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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: _____
- (2) Aggregate number of securities to which transaction applies: _____
- (3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined): _____
- (4) Proposed maximum aggregate value of transaction: _____
- (5) Total fee paid: _____
- Fee paid previously with preliminary materials.
- Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.
- (1) Amount Previously Paid: _____
- (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 29, 2015

Dear Stockholder,

We cordially invite you to attend our 2015 Annual Meeting of Stockholders to be held at 10:00 a.m. Eastern Daylight Time on Monday, June 15, 2015 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 June 15, 2015.

Sincerely,

/s/ RAMESH KUMAR PH.D.

Ramesh Kumar
President and Chief Executive Officer

Onconova Therapeutics, Inc.

375 Pheasant Run
Newtown, PA 18940

NOTICE OF 2015 ANNUAL MEETING OF STOCKHOLDERS

NOTICE IS HEREBY GIVEN that the 2015 Annual Meeting of Stockholders of Onconova Therapeutics, Inc., a Delaware corporation (the "Company"), will be held on:

Date: June 15, 2015

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 seven directors, each to hold office until his or her successor is elected and qualified at the 2016 Annual Meeting of Stockholders;
 2. To consider and take action on the ratification of the appointment of Ernst & Young LLP as our independent registered public accounting firm for fiscal 2015; and
 3. To transact such other business as may properly come before the meeting or any adjournments thereof.

Record Date: The Board of Directors has fixed the close of business on April 16, 2015 as the record date for determining stockholders entitled to notice of, and to vote at, the meeting or any adjournment or postponement of the meeting.

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, 2014 (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/ AJAY BANSAL

Ajay Bansal
Chief Financial Officer and Secretary

Newtown, PA
April 29, 2015

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Onconova Therapeutics, Inc.

375 Pheasant Run
Newtown, PA 18940

PROXY STATEMENT

Annual Meeting of Stockholders To Be Held June 15, 2015

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 Annual Meeting of Stockholders (the "Meeting"). The Meeting is scheduled to be held at 10:00 a.m. Eastern Daylight Time on Monday, June 15, 2015 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 29, 2015.

At the Meeting, stockholders will be asked to vote upon: (1) the election of seven directors, each to hold office until his or her successor is elected and qualified at the 2016 Annual Meeting of Stockholders; (2) the ratification of the appointment of our independent registered public accounting firm for fiscal 2015; and (3) such other business as may properly come before the Meeting and at any adjournments thereof.

Voting Rights and Votes Required

The close of business on April 16, 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 21,703,173 shares of Common Stock, par value \$0.01 per share (the "Common Stock"). 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 holder of record for instructions on the voting options available to them.

The presence at the Meeting, whether in person or by valid proxy, of a majority of the holders of shares of stock of the Company entitled to vote generally in the election of directors 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 Meeting will have one vote for each share so held. Abstentions and broker non-votes will count for quorum purposes.

Directors are elected by a plurality of the votes cast when a quorum is present. Stockholders may not cumulate their votes. The seven candidates receiving the highest number of votes will be elected. In tabulating the votes with respect to Proposal 1, votes withheld in connection with the election of one or more nominees and broker non-votes will be disregarded and will have no effect on the outcome of the vote.

In addition, the proposal to ratify the appointment of our independent registered public accounting firm requires the affirmative vote of a majority of the votes cast for approval. In tabulating the votes with respect to Proposal 2, any votes withheld and any broker non-votes will have no effect on the outcome of the vote.

If the shares of Common Stock you own are held in street name by a bank or brokerage firm, that bank or brokerage firm, as the record holder of your shares of Common Stock, is required to vote your shares according to your instructions. If you do not instruct your bank or broker how to vote, your bank or broker may vote those shares only on "routine" matters, such as the ratification of the

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appointment of independent, registered certified public accountants. On non-routine matters, such as the election of directors, banks and brokers cannot vote and 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.

The Board of Directors recommends a vote FOR each Board of Directors nominee and FOR ratification of the appointment of Ernst & Young LLP as the Company's independent registered public accounting firm for fiscal 2015.

Revocation of Proxies

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

Solicitation of Proxies

We will bear the cost of this solicitation, including amounts paid to banks, brokers, and other record owners to reimburse them for their expenses in forwarding solicitation materials regarding the Meeting to beneficial owners of Common Stock. The solicitation will be by mail, with the materials being forwarded to stockholders of record and certain other beneficial owners of 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 Meeting.

Wells Fargo Shareowner Services ("Wells Fargo"), our transfer agent, has been retained as the Inspector of Elections to receive and tabulate proxies. 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.

The seven persons listed in the table below have been designated by the Board of Directors as nominees for election as directors with terms expiring at the 2016 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 seven nominees, each to hold office until his or her successor is elected and qualified at the 2016 annual meeting of stockholders.

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

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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.

<u>Name</u>	<u>Age</u>	<u>Position(s) with Onconova Therapeutics, Inc.</u>	<u>Served as Director From</u>
Henry S. Bienen, Ph.D.	76	Director	2009
Jerome E. Groopman, M.D.	63	Director	2013
Michael B. Hoffman	64	Chairman of the Board of Directors	2002
Ramesh Kumar, Ph.D.	59	Director, President and Chief Executive Officer	1998
Viren Mehta	65	Director	2004
E. Premkumar Reddy, Ph.D.	71	Director	1999
Anne M. VanLent	67	Director	2013

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. 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 our 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

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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., which became a public company in October 2013. 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 the Municipal Arts Society and 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.

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.

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Anne M. VanLent. Ms. VanLent has served as a member of our Board of Directors since July 2013. 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; as a director and chair of the audit committee of Aegerion Pharmaceuticals, Inc. since April 2013; 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, provide 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.

<u>Name</u>	<u>Age</u>	<u>Position(s) with Onconova Therapeutics, Inc.</u>
Ajay Bansal	53	Chief Financial Officer
Steven M. Fruchtman, M.D.	64	Chief Medical Officer, and Senior Vice President, Research and Development
Manoj Maniar, Ph.D.	52	Senior Vice President, Product Development
Thomas McKearn, M.D., Ph.D.	66	President, Research and Development

Ajay Bansal. Mr. Bansal has served as our Chief Financial Officer since March 2013. He also served as a member of our Board of Directors from March 2013 until immediately prior to the listing of our Common Stock on the NASDAQ Global Market. From May 2010 to March 2013, Mr. Bansal served as Chief Financial Officer of Complete Genomics Incorporated, a life sciences company. From June 2009 to January 2010, Mr. Bansal served as Chief Financial Officer of Lexicon Pharmaceuticals, Inc., a biopharmaceutical company. From October 2008 to June 2009 and from February 2010 to April 2010, Mr. Bansal was a consultant. From March 2006 to October 2008, Mr. Bansal served as Chief Financial Officer of Tercica, Inc., a biopharmaceutical company. From February 2003 to January 2006, Mr. Bansal served as Chief Financial Officer of Nektar Therapeutics, a biopharmaceutical company. Prior to joining Nektar Therapeutics, Mr. Bansal spent more than 15 years as a management consultant at Arthur D. Little, Inc., McKinsey & Company, Inc. and ZS Associates, Inc., in management roles at Novartis Corporation, a pharmaceuticals company, at Mehta Partners, a financial advisory firm, and at Capital One, a bank holding company. Mr. Bansal received a B.S. in Mechanical Engineering from the Indian Institute of Technology (Delhi) and an M.S. in Operations Research and an M.B.A. from Northwestern University.

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,

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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.

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.

Thomas McKeam, M.D., Ph.D. Dr. McKeam has served as our President, Research & Development since September 2012. Prior to joining us, Dr. McKeam served as Vice President, Medical Affairs and then as Vice President, Strategic Clinical Affairs at Agennix AG (formerly GPC Biotech GP), a biopharmaceutical company, from April 2002 to August 2012. Prior to joining Agennix AG, Dr. McKeam held several executive positions both in biotech and pharmaceutical organizations, including Executive Director of Strategic Science & Medicine at Bristol-Myers Squibb. Dr. McKeam was a founder of Cytogen Corporation in 1981 and later served as its Chief Executive Officer. He has served as a director of Advaxis, Inc., a publicly held biotechnology company focused on oncology, since 2004. Dr. McKeam has served on the faculty of the Medical School at the University of Pennsylvania. Dr. McKeam received his medical, graduate, and post-graduate training at the University of Chicago.

Director Compensation

The following table summarizes compensation paid to our non-employee directors in fiscal 2014.

Name	Fees Earned or Paid in Cash (\$)	Stock Option Awards (\$)(1)	All Other Compensation (\$)	Total (\$)
Henry S. Bienen, Ph.D.	41,000	28,915	—	69,915
Jerome E. Groopman, M.D.	33,000	28,915	—	61,915
Michael B. Hoffman	68,000	37,590	—	105,590
Viren Mehta	45,000	28,915	—	73,915
E. Premkumar Reddy, Ph.D.	31,755	28,915	194,000(2)	254,670
Anne M. VanLent	56,000	28,915	—	84,915

- (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."
- (3) At December 31, 2014, the aggregate number of outstanding stock option awards held by each non-employee director was: Dr. Bienen—57,803; Dr. Groopman—87,252; Mr. Hoffman—209,794; Dr. Mehta—20,000; Dr. Reddy—38,754; and Ms. VanLent—40,000.

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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 seven 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 his or her successor is elected and qualified at the next annual meeting of stockholders.

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 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

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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., Viren Mehta and Anne M. VanLent, with Anne M. VanLent serving as chairperson. The current members of our Compensation Committee are Michael B. Hoffman, Henry S. Bienen, Ph.D. 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., Viren Mehta and Anne M. VanLent 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 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 statements, and our compliance with legal and regulatory requirements. Our Audit Committee met nine times during fiscal 2014. 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;

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- 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 \$120,000, 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 qualifies as an audit committee financial expert.

Both our independent registered public accounting firm and management periodically will meet privately with our Audit Committee.

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

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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 six times during fiscal 2014. 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 retained 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 provides various executive compensation services to the Compensation Committee pursuant to a written consulting agreement. Generally, these services include 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 have assessed the independence of Radford pursuant to SEC rules and have determined that no known conflict of interest exists that would prevent Radford from serving as an independent consultant to the Compensation Committee.

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 2014. 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.

Compensation Committee Interlocks and Insider Participation

No member of our Compensation Committee has ever been an executive officer or employee of ours. None of our officers currently serves, or has served during the last completed year, on the Board of Directors, Compensation Committee or other committee serving an equivalent function, of any other entity that has one or more officers serving as a member of our Board of Directors or Compensation Committee.

Meetings of the Board of Directors

The Board of Directors held 13 meetings during fiscal 2014. During fiscal 2014, each director attended at least 75% of the aggregate of the total number of meetings of (a) the Board of Directors and (b) the committees on which such director served.

Directors are encouraged, but not required, to attend the annual meeting of stockholders. All of the Directors attended the 2014 annual meeting of stockholders.

Director Nomination Process

The current nominees for election to the Board of Directors were nominated by the full Board of Directors, upon the recommendation of the Nominating and Corporate Governance Committee. At the Meeting, stockholders will be asked to consider the election of Henry S. Bienen, Ph.D., Jerome E.

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Groopman, M.D., Michael B. Hoffman, Ramesh Kumar, Ph.D., Viren Mehta, E. Premkumar Reddy, Ph.D., and Anne M. VanLent.

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.

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.

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

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 the 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, certain of our executive officers and directors are required to file with the SEC reports of ownership and changes in ownership of Common Stock. 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 2014 in a timely manner, except that, one Form 4 for each of our non-employee directors: Henry S. Bienen, Ph.D., Jerome E. Groopman, M.D., Michael B. Hoffman, Viren Mehta, E. Premkumar Reddy, Ph.D., and Anne M. VanLent related to a grant of stock options on May 22, 2014, and one Form 4 for E. Premkumar Reddy, Ph.D related to an exercise of stock options on May 2, 2014, were filed late.

PROPOSAL TWO—RATIFICATION OF THE APPOINTMENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors, acting upon the recommendation of the Audit Committee, has appointed Ernst & Young LLP to audit our consolidated financial statements for fiscal 2015. Ernst & Young LLP has audited our consolidated financial statements since fiscal 2012.

Although stockholder approval of the appointment 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 appointment. If this proposal is not approved at the Meeting, the Audit Committee may reconsider its appointment of Ernst & Young LLP.

We expect representatives of Ernst & Young LLP to attend the 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 2014</u>	<u>Fiscal 2013</u>
Audit Fees(1)	\$ 337,000	\$ 290,000
Audit-Related Fees(2)	25,000	408,000
Tax Fees(3)	117,000	91,000
All Other Fees(4)	—	880,000
Total Fees	\$ 479,000	\$ 1,669,000

- (1) Audit fees consist of fees for the audits of fiscal 2014 and 2013 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 2014 and fiscal 2013 include fees for tax advice, tax return preparation assistance and review.
- (4) "Other Fees" in fiscal 2013 represent fees related to assistance with our initial public offering.

Pre-Approval Policies and Procedures

The 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 our 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 2014 were pre-approved by the Audit Committee. The 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 APPOINTMENT OF ERNST & YOUNG LLP AS OUR INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR FISCAL 2015.

REPORT OF AUDIT COMMITTEE

The Audit Committee has reviewed the Company's audited consolidated financial statements for the fiscal year ended December 31, 2014 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, 2014.

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

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

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information regarding the beneficial ownership of Common Stock as of March 31, 2015 by (a) each person known by us to be the beneficial owner of more than 5% of the outstanding shares of Common Stock, (b) each named executive officer identified in the Summary Compensation Table below, (c) each director and nominee for director, and (d) all executive officers and directors as a group.

The Percentage of Common Stock outstanding is based on 21,703,173 shares of our Common Stock outstanding as of March 31, 2015. 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 31, 2015 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 them, 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.

<u>Name and Address of Beneficial Owner</u>	<u>Number of Shares Beneficially Owned</u>	<u>Percentage of Shares Beneficially Owned</u>
5% or greater stockholders:		
The Michael and Jane Hoffman 2013 Descendants Trust 712 Fifth Avenue, 51st Fl. New York, NY 10019	4,518,275	20.8%
Michael B. Hoffman(1) (Includes The Michael and Jane Hoffman 2013 Descendants Trust) 712 Fifth Avenue, 51st Fl New York, NY 10019	4,831,353	22.0%
Baxter Healthcare SA(2) Thurgauerstrasse 130 Glattpark (Opfikon) Switzerland 8152	2,603,295	12.0%
E. Premkumar Reddy, Ph.D.(3)	1,376,592	6.3%
Other Directors, Director Nominees and Named Executive Officers:		
Henry S. Bienen, Ph.D.(4)	72,738	*
Jerome E. Groopman, M.D.(5)	65,261	*
Ramesh Kumar, Ph.D.(6)	768,607	3.5%
Manoj Maniar, Ph.D.(7)	138,382	*
Thomas McKeam, M.D., Ph.D.(8)	158,214	*
Viren Mehta(9)	164,998	*
Anne M. VanLent(10)	26,600	*
All current executive officers, directors and director nominees as a group (11 persons)(11)	7,798,686	33.8%

* Represents a beneficial ownership of less than one percent of our outstanding Common Stock.

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(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) 209,794 shares of Common Stock subject to outstanding options that are exercisable within 60 days of March 31, 2015. 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).

(2) The shares are owned directly by Baxter Healthcare SA, which is an indirect wholly owned subsidiary of Baxter International Inc., and as such Baxter International Inc. is an indirect beneficial owner of the shares.

(3) Includes 38,754 shares of Common Stock issuable upon the exercise of options that are currently exercisable or exercisable within sixty days of March 31, 2015.

(4) Includes 57,803 shares of Common Stock issuable upon the exercise of options that are currently exercisable or exercisable within sixty days of March 31, 2015.

(5) Includes 65,261 shares of Common Stock issuable upon the exercise of options that are currently exercisable or exercisable within sixty days of March 31, 2015.

(6) Includes (i) 150,037 shares of Common Stock held by the Ramesh Kumar 2012 Trust and (ii) 492,107 shares of Common Stock subject to outstanding options that are exercisable within 60 days of March 31, 2015. Dr. Kumar has voting and dispositive power with regard to the shares held by the Ramesh Kumar 2012 Trust.

(7) Includes 138,382 shares of Common Stock issuable upon the exercise of options that are currently exercisable or exercisable within sixty days of March 31, 2015.

(8) Includes 154,881 shares of Common Stock issuable upon the exercise of options that are currently exercisable or exercisable within sixty days of March 31, 2015.

(9) 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) 20,000 shares of Common Stock subject to outstanding options that are exercisable within 60 days of March 31, 2015. 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.

(10) Includes 26,600 shares of Common Stock issuable upon the exercise of options that are currently exercisable or exercisable within sixty days of March 31, 2015.

(11) Includes 1,355,677 shares of Common Stock issuable upon the exercise of options that are currently exercisable or exercisable within sixty days of March 31, 2015.

CERTAIN RELATIONSHIPS AND RELATED PERSON TRANSACTIONS

Review and Approval of Related Person Transactions

The Audit Committee 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 entered into by the Company to ensure continued appropriateness. This responsibility is set forth in our Audit Committee charter. A related party transaction will only be approved if the members of the Audit Committee determine 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 2014, to which we have been a party, in which the amount involved in the transaction exceeds \$120,000, 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 employment, compensation, termination and change in control arrangements with our named executive officers, which are described under "Executive and Director Compensation." We believe the terms obtained or consideration that we paid or received, as applicable, in connection with the transactions described below were comparable to terms available or the amounts that would be paid or received, as applicable, in arm's-length transactions with unrelated third parties.

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 affiliated. 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 5, 2015. Payments to Mount Sinai for the year ended December 31, 2014 were \$1,215,000.

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, 2015, 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, 2014 were \$194,000.

EXECUTIVE COMPENSATION

Overview of Executive Compensation

Our Compensation Committee is responsible for overseeing the compensation of all of our executive officers. In this capacity, the Compensation Committee designs, implements, reviews and approves all compensation for our named executive officers, except our Chief Executive Officer. Our Chief Executive Officer's compensation is recommended by the Compensation Committee and approved by the Board of Directors. The goal of the Compensation Committee is to ensure that our compensation programs are aligned with our business goals and objectives and that the total compensation paid to each of our named executive officers is fair, reasonable and competitive.

Compensation Objectives and Philosophy

Our compensation programs are designed to attract and retain qualified and talented executives, motivating them to achieve our business goals and rewarding them for superior short- and long-term

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performance. In particular, our compensation programs are intended to reward the achievement of specified predetermined quantitative and qualitative goals and to align our executives' interests with those of our stockholders in order to attain the ultimate objective of increasing stockholder value.

Elements of Total Compensation and Relationship to Performance

Key elements of these programs include:

- base salary designed to compensate our executives for their services, with consideration given to the executive's qualifications, scope of responsibility, leadership abilities and management experience and effectiveness;
- cash bonus awards designed to reward annual achievements and align executive compensation with business objectives and performance; and
- equity-based incentive compensation, in the form of stock options, the value of which is dependent upon the performance of our Common Stock, and which is typically subject to multi-year vesting that requires continued service and/or the attainment of certain performance goals.

Summary Compensation Table

The following table sets forth information for the fiscal years ended December 31, 2014 and 2013 concerning compensation of our principal executive officer and two other executive officers who were serving as executive officers as of December 31, 2014. We refer to these three executives as our named executive officers.

Name and Principal Position	Year	Salary (\$)	Bonus (\$)(1)	Option Awards (\$)(2)	All Other Compensation (\$)(3)	Total (\$)
Ramesh Kumar, Ph.D.	2014	525,000	188,409	484,961	18,804	1,217,174
President and Chief Executive Officer	2013	467,845	275,000	2,252,973	13,243	3,009,061
Thomas McKearn, M.D., Ph.D.	2014	350,140	100,525	207,841	16,609	675,115
President of Research and Development	2013	274,189	84,823	1,001,364	4,008	1,364,384
Manoj Maniar, Ph.D.	2014	356,860	108,664	166,272	30,589	662,385
Senior Vice President, Product Development(4)						

- (1) Represents discretionary annual bonus amounts paid pursuant to the named executive officers' employment agreements or Radford recommendations approved by the Compensation Committee.
- (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.

The options underlying these awards vest over four years except for a special grant during 2013 to Dr. Kumar and Dr. McKearn related to the company's initial public offering, which vested immediately. For more information see the Outstanding Equity Awards at Fiscal Year-End table on page 22.

See Note 10 of the Notes to Consolidated Financial Statements in our Annual Report on Form 10-K 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.

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- (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. Maniar was not a named executive officer in fiscal 2013.

Employment Agreements

Ramesh Kumar, Ph.D.

We entered into an employment agreement with Dr. Kumar on April 1, 2007. The employment agreement provided for an initial term of four years, unless extended by mutual agreement of the parties or sooner terminated in accordance with the terms of the agreement. Based on mutual agreement between the Company and Dr. Kumar the employment agreement term was extended to March 31, 2015.

The employment agreement provided for an initial base salary of \$299,076, subject to adjustment upon annual review by our Board of Directors, and an annual bonus of up to 35% 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. At December 31, 2014, Dr. Kumar's annual base salary was \$525,000 and he was eligible for an annual bonus up to 55% of such base salary.

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 of \$300,000, 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," Dr. Kumar will be entitled to receive bi-weekly payments equal to his then-current bi-weekly base salary commencing on the date written notice of a termination without "cause" is delivered to Dr. Kumar or the date of termination for "good reason" and ending on the earlier of the date on which the term of the employment agreement would otherwise expire or the date Dr. Kumar accepts comparable employment, provided that if Dr. Kumar accepts such comparable employment within one year of the commencement of such payments, he shall continue to receive such payments until the earlier of the date on which the term of the employment agreement would otherwise expire or one year from such commencement. All incentive stock options that are unvested as of the date of such termination would fully vest as of the date of termination and would remain exercisable for three months from the date of termination.

Manoj Maniar, Ph.D

We entered into an employment agreement with Dr. Maniar on January 1, 2007. The employment agreement provided 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. Based on mutual agreement between the Company and Dr. Maniar the employment agreement term was extended to May 31, 2014.

The employment agreement provided for an initial base salary of \$236,500, subject to adjustment upon annual review, and subject to the Compensation Committee's sole discretion an annual bonus of up to 30% 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. Maniar and the Company, provided that Dr. Maniar 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. At December 31, 2014, Dr. Maniar's annual base salary was \$356,860 and he was eligible for an annual bonus up to 40% of such base salary.

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," Dr. Maniar will be entitled to receive bi-weekly payments equal to his then-current bi-weekly base salary commencing on the date written notice of a termination without "cause" is delivered to Dr. Maniar or the date of termination for "good reason" and ending on the earlier of six months, the date on which the term of the employment agreement would otherwise expire or the date Dr. Maniar accepts comparable employment, provided that if Dr. Maniar accepts such comparable employment within one year of the commencement of such payments, he shall continue to receive such payments until the earlier of the date on which the term of the employment agreement would otherwise expire or one year from such commencement. All incentive stock options that are unvested as of the date of such termination would fully vest as of the date of termination and would remain exercisable for three months from the date of termination.

Thomas McKearn, M.D., Ph.D.

We entered into an employment agreement with Dr. McKearn on September 1, 2012. The employment agreement provides for a term of two years, unless extended by mutual agreement of the parties, with an automatic renewal for successive one-year periods unless written notification is provided by either party to the other at least ten business days prior to the expiration of the term, unless sooner terminated in accordance with the terms of the agreement.

Dr. McKearn's employment agreement provides for an initial base salary of \$205,000 and an annual bonus of up to 35% of such base salary, based on our performance and the performance of Dr. McKearn. 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. Currently, Dr. McKearn works a schedule equivalent to 80% of fulltime. At December 31, 2014, Dr. McKearn's annual base salary was \$350,140 and he was eligible for an annual bonus of up to 40% of such base salary.

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Dr. McKeam 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 and reimbursement of reasonable business expenses in conformance with our policies. Dr. McKeam's employment agreement contains non-solicitation, non-competition, confidentiality and inventions assignment provisions that, among other things, prevents him from competing with us during the term of his employment and for a specified time thereafter.

If Dr. McKeam's employment is terminated due to death, disability, by us for "cause," or by him without "good reason" (with 30 days' notice to us) during the term of his employment agreement, the agreement shall terminate and we shall pay to him 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. McKeam's employment is terminated by us without "cause" or by him with "good reason" during the term of the employment agreement, he will continue to receive salary during a three-month period from the date of notice but shall not be required to perform his duties during such period. All stock options that are unvested as of the date of such termination shall fully vest and shall remain exercisable for three months from the date of termination.

If we or Dr. McKeam provide written notice of intent to terminate the applicable employment agreement at the expiration of the term, he shall receive a lump sum payment equal to three months of his then-current base salary, subject to his execution of a general release of claims against us.

If any of the payments or benefits received by Dr. Kumar, Dr. McKeam or Dr. Maniar shall be nondeductible to us by reason of Section 280G of the Code, such payments shall be reduced to the maximum amount which can be deducted by us, provided that we shall make all reasonable efforts to avoid rendering such payments or benefits nondeductible, including seeking stockholder approval if our Board of Directors determines that such seeking of approval shall have no adverse effect on us.

For purposes of the employment agreements, "cause" generally means (i) any gross failure of the executive (other than by reason of disability) to faithfully and professionally carry out his duties or to comply with any other material provision of his employment agreement, which continues after our written notice thereof or is not susceptible to remedy or relates to the same types of acts or omissions for which notice has previously been given, (ii) the executive's dishonesty or other willful misconduct, (iii) the executive's conviction for any felony or any other crime involving moral turpitude, whether or not relating to his employment, (iv) in accordance with applicable law, the executive's insobriety or use of illegal drugs either in the course of performing his duties or otherwise affecting his ability to perform such duties, (v) the executive's failure to comply with a lawful written direction of us or (vi) any wanton or willful dereliction of duties by the executive.

For purposes of the employment agreements, "good reason" generally means (i) a reduction in base salary by more than 20% in and for any twelve-month period, (ii) breach by us of any material provision of the employment agreement that continues without steps being taken to cure such breach for ten days after written notice thereof by the executive to us, or (iii) during the term of the employment agreement, the occurrence of (1) the sale or transfer of substantially all of our assets or (2) our merger or consolidation under circumstances where we are not the surviving entity or where persons having control of us immediately prior thereto are not in control of us immediately after.

Stock Option and Other Compensation Plans

2013 Equity Compensation Plan

Our Board of Directors adopted, and our stockholders approved, our 2007 Equity Compensation Plan in December 2007 and January 2008, respectively, 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 was amended, restated and renamed immediately prior to the listing of our Common Stock on the NASDAQ Global Select Market in the form of the 2013 Equity Compensation Plan, to reflect such offering. The 2013 Equity Compensation Plan provides for the grant of stock options, stock appreciation rights, restricted stock, restricted stock units, deferred shares and other equity-based awards.

Outstanding Equity Awards at Fiscal Year-End

The following table contains certain information regarding equity awards held by the named executive officers as of December 31, 2014:

<u>Name</u>	<u>Number of Securities Underlying Unexercised Options (#) Exercisable</u>	<u>Number of Securities Underlying Unexercised Options (#) Unexercisable</u>	<u>Option Exercise Price (\$)</u>	<u>Option Expiration Date</u>
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
	46,879(1)	46,894	13.28	12/18/2022
	100,000	—	15.00	7/25/2023
	1,770(3)	3,230	15.00	7/25/2023
	33,750(4)	101,250	13.48	12/20/2023
—(4)	175,000	3.98	12/18/2024	
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
	15,001(1)	15,006	13.28	12/18/2022
	1,770(3)	3,230	15.00	7/25/2023
	10,000(4)	30,000	13.48	12/20/2023
	—(4)	60,000	3.98	12/18/2024
Thomas McKearn	893	—	7.53	3/9/2022
	412	—	13.28	8/31/2022
	37,498(1)	37,520	13.28	12/18/2022
	34,461(2)	44,308	13.28	3/20/2023
	30,000	—	15.00	7/25/2023
	1,770(3)	3,230	15.00	7/25/2023
	18,000(4)	54,000	13.48	12/20/2023
	—(4)	75,000	3.98	12/18/2024

- (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 vested on March 20, 2013. The remaining shares vest 1/36th monthly over 36 months thereafter, subject to continued service to us through each vesting date.
- (3) 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.
- (4) 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, 2014 or (ii) if a Change in Control, as defined herein, occurred on December 31, 2014 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, 2014. 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	4,631,299	\$ 10.04	1,012,310
Equity compensation plans not approved by stockholders	—	—	—

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 2016 Annual Meeting

In order for a stockholder proposal, including a director nomination, to be considered for inclusion in our proxy statement for the 2016 annual meeting of stockholders, the written proposal must be received at our principal executive offices on or before December 31, 2015. 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 2016 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 February 16, 2016 and no later than March 17, 2016 (except that in the event that the date of the 2016 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 2016 annual meeting and not later than the close of business on the later of (A) the 90th day prior to the 2016 annual meeting or (B) the tenth day following the day on which public disclosure of the date of the 2016 annual meeting was made.

The notice should include a brief description of the business desired to be brought before the 2016 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.

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Annual Report

Our 2014 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 December 31, 2014, without charge, by writing to Onconova Therapeutics, Inc., 375 Pheasant Run, Newtown, PA 18940.**

BY ORDER OF THE BOARD OF DIRECTORS

/s/ AJAY BANSAL

Secretary

Dated: April 29, 2015


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.

PROXY CARD


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**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 June 14, 2015.
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 June 14, 2015.

 **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 Items 1 and 2.

1. Election of directors:
- | | |
|-----------------------|-----------------------|
| 01 Henry S. Bienen | 05 Vren Mehta |
| 02 Jerome E. Groopman | 06 E. Premkumar Reddy |
| 03 Michael B. Hoffman | 07 Anne M. VanLent |
| 04 Ramesh Kumar | |

- Vote FOR all nominees (except as marked) Vote WITHHELD from all nominees

(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.)

2. Ratification of the appointment of Ernst & Young LLP as Onconova Therapeutics, Inc.'s independent registered public accounting firm for the fiscal year ending December 31, 2015.

- For Against Abstain

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

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

Date _____

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**

**Monday, June 15, 2015
10:00 a.m.**

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



**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 June 15, 2015.

The shares of stock you hold in your account or in a dividend reinvestment account will be voted as you specify on the reverse side.

If no choice is specified, the proxy will be voted "FOR" Items 1 and 2.

By signing the proxy, you revoke all prior proxies and appoint Ramesh Kumar and Ajay Bansal, and each of them with full power of substitution, to vote your shares on the matters shown on the reverse side and any other matters which may come before the Annual Meeting and all adjournments.

See reverse for voting instructions.