In the event any nominee for director declines or is unable to serve, the proxies may be voted for a substitute nominee selected by the Board of Directors.

THE BOARD OF DIRECTORS RECOMMENDS A VOTE FOR *ALL* NOMINEES.

All of our directors bring to our Board of Directors executive leadership experience from their service as executives and/or directors of our Company and/or other entities. The biography of each of the nominees below contains information regarding the person's business experience, director positions held currently or at any time during the last five years, and the experiences, qualifications, attributes and skills that caused the Nominating and Corporate Governance Committee and our Board of Directors to determine that the person should serve as a director, given our business and structure.

Name	Age	Position(s) with Onconova Therapeutics, Inc.	Served as Director From
Henry S. Bienen, Ph.D.	77	Director	2009
Jerome E. Groopman, M.D.	64	Director	2013
Michael B. Hoffman	65	Chairman of the Board of Directors	2002
Ramesh Kumar, Ph.D.	60	Director, President and Chief Executive Officer	1998
Viren Mehta	66	Director	2004
James J. Marino	65	Director	2015
E. Premkumar Reddy, Ph.D.	72	Director	1999
Jack E. Stover	62	Director Nominee	N/A

Henry S. Bienen, Ph.D. Dr. Bienen has served as a member of our board of directors since May 2009. He currently serves as the chairman of Rasmussen College, has served as the president emeritus of Northwestern University since August 2009 and served as the president of Northwestern University from 1995 to 2009. Dr. Bienen was the James S. McDonnell Distinguished University Professor and Dean of the Woodrow Wilson School of Public and International Affairs at Princeton University prior to his appointment at Northwestern. Dr. Bienen began his association with Princeton University in 1966, advancing from assistant professor to professor of politics and international affairs, and was then appointed the William Stewart Tod Professor of Politics and International Affairs in 1981 and the James S. McDonnell Distinguished University Professor in 1985. Dr. Bienen has served as a director of the Grosvenor Registered Multi Strategy Fund (TI 1), LLC, the Grosvenor Registered Multi Strategy Fund (TI 2), LLC, the Grosvenor Registered Multi Strategy Fund (TE), LLC and the Grosvenor Registered Multi Strategy Master Fund, LLC since April 2011. Dr. Bienen serves on the board of directors of Ryan Specialty Group and previously served on the boards of directors of The Bear Stearns Companies Inc., until its purchase by JP Morgan Chase & Co. in 2008, SPSS Inc. from 2007 until 2009, when the company was sold to IBM Corporation, and Gleacher & Company, a publicly held investment banking firm, from May 2010 to April 2013. Dr. Bienen also currently chairs the advisory board of The Vistria Group, a private equity firm, and serves on the Chicago Board of Education.

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Dr. Bienen received his Bachelor's Degree with honors from Cornell University and both his Master's Degree and Ph.D., from the University of Chicago.

Our board of directors believes Dr. Bienen's perspective and experience as a director of a public company, as well as his educational background, provide him with the qualifications and skills to serve as a director.

Jerome E. Groopman, M.D. Dr. Groopman has served as a member of our board of directors since July 2013. Dr. Groopman has served as the Dina and Raphael Recanati Professor of Medicine at Harvard Medical School since January 1992. He has also served as Attending Hematologist/Oncologist at Beth Israel Deaconess Medical Center since July 1996. Dr. Groopman received an M.D. from Columbia University College of Physicians and Surgeons, and a B.A. in Political Philosophy from Columbia College.

Our board of directors believes Dr. Groopman's perspective and experience in the healthcare industry, as well as his educational background, provide him with the qualifications and skills to serve as a director.

Michael B. Hoffman. Mr. Hoffman has served as Chairman of the Board of Directors since 2006 and as a member of our board of directors since December 2002. Since 2003, Mr. Hoffman has been a partner of Riverstone Holdings LLC, or Riverstone, where he is principally responsible for investments in power and renewable energy. Before joining Riverstone, Mr. Hoffman was senior managing director and head of the mergers and acquisitions advisory business of The Blackstone Group L.P., or Blackstone, where he also served on the firm's principal group investment committee as well as its executive committee. Prior to joining Blackstone, Mr. Hoffman was managing director and co-head of the mergers and acquisitions department at Smith Barney, Harris Upham & Co. Mr. Hoffman currently serves as a director of Pattern Energy, Inc., Talen Energy Corporation, and the general partner of Enviva Partners. Mr. Hoffman also serves on the board of directors of QR Pharma and various private companies sponsored by Riverstone. His non-profit board affiliations include Rockefeller University. Mr. Hoffman received his Bachelor's and Master's Degrees from Northwestern University and his M.B.A. from the Harvard Business School.

Our board of directors believes Mr. Hoffman's perspective and experience as an investor, as well as his educational background, provide him with the qualifications and skills to serve as a director.

Ramesh Kumar, Ph.D. Dr. Kumar is one of our co-founders, and is currently our President and Chief Executive Officer, a position he has held since 1998, as well as a member of our board of directors. Prior to our founding, Dr. Kumar held positions in research and development or management at Princeton University, Bristol-Myers Squibb Company, or Bristol-Myers Squibb, DNX Corp. (later Nextran Corp., a subsidiary of Baxter International Inc.) and Kimeragen, Inc. (later ValiGen Inc.), a genomics company, where he was President of the Genomics and Transgenics Division. Dr. Kumar received his Ph.D. in Molecular Biology from the University of Illinois, Chicago, and trained at the National Cancer Institute. Additionally, Dr. Kumar received his B.Sc. and M.Sc., both with honors, in Microbiology from Panjab University.

Our board of directors believes Dr. Kumar's perspective and experience as our co-founder, President and Chief Executive Officer, as well as his depth of operating and senior management experience in our industry, provide him with the qualifications and skills to serve as a director.

James J. Marino. Mr. Marino has served as a member of our board of directors since July 2015. Prior to July 2015, Mr. Marino was a Partner at the global law firm of Dechert LLP for 28 years, where he served as Managing Partner of the Princeton Office. Mr. Marino served as the outside counsel for Onconova from its inception through and including its initial public offering. Previously, he served on the board of directors of Pharmacoepia Drug Discovery, Inc. from 2000 to 2006 and has worked in

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advisory capacities and on the boards of multiple non-profit organizations, including Robert Wood Johnson University Hospital. He currently serves on the Board of Trustees of Wake Forest University and Wake Forest Baptist Medical Center. Mr. Marino received his B.A., J.D. and MBA from Rutgers University.

Our board of directors believes that Mr. Marino's perspective and experience advising Onconova and numerous other leading life science companies in connection with financings, acquisitions and strategic alliances, provide him with the qualifications and skills to serve as a director.

Viren Mehta. Dr. Mehta has served as a member of our board of directors since February 2004. Dr. Mehta has been a managing member of Mehta Partners since 1997. Mehta Partners provides strategic advisory services to the biotechnology and pharmaceutical companies worldwide. Prior to founding Mehta Partners, Dr. Mehta co-founded Mehta and Isaly in 1989, and prior to that was a part of the strategic planning team of the International Division at Merck & Co. Dr. Mehta earned a Doctor of Pharmacy at the University of Southern California, and an M.B.A. from the Anderson School of Business at the University of California, Los Angeles.

Our board of directors believes Dr. Mehta's perspective and experience in the life sciences industry as a biopharma fund manager, fund consultant and a strategic advisor to senior managers in the biopharma industry, as well as his educational background, provide him with the qualifications and skills to serve as a director.

E. Premkumar Reddy, Ph.D. Dr. Reddy is one of our scientific founders and has served as a member of our board of directors since February 1999. Since March 2010, Dr. Reddy has served as a Professor at Mount Sinai School of Medicine, or Mount Sinai and Director of the Experimental Cancer Therapeutics Program at the Tisch Cancer Institute at Mount Sinai. From 1992 to February 2010, Dr. Reddy served as a Professor and Director of the Fels Institute for Cancer Research of Temple University. He was the founder and co-editor of the international journal of cancer research, *Oncogene*, published by Nature Publishing Group. Dr. Reddy received his B.Sc., M.Sc. and Ph.D. from Osmania University.

Our board of directors believes Dr. Reddy's perspective and experience as our co-founder, his educational background, as well as his experience in research and product development, provide him with the qualifications and skills to serve as a director.

Jack E. Stover. Mr. Stover has been nominated for election to our board of directors at the annual meeting. From May 2012 through May 2013, we engaged Mr. Stover, through JE Stover Consulting, LLC, to assist us in preparing for our initial public offering. Since December 2015, Mr. Stover has served as Interim President and CEO of Interpace Diagnostics Group, Inc., formerly known as "PDI, Inc.", and has served on their board of directors since August 2005. He was the chair of PDI's audit committee from August 2005 until December 2015. Mr. Stover has been Chief Executive Officer of Zebec Therapeutics LLC ("Zebec") since April 2014. Zebec is the successor to Quadrant Pharmaceuticals LLC, which Mr. Stover co-founded and was President and Director of from September 2013. From 2009 to February 2012, Mr. Stover served as the executive chairman of Targeted Nano Therapeutics LLC, a privately held biotechnology company focused on targeted delivery of peptides and proteins. Mr. Stover was also chairman of the audit committee and a member of the board of directors of Arbios Systems Inc. from 2005 to 2008 and a member of the board of directors of Influmedix, Inc. from 2010 to 2011. From 2004 to 2008, he served as chief executive officer, president and director of Antares Pharma, Inc., a publicly held specialty pharmaceutical company listed on the American Stock Exchange. Prior to that, Mr. Stover was executive vice president and chief financial officer of Sicor, Inc., a publicly held company which manufactured and marketed injectable pharmaceutical products, and which was acquired by Teva Pharmaceutical Industries. Prior to that, Mr. Stover was executive vice president and director of a proprietary women's pharmaceutical company,

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Gynetics, Inc. ("Gynetics"), and before Gynetics, he was senior vice president and director of B. Braun Medical, Inc., a private global medical device and pharmaceutical company. For more than five years prior to that, Mr. Stover was a partner with PricewaterhouseCoopers (then Coopers and Lybrand), working in the bioscience industry division in New Jersey. Mr. Stover received his B.A. in Accounting from Lehigh University and is a Certified Public Accountant.

Our board of directors believes that Mr. Stover's experience holding senior leadership positions in the life sciences industry, his specific experience and skills in the areas of general operations, and financial operations and administration, and his extensive experience in accounting and as an audit committee member and chair of various public companies in the life sciences industry, provide him with the qualifications and skills to serve as a director.

Incumbent Director

Anne M. VanLent. Ms. VanLent has served as a member of our board of directors since July 2013, and her term will end at the annual meeting, upon the election and qualification of her successor. Ms. VanLent has served as President of AMV Advisors, a personal consulting firm providing strategic and financial services to companies in the greater life sciences sector, since May 2008. Ms. VanLent has served as a director of Biota Pharmaceuticals, Inc. since May 2013, where she has also served as chair of the audit committee and as a member of the nominating and governance committee since May 2013 and lead independent director since November 2015; as a director and chair of the audit committee of Aegerion Pharmaceuticals, Inc. since April 2013 and a member of the compensation committee and the compliance committee since 2015; and as a director of Ocera Therapeutics, Inc. (formerly Tranzyme Pharmaceuticals, Inc.) since April 2011, where she has also served as chair of the nominating and governance committee since December 2013. From December 2004 to May 2013, Ms. VanLent served as a director of Integra Life Sciences Holding Corporation, where she was a member of the audit committee from December 2004 to May 2013, serving as its chair from May 2006 to May 2012, and a member of the compensation committee from 2004 to 2006. Ms. VanLent also served as a director of Penwest Pharmaceuticals Co., from 1997 to 2010, where she was chair of the audit committee from 2002 to 2010 and chair of the nomination and governance committee in 2010. Ms. VanLent received a B.A. degree in Physics from Mount Holyoke College.

Our board of directors believes that Ms. VanLent's extensive leadership and finance experience, and her extensive experience serving as a board member, audit committee member and audit committee chair of public companies in the life sciences industry, has provided her with the qualifications and skills to serve as a director.

Executive Officers

The following table sets forth certain information regarding our executive officers who are not also directors.

Name	Age	Position(s) with Onconova Therapeutics, Inc.
Steven M. Fruchtman, M.D.	65	Chief Medical Officer, and Senior Vice President, Research and Development
Manoj Maniar, Ph.D.	53	Senior Vice President, Product Development
Mark P. Guerin	47	Vice President—Financial Planning & Accounting, and Chief Accounting Officer

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Steven M. Fruchtman, M.D. Dr. Fruchtman has served as our Chief Medical Officer and Senior Vice President, Research and Development since January 2015. Dr. Fruchtman is a board certified hematologist with extensive industry experience in clinical research for myelodysplastic syndromes, hematologic malignancies and solid tumors. From June 2014 to January 2015, Dr. Fruchtman was a hematology oncology drug development consultant. From September 2013 to June 2014, Dr. Fruchtman served as Chief Medical Officer at Syndax Pharmaceuticals, Inc., a biopharmaceutical company. From July 2011 to July 2013, Dr. Fruchtman was the Chief Medical Officer and Senior Vice President of Research and Regulatory Affairs at Spectrum Pharmaceuticals. From February 2011 to June 2011, he was Vice President of Research at Spectrum Pharmaceuticals, Inc., a biopharmaceutical company. From February 2009 to January 2011, Dr. Fruchtman was Vice President, Clinical Research at Allos Therapeutics, Inc., a biopharmaceutical company. Prior to this, Dr. Fruchtman held senior positions at Novartis and Ortho Biotech Products. Dr. Fruchtman was on the faculty of the Mount Sinai School of Medicine and was the Director of the Stem Cell Transplantation and Myeloproliferative Disorder Programs at Mount Sinai Hospital in New York City. Dr. Fruchtman received his medical degree from New York Medical College and his B.A. from Cornell University.

Mark P. Guerin Mr. Guerin has served as Vice President—Financial Planning & Accounting, and Chief Accounting Officer since May 2014, and as Vice President—Financial Planning & Accounting from September 2013 to May 2014. He has also served as our principal financial officer since February 12, 2016. Between January 2012 and September 2013, Mr. Guerin was self-employed as a financial and accounting consultant. For more than six years, through December 2011, Mr. Guerin was employed by CardioKine, Inc., serving as Chief Financial Officer from mid-2009 through December 2011. Mr. Guerin received his B.A. in Accounting from DeSales University.

Manoj Maniar, Ph.D. Dr. Maniar has served as our Senior Vice President, Product Development since August 2005. Prior to joining us, Dr. Maniar was with SRI International, Inc., a nonprofit research institute, where he served as Senior Director, Formulations and Drug Delivery. Dr. Maniar received his B.S. in Pharmacy from Bombay College of Pharmacy and his Ph.D. in Pharmaceutics from the University of Connecticut.

Director Compensation

The following table summarizes compensation paid to our non-employee directors in fiscal 2015.

Name	Fees Earned or Paid in Cash (\$)	Stock Option Awards \$(1)	All Other Compensation (\$)	Total (\$)
Henry S. Bienen, Ph.D.	41,000	16,977	—	57,977
Jerome E. Groopman, M.D.	33,000	16,977	—	49,977
Michael B. Hoffman	68,000	22,070	—	90,070
James J. Marino	20,250	46,888	—	67,138
Viren Mehta	45,000	16,977	—	61,977
E. Premkumar Reddy, Ph.D.	30,000	16,977	196,526(2)	243,503
Anne M. VanLent	56,000	16,977	—	72,977

(1) Represents the fair value of the shares and options on the date of grant, calculated in accordance with Accounting Standards Codification (ASC) No. 718, *Compensation—Stock Compensation* (ASC 718).

(2) Represents consulting fees paid to Dr. Reddy. See "Certain Relationships and Related Person Transactions."

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- (3) At December 31, 2015, the aggregate number of outstanding stock option awards held by each non-employee director was: Dr. Bienen—67,803; Dr. Groopman—94,252; Mr. Hoffman—222,794; Mr. Marino—30,000; Dr. Mehta—30,000; Dr. Reddy—48,754; and Ms. VanLent—50,000.

In June 2013, our board of directors approved a non-employee director compensation policy, which became effective for all non-employee directors in July 2013. In accordance with this policy, each non-employee director receives an annual base retainer of \$30,000. In addition, our non-employee directors receive the following cash compensation for board services, as applicable:

- the chairman of our board of directors receives an additional annual retainer of \$20,000;
- each member of our audit, compensation and nominating and corporate governance committees receives an additional retainer of \$6,000, \$5,000 and \$3,000, respectively; and
- each chairperson of our audit, compensation and nominating and corporate governance committees receives an additional annual retainer of \$15,000, \$10,000 and \$6,000, respectively, in addition to the retainer received for service as a member of such committee.

All amounts are paid in quarterly installments.

In addition, newly appointed non-employee directors receive a one-time initial award of options to purchase 20,000 shares of our common stock, which vests annually over a three-year period subject to the director's continued service on the board of directors. Thereafter, each non-employee director receives an annual award of options to purchase 10,000 shares of our common stock, which vests monthly over a twelve-month period subject to the director's continued service on the board of directors. The chairman of our board of directors additionally receives an annual award of options to purchase 3,000 shares of our common stock, which vests monthly over a twelve-month period subject to the director's continued service on the board of directors.

All of our directors are eligible to receive additional discretionary awards under our 2013 Equity Compensation Plan, provided that non-employee directors may not receive incentive stock options.

We reimburse each non-employee director for out-of-pocket expenses incurred in connection with attending our board of directors and committee meetings. Compensation for our directors, including cash and equity compensation, is determined, and remains subject to adjustment, by our board of directors.

Corporate Governance

Board Composition

Our board of directors currently consists of eight members. Our board of directors has undertaken a review of the independence of our directors and has determined that all directors except Ramesh Kumar, Ph.D. and E. Premkumar Reddy, Ph.D. are independent within the meaning of Section 5605(a)(2) of the NASDAQ Stock Market listing rules and Rule 10A-3 under the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Our tenth amended and restated certificate of incorporation provides that our board of directors will consist of not less than three nor more than 11 directors, as such number of directors may from time to time be fixed by our board of directors. Each director shall be elected to the board to hold office until the next annual meeting of stockholders and until his or her successor is elected and qualified.

Board Leadership Structure and Role in Risk Oversight

Our board of directors recognizes the time, effort and energy that the chief executive officer is required to devote to his position in the current business environment, as well as the commitment required to serve as our chairman, particularly as the board of directors' oversight responsibilities

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continue to grow. We believe that, at present, separating these positions allows our chief executive officer to focus on our day-to-day business, while allowing our chairman to lead the board of directors in its fundamental role of providing advice to, and independent oversight of, management. Our board of directors also believes that this structure ensures a greater role for the independent directors in the oversight of our company and active participation of the independent directors in setting agendas and establishing priorities and procedures for the work of our board of directors.

While our bylaws do not require that our chairman and chief executive officer positions be separate, our board of directors believes that having separate positions is the appropriate leadership structure for us at this time and demonstrates our commitment to good corporate governance.

Risk is inherent with every business, and how well a business manages risk can ultimately determine its success. We face a number of risks, including but not limited to risks relating to limited cash resources, need to raise additional funds, product candidate development, technological uncertainty, dependence on collaborative partners and other third parties, uncertainty regarding patents and proprietary rights, comprehensive government regulations, having no commercial manufacturing experience, marketing or sales capability or experience and dependence on key personnel. Management is responsible for the day-to-day management of risks we face, while our board of directors, as a whole and through its committees, has responsibility for the oversight of risk management. In its risk oversight role, our board of directors has the responsibility to satisfy itself that the risk management processes designed and implemented by management are adequate and functioning as designed. The board of directors periodically consults with management regarding the Company's risks.

Our board of directors is actively involved in oversight of risks that could affect us. This oversight is conducted primarily through the audit committee of our board of directors, but the full board of directors has retained responsibility for general oversight of risks.

Board Committees

Our board of directors has established three standing committees: the audit committee, the compensation committee and the nominating and corporate governance committee. The current members of our audit committee are Henry S. Bienen, Ph.D., James J. Marino, Viren Mehta and Anne M. VanLent, with Anne M. VanLent serving as chairperson. Upon his election to the board of directors, we anticipate that Jack E. Stover will be appointed to serve as a member of the audit committee. The current members of our compensation committee are Michael B. Hoffman, Henry S. Bienen, Ph.D., James J. Marino and Anne M. VanLent, with Michael B. Hoffman serving as chairperson. The current members of our nominating and corporate governance committee are Michael B. Hoffman, Viren Mehta and Jerome E. Groopman, M.D., with Viren Mehta serving as chairperson.

Our board of directors has determined that Henry S. Bienen, Ph.D., James J. Marino, Viren Mehta, Anne M. VanLent and Jack E. Stover meet the additional test for independence for audit committee members imposed by Securities and Exchange Commission ("SEC") regulations and Section 5605(c)(2)(A) of the NASDAQ Stock Market listing rules and that Michael B. Hoffman, Henry S. Bienen, Ph.D., James J. Marino and Anne M. VanLent meet the additional test for independence for compensation committee members imposed by Section 5605(d)(2)(A) of the NASDAQ Stock Market listing rules.

Audit Committee

The primary purpose of our audit committee is to assist the board of directors in the oversight of the integrity of our accounting and financial reporting process, the audits of our consolidated financial

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statements, and our compliance with legal and regulatory requirements. Our audit committee met five times during fiscal 2015. The functions of our audit committee include, among other things:

- hiring the independent registered public accounting firm to conduct the annual audit of our consolidated financial statements and monitoring its independence and performance;
- reviewing and approving the planned scope of the annual audit and the results of the annual audit;
- pre-approving all audit services and permissible non-audit services provided by our independent registered public accounting firm;
- reviewing the significant accounting and reporting principles to understand their impact on our consolidated financial statements;
- reviewing our internal financial, operating and accounting controls with management, our independent registered public accounting firm and our internal audit provider;
- reviewing with management and our independent registered public accounting firm, as appropriate, our financial reports, earnings announcements and our compliance with legal and regulatory requirements;
- reviewing potential conflicts of interest under and violations of our code of conduct;
- establishing procedures for the treatment of complaints received by us regarding accounting, internal accounting controls or auditing matters and confidential submissions by our employees of concerns regarding questionable accounting or auditing matters;
- reviewing and approving related-party transactions; and
- reviewing and evaluating, at least annually, our audit committee's charter.

With respect to reviewing and approving related-party transactions, our audit committee reviews related-party transactions for potential conflicts of interests or other improprieties. Under SEC rules, related-party transactions are those transactions to which we are or may be a party in which the amount involved exceeds the lesser of \$120,000 or 1% of total assets, and in which any of our directors or executive officers or any other related person had or will have a direct or indirect material interest, excluding, among other things, compensation arrangements with respect to employment and board membership. Our audit committee could approve a related-party transaction if it determines that the transaction is in our best interests. Our directors are required to disclose to this committee or the full board of directors any potential conflict of interest, or personal interest in a transaction that our board is considering. Our executive officers are required to disclose any related-party transaction to the audit committee. We also poll our directors on an annual basis with respect to related-party transactions and their service as an officer or director of other entities. Any director involved in a related-party transaction that is being reviewed or approved must recuse himself or herself from participation in any related deliberation or decision. Whenever possible, the transaction should be approved in advance and if not approved in advance, must be submitted for ratification as promptly as practical.

The financial literacy requirements of the SEC require that each member of our audit committee be able to read and understand fundamental financial statements. In addition, at least one member of our audit committee must qualify as an audit committee financial expert, as defined in Item 407(d)(5) of Regulation S-K promulgated under the Securities Act, and have financial sophistication in accordance with the NASDAQ Stock Market listing rules. Our board of directors has determined that Anne M. VanLent and Jack E. Stover qualify as audit committee financial experts.

Both our independent registered public accounting firm and management periodically will meet privately with our audit committee.

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The board of directors has adopted a charter for the audit committee, which is available in the corporate governance section of our website at <http://www.onconova.com>.

Compensation Committee

The primary purpose of our compensation committee is to assist our board of directors in exercising its responsibilities relating to compensation of our executive officers and employees and to administer our equity compensation and other benefit plans. In carrying out these responsibilities, this committee reviews all components of executive officer and employee compensation for consistency with its compensation philosophy, as in effect from time to time. Our compensation committee met ten times during fiscal 2015. The functions of our compensation committee include, among other things:

- designing and implementing competitive compensation, severance and change in control policies to attract and retain key personnel;
- reviewing and formulating policy and determining the compensation of our executive officers and employees;
- reviewing and recommending to our board of directors the compensation of our non-employee directors;
- reviewing and evaluating our compensation risk policies and procedures;
- administering our equity incentive plans and granting equity awards to our employees, consultants and directors under these plans;
- administering our performance bonus plans and granting bonus opportunities to our employees, consultants and non-employee directors under these plans;
- if required from time to time, preparing the executive officer compensation information required to be included in our annual proxy statement;
- engaging compensation consultants or other advisors it deems appropriate to assist with its duties; and
- reviewing and evaluating, at least annually, our compensation committee's charter.

The board of directors has adopted a charter for the compensation committee, which is available in the corporate governance section of our website at <http://www.onconova.com>.

The compensation committee has utilized Radford ("Radford"), an Aon Hewitt company, as its executive compensation consultant. Radford reports directly to the compensation committee. The compensation committee may replace Radford or hire additional consultants at any time. Upon request by the compensation committee or its chair, a representative of Radford attends meetings of the compensation committee and is available to discuss compensation issues in between meetings.

In connection with its work for the compensation committee, Radford provided various executive compensation services to the compensation committee pursuant to a written consulting agreement. Generally, these services included advising the compensation committee on the principal aspects of our executive compensation program and evolving industry practices and providing market information and analysis regarding the competitiveness of our program design and our award values in relation to performance.

The compensation committee retains sole authority to hire any compensation consultant, approve such consultant's compensation, determine the nature and scope of its services, evaluate its performance, and terminate its engagement. We assessed the independence of Radford pursuant to SEC rules and determined that no known conflict of interest existed that would prevent Radford from serving as an independent consultant to the compensation committee.

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The compensation committee has reviewed our compensation policies and practices for all employees, including our named executive officers, as they relate to risk management practices and risk-taking incentives, and has determined that there are no risks arising from these policies and practices that are reasonably likely to have a material adverse effect on us.

Nominating and Corporate Governance Committee

The primary purpose of our nominating and corporate governance committee is to assist our board of directors in promoting the best interest of our company and our stockholders through the implementation of sound corporate governance principles and practices. Our nominating and corporate governance committee met two times during fiscal 2015. The functions of our nominating and corporate governance committee include, among other things:

- identifying, reviewing and evaluating candidates to serve on our board of directors;
- determining the minimum qualifications for service on our board of directors;
- developing and recommending to our board an annual self-evaluation process for our board of directors and overseeing the annual self-evaluation process;
- developing, as appropriate, a set of corporate governance principles, and reviewing and recommending to our board of directors any changes to such principles; and
- periodically reviewing and evaluating our nominating and corporate governance committee's charter.

The board of directors has adopted a charter for the nominating and corporate governance committee, which is available in the corporate governance section of our website at <http://www.onconova.com>.

Code of Conduct for Employees, Executive Officers and Directors

We have adopted a code of conduct applicable to all of our employees, executive officers and directors. The code of conduct is available in the corporate governance section of our website at <http://www.onconova.com>.

The audit committee of our board of directors is responsible for overseeing the code of conduct and must approve any waivers of the code of conduct for employees, executive officers or directors.

Meetings of the Board of Directors

The board of directors held 20 meetings during fiscal 2015. During fiscal 2015, each director attended at least 75 percent of the aggregate of the total number of meetings of the board of directors and the committees on which such director served.

Directors are encouraged, but not required, to attend the annual meeting of stockholders. Michael B. Hoffman, Ramesh Kumar, Ph.D., E. Premkumar Reddy, Ph.D., and Anne M. VanLent attended the 2015 annual meeting of stockholders.

Director Nomination Process

The process followed by our nominating and corporate governance committee to identify and evaluate director candidates includes requests to board members and others for recommendations, meetings from time to time to evaluate biographical information and background material relating to potential candidates and interviews of selected candidates by members of the nominating and corporate governance committee and the board of directors.

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In determining whether to recommend any particular candidate for inclusion in the board of director's slate of recommended director nominees, our nominating and corporate governance committee considers the composition of the board of directors with respect to depth of experience, balance of professional interests, required expertise and other factors. The nominating and corporate governance committee considers the value of diversity when recommending candidates. The committee views diversity broadly to include diversity of experience, skills and viewpoint. The nominating and corporate governance committee does not assign specific weights to particular criteria and no particular criterion is a prerequisite for each prospective nominee. Our board of directors believe that the backgrounds and qualifications of its directors, considered as a group, should provide a composite mix of experience, knowledge and abilities that will allow it to fulfill its responsibilities.

Stockholders may recommend individuals to our nominating and corporate governance committee for consideration as potential director candidates. The nominating and corporate governance committee will evaluate stockholder-recommended candidates by following the same process and applying the same criteria as it follows for candidates submitted by others.

Stockholders may directly nominate a person for election to our board of directors by complying with the procedures set forth in Section 2.2(A) of our bylaws, and with the rules and regulations of the SEC. Under our bylaws, only persons nominated in accordance with the procedures set forth in the bylaws will be eligible to serve as directors. In order to nominate a candidate for service as a director, you must be a stockholder at the time you give the board of directors notice of your nomination, and you must be entitled to vote for the election of directors at the meeting at which your nominee will be considered. In addition, the stockholder must have given timely notice in writing to our Secretary. To be timely, a stockholder's notice must be delivered to the Secretary at our principal executive offices not later than the 90th day, nor earlier than the 120th day, prior to the first anniversary of the prior year's annual meeting of stockholders (provided, however, that in the event that the date of the annual meeting is more than 30 days before or 60 days after such anniversary date, notice by the stockholder must be delivered no earlier than the 120th day prior to the annual meeting and no later than the later of the 90th day prior to such annual meeting or the 10th day following the day on which public announcement of the date of such annual meeting is first made by us). Your notice must set forth (i) the name, age, business address and, if known, residence address of the nominee, (ii) the principal occupation or employment of the nominee, (iii) the class and number of shares of stock of the Company directly or indirectly, owned beneficially or of record by the nominee, (iv) a description of all arrangements or understandings between you and the nominee and any other person or persons (naming such person or persons) pursuant to which the nomination is to be made by you, and (v) all other information relating to the nominee that is required to be disclosed in solicitations of proxies for the election of directors in an election contest, or is otherwise required, in each case, pursuant to Section 14 of the Exchange Act and the rules and regulations promulgated thereunder. Nominations for director must be accompanied by the nominee's written consent to being named in the proxy statement as a nominee and to serving as a director if elected.

Stockholder Communications with the Board

You can contact our board of directors to provide comments, to report concerns, or to ask a question, at the following address.

President
Onconova Therapeutics, Inc.
375 Pheasant Run
Newtown, PA 18940
United States

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You may submit your concern anonymously or confidentially by postal mail. You may also indicate whether you are a stockholder, customer, supplier, or other interested party.

Communications are distributed to our board of directors, or to any individual directors, as appropriate, depending on the facts and circumstances outlined in the communication.

Section 16(a) Beneficial Ownership Reporting Compliance

Pursuant to Section 16(a) of the Exchange Act and the rules issued thereunder, our executive officers, directors and beneficial owners of more than ten percent of our common stock are required to file with the SEC reports of holdings of and transactions in our securities. Copies of such reports are required to be furnished to us. Based solely on a review of the copies of such reports furnished to us, or written representations that no other reports were required, we believe that all required reports were filed in fiscal 2015 in a timely manner, except that, one Form 4 for each of our executive officers subject to Section 16(a) reporting: Ajay Bansal, Steven M. Fruchtman, M.D., Mark P. Guerin, Ramesh Kumar, Ph.D., and Manoj Maniar, Ph.D., related to a grant of stock options on September 25, 2015, and one Form 3 for Manoj Maniar, Ph.D related to his initial Section 16 (a) filing upon becoming an executive officer on April 27, 2015, were filed late.

PROPOSAL TWO—TO AMEND OUR CERTIFICATE OF INCORPORATION TO COMBINE OUTSTANDING SHARES OF OUR COMMON STOCK INTO A LESSER NUMBER OF OUTSTANDING SHARES, A "REVERSE STOCK SPLIT," BY A RATIO OF NOT LESS THAN ONE-FOR-EIGHT AND NOT MORE THAN ONE-FOR-TWELVE, WITH THE EXACT RATIO TO BE SET WITHIN THIS RANGE BY OUR BOARD OF DIRECTORS IN ITS SOLE DISCRETION

Introduction

Our board has approved an amendment to our Tenth Amended and Restated Certificate of Incorporation, referred to as our "certificate of incorporation," 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, our board would have the sole discretion to effect the amendment and combination at any within 90 days after our annual meeting and to fix the specific ratio for the combination, provided that the ratio would be not less than one-for-eight and not more than one-for-twelve. The board would also have the discretion to abandon the amendment prior to its effectiveness. The board is hereby soliciting stockholder approval for the reverse stock split proposal.

If approved by our stockholders, the reverse stock split proposal would permit (but not require) our board to effect a reverse stock split of our common stock at any time by a ratio of not less than one-for-eight and not more than one-for-twelve, with the specific ratio to be fixed within this range by the board in its sole discretion without further stockholder approval. We believe that enabling the board 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 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 board anticipates fixing a specific ratio designed to target a post-split per share price of approximately \$5.00.

The reverse stock split, if approved by our stockholders, would become effective upon the filing of the amendment to our certificate of incorporation with the Secretary of State of the State of Delaware, or at the later time set forth in the amendment. The exact timing of the amendment will be determined by the board based on its evaluation as to when such action will be the most advantageous to our Company and our stockholders. In addition, the board reserves the right, notwithstanding stockholder approval and without further action by the stockholders, to abandon the amendment and 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, 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 *Annex 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, 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 bid price of not less than \$1.00 per share. In recent months, our common stock has traded significantly below \$1.00 per share. We have been provided with a 180-day grace period (which expires on August 8, 2016) to regain compliance. If we are not in compliance by August 8, 2016, 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

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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 proposal, in addition to the considerations described above, our 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, our board of directors is seeking stockholder approval for a range of reverse split ratios of not less than one-for-eight and not greater than one-for-twelve. The need for the range is due to the volatility of our stock price, which ranged from a high of \$4.00 to a low of \$0.32 between March 16, 2015 and March 15, 2016.

We believe that enabling our 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, our 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.

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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.

Our 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 Two and within 90 days after the date of the annual meeting. Our 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 annual 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. Our board of directors, however, is also mindful about the potential dilutive effect on existing stockholders. For the reasons discussed below relating to our target per share price, the board has approved and recommended a range of reverse stock split ratios which would result in more shares becoming available than we believe are necessary for reasonably foreseeable future needs. Accordingly, the board has also approved and recommended an amendment to our certificate of incorporation, conditioned upon stockholder approval and implementation of the reverse stock split, to reduce the authorized number of shares of our common stock. See "Proposal 3—To approve, conditioned upon stockholder approval and implementation of the reverse stock split, an amendment to our certificate of incorporation to reduce the number of our authorized shares of common stock from 75,000,000 to 25,000,000," beginning on page for more information regarding this proposal.

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.

We are party to a purchase agreement with Lincoln Park Capital Fund LLC, pursuant to which Lincoln Park has committed to purchase up to \$16,500,000 of our common stock. Subject to our compliance with the terms of the purchase agreement, we may sell shares to Lincoln Park at our discretion from time to time until November 2018. The purchase price for the shares that we may sell

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to Lincoln Park under the purchase agreement will fluctuate based on the market price of our common stock. We also maintain our 2013 Equity Compensation Plan pursuant to which we may grant various types of equity compensation awards to our employees, directors, and individual consultants, advisors or independent contractors who render services to us. Except for our agreement with Lincoln Park and the potential for awards under our 2013 Equity Compensation Plan, at this time we do not have any plans, arrangements or understandings, whether written or oral, to issue any of the additional shares that will be made available if the reverse stock split is approved and implemented.

Potential Effects of Proposed Amendment

If our stockholders approve the reverse stock split and our board effects it, the number of shares of common stock issued and outstanding will be reduced, depending upon the ratio determined by the board. 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.

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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, the 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, 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 or warrants 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 or warrants 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

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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.

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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.

Appraisal Rights

Under the Delaware General Corporation Law, stockholders will not be entitled to dissenter's rights with respect to the proposed amendment to our certificate of incorporation to effect the reverse stock split, and we do not intend to independently provide stockholders with such rights.

Recommendation

OUR BOARD OF DIRECTORS 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, A "REVERSE STOCK SPLIT," BY A RATIO OF NOT LESS THAN ONE-FOR-EIGHT AND NOT MORE THAN ONE-FOR-TWELVE, WITH THE EXACT RATIO TO BE SET WITHIN THIS RANGE BY OUR BOARD OF DIRECTORS IN ITS SOLE DISCRETION.

PROPOSAL THREE—TO APPROVE, CONDITIONED UPON STOCKHOLDER APPROVAL AND IMPLEMENTATION OF THE REVERSE STOCK SPLIT, AN AMENDMENT TO OUR CERTIFICATE OF INCORPORATION TO REDUCE THE NUMBER OF OUR AUTHORIZED SHARES OF COMMON STOCK FROM 75,000,000 TO 25,000,000

General

Our board has approved, conditioned upon stockholder approval and implementation of the reverse stock split, an amendment to our restated certificate of incorporation, as amended, to decrease the number of authorized shares of the Company's common stock from 75,000,000 shares to 25,000,000 shares.

If the reverse stock split is approved by our stockholders and implemented by the board, and the decrease in the number of our authorized shares of common stock is approved by our stockholders, the decrease would become effective upon the filing of the amendment to our certificate of incorporation with the Secretary of State of the State of Delaware, or at the later time set forth in the amendment, but in any event simultaneous with the effectiveness of the reverse stock split. The exact timing of the amendment will be determined by the board based on its evaluation as to when such action will be the most advantageous to our Company and our stockholders. In addition, the board reserves the right, notwithstanding stockholder approval and without further action by the stockholders, to abandon the amendment and the decrease in the number of authorized shares of common stock only if, at any time prior to the effectiveness of the filing of the amendment with the Secretary of State, the board, in its sole discretion, also determines to abandon the reverse stock split. In the event that stockholders approve the reverse stock split proposal, but do not approve the authorized shares proposal, the board will retain the discretion to implement the reverse stock split.

The proposed form of amendment to our certificate of incorporation to effect the decrease in authorized shares is attached as *Annex B* to this proxy statement.

Reasons for Proposed Amendment

As discussed under "Proposal 1—To amend our certificate of incorporation to combine outstanding shares of our common stock into a lesser number of outstanding shares, a 'reverse stock split,' by a ratio of not less than one-for-eight and not more than one-for-twelve," beginning on page , our board of directors has approved and recommended a reverse stock split within a specified range. The range was selected, primarily, to permit the board to target a post-split market price per share of approximately \$5.00.

Because reverse stock split alone would have no effect on our authorized capital stock, the reverse stock split would have the effect of increasing the number of available and unissued shares of common stock. While the board believes it is important to increase the number of shares available for issuance, it is also mindful about the potential dilutive effect on existing stockholders. The board believes that the reverse stock split alone would result in more authorized shares becoming available for issuance than it believes are necessary for reasonably foreseeable future needs. Accordingly, the board has also approved and recommended an amendment to our certificate of incorporation, conditioned upon stockholder approval and implementation of the reverse stock split, to reduce the authorized number of shares of our common stock from 75,000,000 to 25,000,000. Among the matters considered by the board in determining the number of shares of common stock to be authorized were the company's reasonably foreseeable future needs and the uncertainty of the actual reverse stock split ratio that may be fixed within the range approved by stockholders, if the reverse stock split proposal is approved.

Recommendation

OUR BOARD RECOMMENDS A VOTE "FOR" THE PROPOSAL TO AMEND, CONDITIONED UPON STOCKHOLDER APPROVAL AND IMPLEMENTATION OF THE REVERSE STOCK SPLIT, OUR CERTIFICATE OF INCORPORATION TO DECREASE THE NUMBER OF AUTHORIZED SHARES OF OUR COMMON STOCK FROM 75,000,000 TO 25,000,000.

**PROPOSAL FOUR—RATIFICATION OF THE SELECTION OF ERNST & YOUNG LLP AS OUR
INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR THE FISCAL YEAR ENDING
DECEMBER 31, 2016**

Our board of directors, acting upon the recommendation of the audit committee, has selected Ernst & Young LLP to audit our consolidated financial statements for the fiscal year ending December 31, 2016. Ernst & Young LLP has audited our consolidated financial statements since fiscal 2012.

Although stockholder approval of the selection of Ernst & Young LLP is not required by law, our board of directors and the audit committee believe it is advisable to give stockholders an opportunity to ratify this selection. If this proposal is not approved at the annual meeting, the audit committee may reconsider its selection of Ernst & Young LLP. Additionally, we are considering various actions to reduce our operating expenses. Even if this proposal is approved, the audit committee may reconsider its selection of Ernst & Young LLP as part of our expense reduction efforts.

We expect representatives of Ernst & Young LLP to attend the annual meeting, to be available to respond to appropriate questions from stockholders, and to have the opportunity to make a statement if so desired.

Fees of Independent Registered Public Accounting Firm

The following table summarizes the fees of Ernst & Young LLP, our independent registered public accounting firm, billed to us for each of the last two fiscal years.

<u>Fee Category</u>	<u>Fiscal 2015</u>	<u>Fiscal 2014</u>
Audit Fees(1)	\$ 338,000	\$ 337,000
Audit-Related Fees(2)	85,000	25,000
Tax Fees(3)	65,000	117,000
Total Fees	<u>\$ 488,000</u>	<u>\$ 479,000</u>

- (1) Audit fees consist of fees for the audits of fiscal 2015 and 2014 and quarterly reviews of our consolidated financial statements and other professional services provided in connection with statutory and regulatory filings or engagements.
- (2) Audit-related fees consist of fees for assurance and related services that are reasonably related to the performance of the audit and the review of our consolidated financial statements and which are not reported under "Audit Fees."
- (3) Tax fees for fiscal 2015 and fiscal 2014 include fees for tax advice, tax return preparation assistance and review.

Pre-Approval Policies and Procedures

Our audit committee's policy is that all audit services and all non-audit services to be provided to us by our independent registered public accounting firm must be approved in advance by the audit committee. The audit committee's approval procedures include the review and approval of engagement letters from our independent registered public accounting firm that document the fees for all audit services and non-audit services, primarily tax advice and tax return preparation and review.

All audit services and all non-audit services in fiscal 2015 were pre-approved by our audit committee. Our audit committee has determined that the provision of the non-audit services for which these fees were rendered is compatible with maintaining the independent auditor's independence.

THE BOARD OF DIRECTORS RECOMMENDS A VOTE FOR THE PROPOSAL TO RATIFY THE SELECTION OF ERNST & YOUNG LLP AS OUR INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR THE FISCAL YEAR ENDING DECEMBER 31, 2016.

**PROPOSAL FIVE—TO ADJOURN THE ANNUAL MEETING, IF NECESSARY, TO SOLICIT
ADDITIONAL PROXIES IN THE EVENT THAT THERE ARE NOT SUFFICIENT VOTES AT THE
TIME OF THE ANNUAL MEETING TO APPROVE THE REVERSE STOCK SPLIT**

If, at the time scheduled for the annual meeting, there are not sufficient votes to approve the reverse stock split, such proposal could not be approved unless the annual meeting was adjourned to a later date in order to permit further solicitation of proxies. In order to allow those proxies that have been received by us at the time scheduled for the annual meeting to be voted for adjournment, you are being asked to consider a proposal to approve the adjournment of the annual meeting, if necessary, to permit further solicitation of proxies "FOR" the approval of the reverse stock split.

If a quorum is present at the annual meeting and it appears there are sufficient votes "FOR" the approval of the reverse stock split, the chairman of the annual meeting may determine that no action will be taken on the proposal to adjourn. The chairman of the annual meeting may also determine that no action will be taken on the proposal to adjourn if the board of directors has determined at the time of the annual meeting that no further solicitation of proxies would be undertaken.

Recommendation

THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS A VOTE FOR APPROVAL OF THE PROPOSAL TO ADJOURN THE ANNUAL MEETING, IF NECESSARY, TO SOLICIT ADDITIONAL PROXIES.

REPORT OF AUDIT COMMITTEE

The Audit Committee has reviewed the Company's audited consolidated financial statements for the fiscal year ended December 31, 2015 and discussed them with the Company's management and the Company's independent registered public accounting firm.

The Audit Committee has also received from, and discussed with, the Company's independent registered public accounting firm various communications that the Company's independent registered public accounting firm is required to provide to the Audit Committee, including the matters required to be discussed by Auditing Standard No. 16, *Communications with Audit Committees*, as amended.

The Audit Committee has received the written disclosures and the letter from the Company's independent registered public accounting firm required by Independence Standards Board Standard No. 1, *Independence Discussions with Audit Committees*, as adopted by the Public Company Accounting Oversight Board in Rule 3600T, and has discussed with the Company's independent registered public accounting firm their independence.

Based on the review and discussions referred to above, the Audit Committee recommended to the Company's Board of Directors that the audited consolidated financial statements be included in the Company's Annual Report on Form 10-K for the year ended December 31, 2015.

By the Audit Committee of the Board of Directors of Onconova Therapeutics, Inc.

Anne M. VanLent, *Chairperson*
Henry S. Bienen
James J. Marino
Viren Mehta

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information regarding the beneficial ownership of our common stock as of March 15, 2016 by (a) each person known by us to be the beneficial owner of more than 5% of the outstanding shares of our common stock, (b) each named executive officer identified on page of this proxy statement under the heading, "2015 Summary Compensation Table," (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 27,401,035 shares of our common stock outstanding on March 15, 2016. For purposes of the table below, and in accordance with the rules of the SEC, we deem shares of common stock subject to options that are currently exercisable or exercisable within sixty days of March 15, 2016 to be outstanding and to be beneficially owned by the person holding the 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:		
The Michael and Jane Hoffman 2013 Descendants Trust 712 Fifth Avenue, 51st Fl. New York, NY 10019	4,518,275	16.5%
Michael B. Hoffman(1) (Includes The Michael and Jane Hoffman 2013 Descendants Trust) 712 Fifth Avenue, 51st Fl. New York, NY 10019	4,842,186	17.5%
Baxalta GmbH(2) Thurgauerstrasse 130 Glattpark (Opfikon) Switzerland 8152	2,603,295	9.5%
Frigate Ventures LP(3) 5950 Berkshire Lane, Suite 210 Dallas, TX 75225	1,936,842	7.1%
E. Premkumar Reddy, Ph.D.(4)	1,384,925	5.0%
Other Directors, Director Nominees and Named Executive Officers:		
Henry S. Bienen, Ph.D.(5)	81,071	*
Jerome E. Groopman, M.D.(6)	80,749	*
Ramesh Kumar, Ph.D.(7)	935,578	3.3%
Manoj Maniar, Ph.D.(8)	211,859	*
James J. Marino	*	*
Steven M. Fruchtman, M.D.(9)	85,859	*
Viren Mehta(10)	173,331	*
Jack E. Stover	*	*
Anne M. VanLent(11)	41,533	*
All current executive officers, directors and director nominees as a group (12 persons)(12)	7,899,670	27.3%

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

- (1) Includes (i) 4,518,275 shares of common stock held by the Michael and Jane Hoffman 2013 Descendants Trust of which Mr. Hoffman is donor, (ii) 84,530 shares of common stock held by the Michael and Jane Hoffman 2013 Descendants Trust (Non-GST Exempt Trust) of which Mr. Hoffman is donor and (iii) 220,627 shares of common stock subject to outstanding options that are exercisable within 60 days of March 15, 2016. Mr. Hoffman has no voting or dispositive power with regard to any of the shares held by the Michael and Jane Hoffman 2013 Descendants Trust and the Michael and Jane Hoffman 2013 Descendants Trust (Non-GST Exempt Trust). A.J. Agarwal and Jane Hoffman, Mr. Hoffman's spouse, as trustees, have voting and dispositive power with regard to the shares held by the Michael and Jane Hoffman 2013 Descendants Trust and the Michael and Jane Hoffman 2013 Descendants Trust (Non-GST Exempt Trust).

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- (2) The shares are owned directly by Baxalta GmbH, which is an indirect wholly owned subsidiary of Baxalta Incorporated, and as such Baxalta Incorporated is an indirect beneficial owner of the shares.
- (3) Based on a Schedule 13G filed with the SEC on January 13, 2016. The Schedule 13G was filed on behalf of Frigate Ventures LP (d/b/a Anson Group), a Texas limited partnership ("Frigate"), Admiralty Advisors LLC, a Texas limited liability company ("Admiralty"), Mr. Bruce R. Winson, the principal of Frigate and Admiralty, M5V Advisors Inc. (d/b/a Anson Group Canada), an Ontario, Canada corporation ("M5V"), Mr. Adam Spears, a director of M5V, and Mr. Moez Kassam, a director of M5V. The shares were purchased by a private fund to which Frigate and M5V serve as co-investment advisors (the "Fund"). Frigate and M5V serve as co-investment advisors to the Fund and may direct the vote and disposition of the 1,936,842 shares of common stock held by the Fund. As the general partner of Frigate, Admiralty may direct the vote and disposition of the 1,936,842 shares of common stock held by the Fund. As the principal of Frigate and Admiralty, Mr. Winson may direct the vote and disposition of the 1,936,842 shares of common stock held by the Fund. As directors of M5V, Mr. Spears and Mr. Kassam may each direct the vote and disposition of the 1,936,842 shares of common stock held by the Fund.
- (4) Includes 47,087 shares of common stock issuable upon the exercise of options that are currently exercisable or exercisable within sixty days of March 15, 2016.
- (5) Includes 66,136 shares of common stock issuable upon the exercise of options that are currently exercisable or exercisable within sixty days of March 15, 2016.
- (6) Includes 80,749 shares of common stock issuable upon the exercise of options that are currently exercisable or exercisable within sixty days of March 15, 2016.
- (7) Includes (i) 150,037 shares of common stock held by the Ramesh Kumar 2012 Trust and (ii) 659,078 shares of common stock subject to outstanding options that are exercisable within 60 days of March 15, 2016. Dr. Kumar has voting and dispositive power with regard to the shares held by the Ramesh Kumar 2012 Trust.
- (8) Includes 211,859 shares of common stock issuable upon the exercise of options that are currently exercisable or exercisable within sixty days of March 15, 2016.
- (9) Includes 85,859 shares of common stock issuable upon the exercise of options that are currently exercisable or exercisable within sixty days of March 15, 2016.
- (10) Includes (i) 28,438 shares of common stock held jointly with Dr. Mehta's spouse, (ii) 8,056 shares of common stock held by Mehta Partners, LLC, (iii) 1,733 shares of common stock held by Mehta Partners, LLC FBO Jean Marie Kiss IRA, (iv) 8,295 shares of common stock held by Viram Foundation and (v) 28,333 shares of common stock subject to outstanding options that are exercisable within 60 days of March 15, 2016. 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 Mehta Partners, LLC FBO Jean Marie Kiss IRA. Dr. Mehta, as trustee has voting and dispositive power with regard to the shares held by Viram Foundation.
- (11) Includes 41,533 shares of common stock issuable upon the exercise of options that are currently exercisable or exercisable within sixty days of March 15, 2016.
- (12) Includes 1,503,840 shares of common stock issuable upon the exercise of options that are currently exercisable or exercisable within sixty days of March 15, 2016.

CERTAIN RELATIONSHIPS AND RELATED PERSON TRANSACTIONS

Review and Approval of Related Person Transactions

The audit committee of our board of directors is charged with the responsibility of reviewing and approving all related person transactions (as defined in SEC regulations), and periodically reassessing any related person transaction that we enter to ensure continued appropriateness. This responsibility is set forth in our audit committee charter. A related party transaction will only be approved if the audit committee determines that the transaction is in the best interests of the Company. If a director is involved in the transaction, he or she will recuse himself or herself from all decisions regarding the transaction.

The following is a description of transactions during fiscal 2015, to which we have been a party, in which the amount involved in the transaction exceeds \$120,000 or 1% of total assets, and in which any of our current directors, executive officers or to our knowledge, beneficial owners of more than 5% of our capital stock or an affiliate or immediate family member thereof, had or will have a direct or indirect material interest, other than the employment relationships with our executive officers and the related compensation solely resulting from those employment relationships.

On May 3, 2010, as subsequently amended, we entered into a research agreement with the Mount Sinai School of Medicine ("Mount Sinai"), with which E. Premkumar Reddy, Ph.D., a member of our board of directors and the beneficial owner of more than 5% of our capital stock, is associated. The research is undertaken by Mount Sinai on our behalf. Mount Sinai, in connection with us, will prepare applications for patents generated from the research. Results from all projects will belong exclusively to Mount Sinai, but we will have an exclusive option to license any inventions. The initial term of the research agreement was one year with options to extend by mutual agreement. The term of the agreement has been extended through July 4, 2016. Payments to Mount Sinai for the year ended December 31, 2015 were \$1,089,000.

We entered into a consulting agreement with E. Premkumar Reddy, Ph.D., a member of our board of directors and the beneficial owner of more than 5% of our capital stock, effective as of January 1, 2012 for consulting services rendered in addition to his membership on our board of directors. The consulting agreement provided for a term of one year, unless renewed by mutual agreement of the parties. The current term has been extended through December 31, 2016, unless sooner terminated in accordance with the terms of the agreement. The board member provides consulting services to the Company on the terms set forth in the agreement. Payments to this board member for the year ended December 31, 2015 were \$197,000.

EXECUTIVE COMPENSATION**Overview of Executive Compensation**

The compensation committee of our board of directors is responsible for overseeing the compensation of all of our executive officers. In this capacity, our compensation committee annually reviews and approves the compensation of our chief executive officer and other executive officers, including such goals and objectives relevant to the executive officers' compensation that the committee, in its discretion, determines are appropriate, evaluates their performance in light of those goals and objectives, and sets their compensation based on this evaluation.

2015 Summary Compensation Table

The following table sets forth information for the fiscal years ended December 31, 2015 and 2014 concerning compensation of our principal executive officer and the two most highly compensated executive officers during 2015. We refer to these three executive officers as our "named executive officers."

<u>Name and Principal Position</u>	<u>Year</u>	<u>Salary (\$)</u>	<u>Bonus \$(1)</u>	<u>Option Awards \$(2)</u>	<u>All Other Compensation \$(3)</u>	<u>Total (\$)</u>
Ramesh Kumar, Ph.D. President and Chief Executive Officer	2015	542,810	—	224,056	12,960	779,826
	2014	525,000	188,409	484,961	18,804	1,217,174
Steven M. Fruchtman, M.D. Chief Medical Officer and Senior Vice President, Research and Development(4)	2015	395,769	50,000	459,904	7,528	913,201
Manoj Maniar, Ph.D. Senior Vice President, Product Development	2015	370,695	—	102,425	20,000	493,120
	2014	356,860	108,664	166,272	30,589	662,385

- (1) Represents discretionary annual bonus amounts paid.
- (2) The entries in the option awards column reflect the grant date fair value of the awards, as calculated for financial statement reporting purposes in accordance with Accounting Standards Codification (ASC) No. 718, *Compensation—Stock Compensation*. The option values were calculated using the Black-Scholes option pricing model. These amounts do not represent the actual value realized by the named executive officers. See Note 8 of the Notes to Consolidated Financial Statements for the fiscal year ended December 31, 2014 for a discussion of the relevant assumptions used to determine the valuation of our stock options for accounting purposes.
- (3) Includes amounts paid for insurance premiums on behalf of the named executive officer and matching funds paid pursuant to our 401(k) Plan.
- (4) Dr. Fruchtman was not a named executive officer in fiscal 2014.

Employment Agreements

We have entered into employment agreements with each of our named executive officers, and the compensation of our named executive officers is determined, in large part, by the terms of those employment agreements. Following are descriptions of the material terms of each named executive officer's employment agreement.

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Ramesh Kumar, Ph.D.

We entered into an employment agreement with Dr. Kumar on July 1, 2015, which supersedes any prior employment agreements. The employment agreement continues indefinitely, unless terminated in accordance with the terms of the agreement.

The employment agreement provided for an initial base salary of \$543,375, subject to adjustment upon annual review by our board of directors, and an annual bonus of up to 55% of such base salary, payable upon our achievement of revenue or profit objectives, specific business plan goals or other performance milestones mutually agreed to by Dr. Kumar and our board of directors, provided that Dr. Kumar remain employed by us throughout the performance year. The bonus may be paid in the form of cash, stock options, shares of our common stock, or a combination thereof, at our compensation committee's discretion. Dr. Kumar may also be entitled to additional compensation in recognition of extraordinary contributions, at the sole discretion of our compensation committee. On February 12, 2016, we entered into a letter agreement with Dr. Kumar pursuant to which Dr. Kumar agreed to a voluntary reduction in his base salary from \$543,375 to \$407,531, effective as of January 1, 2016. For purposes of severance and other benefits calculated based upon base salary, however, Dr. Kumar's base salary will be deemed to remain at \$543,375.

Dr. Kumar is entitled to participate in all of our employee benefit plans and programs that are made generally available from time to time to our executive officers and is entitled to vacation benefits. Pursuant to his employment agreement, Dr. Kumar is entitled to term life insurance coverage in a face amount that is not less than his base salary, a reasonable transportation allowance if we relocate our research facility more than 40 miles from its present location, and up to \$10,000 annually for educational programs related to the performance of his duties. If Dr. Kumar dies during his employment, we will be entitled to a \$1 million death benefit under a "key man" life insurance policy. Dr. Kumar's employment agreement contains non-solicitation, non-competition, confidentiality and inventions assignment provisions that, among other things, prevent him from competing with us during the term of his employment and for a specified time thereafter.

If Dr. Kumar's employment is terminated due to his death, disability, by us for "cause" or by Dr. Kumar without "good reason" during the term of his employment agreement, we will pay to Dr. Kumar or his spouse or estate the balance of his accrued and unpaid salary, unreimbursed expenses, and unused accrued vacation time through the termination date.

If Dr. Kumar's employment is terminated by us without "cause" or by Dr. Kumar for "good reason," other than during a change in control protection period, Dr. Kumar will be entitled to receive severance equal to his current base salary and target bonus for the fiscal year during which his employment ceases. If the termination is during a change in control protection period, Dr. Kumar will be entitled to receive severance equal to two times the sum of his current base salary and target bonus for the fiscal year during which his employment ceases, less any severance previously paid. A change in control protection period commences three months prior to and ends twelve months following a change in control. The Company will also reimburse Dr. Kumar for a portion of his medical insurance costs and all of Dr. Kumar's incentive stock options that are unvested as of the date of such termination would fully vest as of the date of termination.

Steven Fruchtmann, M.D.

We entered into an employment agreement with Dr. Fruchtmann on January 12, 2015. The employment agreement provides for an initial term of two years, unless extended by mutual agreement of the parties or sooner terminated in accordance with the terms of the agreement.

The employment agreement provides for an initial base salary of \$420,000, subject to adjustment upon annual review, and subject to the compensation committee's sole discretion, an annual bonus,

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based on the performance of Dr. Fruchtmann and the Company, of up to 40% of such base salary. The bonus may be paid in the form of cash, stock options, shares of our common stock, or a combination thereof, at our compensation committee's discretion.

In accordance with the agreement, upon hiring, Dr. Fruchtmann received 120,000 stock options that vest proportionately over four years, a sign-on bonus of \$25,000 and an advance against his annual bonus of \$25,000.

Dr. Fruchtmann is entitled to participate in all of our employee benefit plans and programs that are made generally available from time to time to our executive officers and is entitled to vacation benefits. Dr. Fruchtmann's employment agreement contains non-solicitation, non-competition, confidentiality and inventions assignment provisions that, among other things, prevent him from competing with us during the term of his employment and for a specified time thereafter. The Company will reimburse Dr. Fruchtmann for reasonable expenses including certain commuting costs to the Company's offices.

If Dr. Fruchtmann's employment is terminated due to his death, disability, by us for "cause" or by Dr. Fruchtmann without "good reason" during the term of his employment agreement, we will pay to Dr. Fruchtmann or his spouse or estate the balance of his accrued and unpaid salary, unreimbursed expenses, and unused accrued vacation time through the termination date.

If Dr. Fruchtmann's employment is terminated by us without "cause", by Dr. Fruchtmann for "good reason," or at the expiration of the term of the agreement, Dr. Fruchtmann will be entitled to payments equal to six months base salary and also to continued health benefits for six months. All incentive stock options that are unvested as of the date of such termination would fully vest as of the date of termination.

Manoj Maniar, Ph.D.

We entered into an employment agreement with Dr. Maniar on July 1, 2015, which supersedes any prior employment agreements. The employment agreement continues indefinitely, unless terminated in accordance with the terms of the agreement.

The employment agreement provides for an initial base salary of \$371,135, subject to adjustment upon annual review by our board of directors, and subject to the compensation committee's sole discretion, an annual bonus, based on the performance of Dr. Maniar and the Company, of up to 40% of such base salary. The bonus may be paid in the form of cash, stock options, shares of our common stock, or a combination thereof, at our compensation committee's discretion.

Dr. Maniar is entitled to participate in all of our employee benefit plans and programs that are made generally available from time to time to our executive officers and is entitled to vacation benefits. Dr. Maniar's employment agreement contains non-solicitation, non-competition, confidentiality and inventions assignment provisions that, among other things, prevent him from competing with us during the term of his employment and for a specified time thereafter.

If Dr. Maniar's employment is terminated due to his death, disability, by us for "cause" or by Dr. Maniar without "good reason" during the term of his employment agreement, we will pay to Dr. Maniar or his spouse or estate the balance of his accrued and unpaid salary, unreimbursed expenses, and unused accrued vacation time through the termination date.

If Dr. Maniar's employment is terminated by us without "cause" or by Dr. Maniar for "good reason," other than during a change in control protection period, Dr. Maniar will be entitled to receive severance equal to nine-twelfths of the sum of his current base salary and target bonus for the fiscal year during which his employment ceases. If the termination is during a change in control protection period, Dr. Maniar will be entitled to receive severance equal to the sum of his current base salary and target bonus for the fiscal year during which his employment ceases. A change in control protection period is the twelve months following a change in control. The Company will also reimburse Dr. Maniar for a portion of his medical insurance costs and all of Dr. Maniar's incentive stock options that are unvested as of the date of such termination would fully vest as of the date of termination.

Stock Option and Other Compensation Plans

We maintain our 2013 Equity Compensation Plan for the purpose of attracting key employees, directors and consultants, inducing them to remain with us and encouraging them to increase their efforts to make our business more successful. The plan provides for awards of stock options, stock appreciation rights, restricted stock, restricted stock units, deferred shares and other equity-based awards.

The following table contains certain information regarding equity awards held by the named executive officers as of December 31, 2015:

Outstanding Equity Awards at 2015 Fiscal Year-End

Name	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price (\$)	Option Expiration Date
Ramesh Kumar	16,739	—	6.00	4/7/2017
	18,754	—	5.76	3/17/2020
	75,018	—	5.76	3/17/2020
	52,513	—	6.13	12/10/2020
	10,335	—	6.13	12/5/2021
	93,773	—	13.28	12/18/2022
	70,315(1)	23,458	13.28	12/18/2022
	100,000	—	15.00	7/25/2023
	3,018(2)	1,982	15.00	7/25/2023
	67,500(3)	67,500	13.48	12/20/2023
	43,750(3)	131,250	3.98	12/18/2024
	14,583(3)	72,917	2.32	4/16/2025
	5,468(3)	82,032	1.48	9/25/2025
Steven Fruchtmann	27,500(3)	92,500	4.37	1/12/2025
	5,833(3)	29,167	2.48	4/20/2025
	2,500(3)	37,500	1.48	9/25/2025
Manoj Maniar	11,252	—	6.00	8/1/2017
	37,509	—	5.76	3/17/2020
	18,754	—	5.76	3/17/2020
	7,501	—	6.13	12/10/2020
	18,754	—	6.13	12/10/2020
	3,780	—	6.13	12/5/2021
	22,501(1)	7,506	13.28	12/18/2022
	3,018(2)	1,982	15.00	7/25/2023
	20,000(3)	20,000	13.48	12/20/2023
	15,000(3)	45,000	3.98	12/18/2024
	6,666(3)	33,334	2.32	4/16/2025
2,500(3)	37,500	1.48	9/25/2025	

- (1) 25% of the total shares underlying this option vested on December 18, 2013. The remaining shares vest 1/36th monthly over 36 months thereafter, subject to continued service to us through each vesting date.
- (2) 25% of the total shares underlying this option will vest on July 25, 2014. The remaining shares vest 1/36th monthly over 36 months thereafter, subject to continued service to us through each vesting date.

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- (3) Shares vest in equal monthly installments over four years, 1/48th per month. The first shares vest one month after the date of grant.

Potential Payments Upon Termination of Employment or Change in Control

As discussed under the caption "—Employment Agreements" above, we have agreements with our named executive officers pursuant to which they will receive severance payments upon certain termination events. The information below describes certain compensation that would be available under our existing plans and arrangements if (i) the named executive officer was terminated as of December 31, 2015 or (ii) if a Change in Control, as defined herein, occurred on December 31, 2015 and the named executive officer's employment had been subsequently terminated on the same date.

Acceleration of Equity Awards

Pursuant to the terms of each named executive officer's option agreements, in the event of a "Change in Control" that occurs during any time prior to such named executive officer's Termination of Service (as such terms are defined in our 2013 Equity Compensation Plan) with us, all stock options granted pursuant to such option agreement shall fully vest.

Termination Other than for Cause, Death or Disability; Resignation for Good Reason

The payments and benefits to which each named executive officer would be entitled in the event the named executive officer's employment is terminated for any reason other than for cause, death, or disability, or if the named executive officer resigns for good reason, whether or not following a "change in control" is described above.

Equity Compensation Plan Information

The following table summarizes the total number of outstanding options and shares available for other future issuances of options under all of our equity compensation plans as of December 31, 2015. All of the outstanding awards listed below were granted under our 2013 Equity Compensation Plan. See "Stock Option and Other Compensation Plans—2013 Equity Compensation Plan" above for a summary of the 2013 Equity Compensation Plan.

<u>Plan Category</u>	<u>Number of Shares to be Issued Upon Exercise of Outstanding Options, Warrants and Rights</u>	<u>Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights</u>	<u>Number of Shares Remaining Available for Future Issuance Under the Equity Compensation Plan (Excluding Shares in First Column)</u>
Equity compensation plans approved by stockholders	5,157,602	\$ 8.56	1,354,133
Equity compensation plans not approved by stockholders	—	—	—

In accordance with the terms of the 2013 Equity Compensation Plan, on January 1, 2016, the maximum aggregate number of shares of our common stock that may be issued under the plan was automatically increased by 1,018,567 shares, such that immediately after such increase the number of shares remaining available for future issuance under the plan was 2,372,700.

OTHER MATTERS

Other Business

As of the date of this Proxy Statement, the Board of Directors knows of no business to be presented at the Meeting other than as set forth herein. If other matters properly come before the Meeting, the persons named as proxies will vote on such matters in their discretion.

Stockholder Proposals for 2017 Annual Meeting

In order for a stockholder proposal, including a director nomination, to be considered for inclusion in our proxy statement for the 2017 annual meeting of stockholders, the written proposal must be received at our principal executive offices on or before December 14, 2016. 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 accordance with Section 2.2 of our bylaws, a stockholder who wishes to present a proposal for consideration at the 2017 annual meeting 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 the Meeting. 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 18, 2017 and no later than February 17, 2017 (except that in the event that the date of the 2017 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 2017 annual meeting and not later than the close of business on the later of (A) the 90th day prior to the 2017 annual meeting or (B) the tenth day following the day on which public disclosure of the date of the 2017 annual meeting was made.

The notice should include a brief description of the business desired to be brought before the 2017 annual meeting, the text of the proposal or business (including the text of any resolutions proposed for consideration and in the event that such business includes a proposal to amend these bylaws, the language of the proposed amendment), the reasons for conducting such business at the meeting and any material interest in such business of such stockholder and the beneficial owner, if any, on whose behalf the proposal is made, and any other information concerning such matter that must be disclosed in proxy solicitations pursuant to Regulation 14A under the Exchange Act, as if the matter had been proposed, or intended to be proposed, by the board of directors. As to the stockholder giving the notice and the beneficial owner, if any, on whose behalf the nomination or proposal is made, the notice should include the information required by Section 2.2(A)(3)(C) of our bylaws.

Annual Report

Our 2015 Annual Report on Form 10-K is concurrently being mailed to stockholders. The Annual Report contains our consolidated financial statements and the report thereon of Ernst & Young LLP, independent registered public accounting firm. **Stockholders may obtain an additional copy of our Annual Report on Form 10-K filed with the Securities and Exchange Commission for the year ended**

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December 31, 2015, without charge, by writing to Onconova Therapeutics, Inc., 375 Pheasant Run, Newtown, PA 18940.

BY ORDER OF THE BOARD OF DIRECTORS

/s/ RAMESH KUMAR

President and Chief Executive Officer

Dated: April , 2016

IT IS IMPORTANT THAT PROXIES BE RETURNED PROMPTLY. THEREFORE, STOCKHOLDERS ARE URGED TO COMPLETE, SIGN, DATE AND RETURN THE ACCOMPANYING FORM OF PROXY IN THE ENCLOSED ENVELOPE.

PROPOSED FORM OF
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: Upon the filing (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 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.

SECOND: That the stockholders of the Corporation have duly approved the foregoing amendments 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 th day of , 2016.

ONCONOVA THERAPEUTICS, INC.

By: _____
Name:
Title:

PROPOSED FORM OF
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: That the second sentence of Article IV, Section A, be amended and restated in its entirety as follows:

The total number of shares which the Corporation is authorized to issue is 30,000,000 shares, of which (i) 25,000,000 shares shall be designated as Common Stock and (ii) 5,000,000 shares shall be designated as Preferred Stock.

SECOND That the stockholders of the Corporation have duly approved the foregoing amendments 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 th day of , 2016.

ONCONOVA THERAPEUTICS, INC.

By: _____
Name:
Title:

PROXY CARD

ONCONOVA TARGETING CANCER PROTECTING HEALTHY CELLS	Shareowner Services P.O. Box 64945 St. Paul, MN 55164-0945	
Vote by Internet, Telephone or Mail 24 Hours a Day, 7 Days a Week		
Your phone or Internet vote authorizes the named proxies to vote your shares in the same manner as if you marked, signed and returned your proxy card.		
INTERNET/MOBILE- www.proxypush.com/ontx Use the Internet to vote your proxy until 11:59 p.m. (CT) on May 17, 2016. Scan code below for mobile voting.		
PHONE - 1-866-883-3382 Use a touch-tone telephone to vote your proxy until 11:59 p.m. (CT) on May 17, 2016.		
MAIL - Mark, sign and date your proxy card and return it in the postage-paid envelope provided. If you vote your proxy by Internet or by Telephone, you do NOT need to mail back your Proxy Card.		

Please detach here

The Board of Directors Recommends a Vote FOR the election of all director nominees (Proposal 1) and FOR Proposals 2, 3, 4 and 5.

1. Election of directors:
- | | | | |
|-----------------------|-----------------------|--|--|
| 01 Henry S. Bienen | 05 James J. Marino | <input type="checkbox"/> Vote FOR all nominees | <input type="checkbox"/> Vote WITHHELD from all nominees |
| 02 Jerome E. Groopman | 06 Viren Mehta | (except as marked) | |
| 03 Michael B. Hoffman | 07 E. Premkumar Reddy | | |
| 04 Ramesh Kumar | 08 Jack E. Stover | | |

(Instructions: To withhold authority to vote for any indicated nominee, write the number(s) of the nominee(s) in the box provided to the right.)

INSTRUCTIONS: To vote for a proposal, mark the box "For" with an "X". To vote against a proposal, mark the box "Against" with an "X". To abstain from voting, mark the box "Abstain" with an "X".

- | | |
|---|---|
| <p>2. Proposal to amend our certificate of incorporation to combine outstanding shares of our common stock into a lesser number of outstanding shares, a "reverse stock split," by a ratio of not less than one-for-eight and not more than one-for-twelve, with the exact ratio to be set within this range by our board of directors in its sole discretion.</p> <p>3. Proposal to approve, conditioned upon stockholder approval and implementation of the reverse stock split, an amendment to our certificate of incorporation to reduce the number of our authorized shares of common stock from 75,000,000 to 25,000,000.</p> <p>4. Ratification of the selection of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2016.</p> <p>5. Proposal to adjourn the annual meeting, if necessary, to solicit additional proxies in the event that there are not sufficient votes at the time of the annual meeting to approve the reverse stock split (Proposal 2)</p> | <p><input type="checkbox"/> For <input type="checkbox"/> Against <input type="checkbox"/> Abstain</p> <p><input type="checkbox"/> For <input type="checkbox"/> Against <input type="checkbox"/> Abstain</p> <p><input type="checkbox"/> For <input type="checkbox"/> Against <input type="checkbox"/> Abstain</p> <p><input type="checkbox"/> For <input type="checkbox"/> Against <input type="checkbox"/> Abstain</p> |
|---|---|

THIS PROXY WHEN PROPERLY EXECUTED WILL BE VOTED AS DIRECTED OR, IF NO DIRECTION IS GIVEN, WILL BE VOTED AS THE BOARD RECOMMENDS.

Date _____

Address Change? Mark box, sign, and indicate changes below:

Signature(s) in Box
 Please sign exactly as your name(s) appears on Proxy. If held in joint tenancy, all persons should sign. Trustees, administrators, etc., should include title and authority. Corporations should provide full name of corporation and title of authorized officer signing the Proxy.

ONCONOVA THERAPEUTICS, INC.
ANNUAL MEETING OF STOCKHOLDERS

Wednesday, May 18, 2016
10:00 a.m.

Offices of Pepper Hamilton LLP
The New York Times Building
620 Eighth Avenue
37th Floor
New York, NY 10018

ONCONOVA
TARGETING CANCER | PROTECTING HEALTHY CELLS
Onconova Therapeutics, Inc.
375 Pheasant Run
Newtown, PA 18940

proxy

This proxy is solicited by the Board of Directors for use at the Annual Meeting on May 18, 2016.

The undersigned hereby appoints Mark Guerin and Steven M. Fruchtman, and each of them, with full power of substitution, to vote, as designated below, all the shares of Onconova Therapeutics, Inc. common stock held of record by the undersigned at the close of business on April 6, 2016, at the annual meeting of shareholders, to be held May 18, 2016, and at any and all adjournments or postponements thereof. The undersigned hereby revokes any and all earlier dated proxies with respect to such annual meeting. This proxy, when properly executed, will be voted in the manner directed herein by the undersigned. If no direction is made, this proxy will be voted **FOR** the election of each of board's director nominees, **FOR** the proposal to amend our certificate of incorporation to combine outstanding shares of our common stock into a lesser number of outstanding shares, a "reverse stock split," by a ratio of not less than one-for-eight and not more than one-for-twelve, with the exact ratio to be set within this range by our board of directors in its sole discretion; **FOR** the proposal to approve, conditioned upon stockholder approval and implementation of the reverse stock split, an amendment to our certificate of incorporation to reduce the number of our authorized shares of common stock from 75,000,000 to 25,000,000; **FOR** the ratification of the selection of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2016; and **FOR** the proposal to adjourn the annual meeting, if necessary, to solicit additional proxies in the event that there are not sufficient votes at the time of the annual meeting to approve the reverse stock split.

Should a director nominee be unable to serve as a director, an event the Onconova Therapeutics, Inc. does not currently anticipate, the persons named in this proxy reserve the right, in their discretion to vote for a substitute nominee designated by the board of directors.

If any other business is presented at the annual meeting, including matters incidental to the conduct of the meeting or otherwise, this proxy will be voted by those named in this proxy in their best judgment. At the present time, the board of directors knows of no other business to be presented at the meeting.

This proxy may be revoked at any time before it is voted by delivering to the secretary of Bancorp of New Jersey, Inc. on or before the taking of the vote at the annual meeting, a written notice of revocation bearing a later date than the proxy or a later dated proxy relating to the same shares of Onconova Therapeutics, Inc. common stock, or by attending the annual meeting and voting in person. Attendance at the annual meeting will not in itself constitute the revocation of a proxy. If this proxy is properly revoked as described above, then the power of the persons named in this proxy shall be deemed terminated and of no further force and effect.

See reverse for voting instructions.