

TRANSGENOMIC INC
Form DEF 14A
April 24, 2014

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

SCHEDULE 14A INFORMATION

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

Filed by the Registrant x
Filed by a Party other than the Registrant o

Check the appropriate box:

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

Transgenomic, Inc.

(Name of Registrant as Specified In Its Charter)

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

Payment of Filing Fee (Check the appropriate box):

- x No fee required.
- o 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:

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- o Fee paid previously with preliminary materials.

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(1) Amount previously paid:

(2) Form, Schedule or Registration Statement No.:

(3) Filing Party:

(4) Date Filed:

TRANSGENOMIC, INC.
12325 Emmet Street
Omaha, Nebraska 68164

April 24, 2014

Dear Stockholder:

You are cordially invited to attend our 2014 Annual Meeting of Stockholders, which will be held at our principal executive offices, 12325 Emmet Street, Omaha, Nebraska, on Wednesday, May 14, 2014 at 9:30 a.m., Central Daylight Time.

At the Annual Meeting, stockholders will be asked to vote on each of the two proposals set forth in the Notice of Annual Meeting of Stockholders and the proxy statement, which describe the formal business to be conducted at the Annual Meeting and follow this letter.

It is important that your shares are represented and voted at the Annual Meeting regardless of the size of your holdings. Whether or not you plan to attend the Annual Meeting, please complete, sign, date and return the accompanying proxy card in the enclosed postage-paid envelope or vote electronically via the Internet or by telephone, if permitted by the broker or other nominee that holds your shares. Voting electronically, by telephone, or by returning your proxy card in advance of the Annual Meeting does not deprive you of your right to attend the Annual Meeting.

If you have any questions concerning the Annual Meeting and you are the stockholder of record of your shares, please contact Donna Christian at (402) 452-5416. If your shares are held by a broker or other nominee (that is, in "street name"), please contact your broker or other nominee for questions concerning the Annual Meeting.

Thank you for your continued support. We look forward to seeing those of you who will be able to attend the Annual Meeting.

Sincerely yours,
/S/ PAUL KINNON
Paul Kinnon
President and Chief Executive Officer

TRANSGENOMIC, INC.
12325 Emmet Street
Omaha, Nebraska 68164

NOTICE OF ANNUAL MEETING OF STOCKHOLDERS

Notice is hereby given that the 2014 Annual Meeting of Stockholders of Transgenomic, Inc. (the "Company") will be held at our principal executive offices, 12325 Emmet Street, Omaha, Nebraska, on Wednesday, May 14, 2014 at 9:30 a.m., Central Daylight Time, for the following purposes:

- (1) To ratify the appointment of Ernst & Young LLP as our independent registered public accounting firm for the year ending December 31, 2014;
- (2) To conduct an advisory vote to approve named executive compensation; and
- (3) To transact such other business as may properly come before the Annual Meeting or any adjournment or postponement thereof.

Only stockholders of record at the close of business on March 19, 2014 are entitled to notice of, and to vote at, the Annual Meeting.

By Order of the Board of Directors
/S/ MARK P. COLONNESE
Mark P. Colonnese, Executive Vice President
and Chief Financial Officer

Omaha, Nebraska
April 24, 2014

Important Notice Regarding the Availability of Proxy Materials for the Stockholder Meeting to be held on May 14, 2014 : This Proxy Statement, the accompanying form of proxy card and our Annual Report on Form 10-K for the fiscal year ended December 31, 2013, including financial statements, are available on the Internet at www.transgenomic.com. Under rules issued by the Securities and Exchange Commission (the "SEC"), we are providing access to our proxy materials both by sending you this full set of proxy materials and by notifying you of the availability of our proxy materials on the Internet.

Transgenomic, Inc.
12325 Emmet Street
Omaha, Nebraska 68164

PROXY STATEMENT
for
ANNUAL MEETING OF STOCKHOLDERS
of
TRANSGENOMIC, INC.

GENERAL INFORMATION

We are sending this Proxy Statement to you in connection with our request for your proxy to use at the Annual Meeting of Stockholders (the “Annual Meeting”) of Transgenomic, Inc. (the “Company”) to be held on May 14, 2014 at 9:30 a.m., Central Daylight Time, at our offices located at 12325 Emmet Street, Omaha, Nebraska. Only those owners of our common stock, Series A Convertible Preferred Stock (the “Series A Preferred Stock”) and Series B Convertible Preferred Stock (the “Series B Preferred Stock” and, together with the Series A Preferred Stock, the “Preferred Stock”) of record as of the close of business on March 19, 2014 (the “Record Date”) are entitled to vote at the Annual Meeting. This Proxy Statement, along with the Notice of the Annual Meeting, the Annual Report to Stockholders and a proxy card are being first mailed to stockholders on or about April 24, 2014.

Your proxy is being solicited by the Board of Directors of the Company (the “Board”) and will give each member of the Board and our Chief Executive Officer the power to vote on your behalf at the Annual Meeting. All shares of the Company’s voting stock represented by properly executed and unrevoked proxies will be voted by a member of the Board or the Chief Executive Officer in accordance with the directions given by those proxies. Where no instructions are indicated, the Board or the Chief Executive Officer will vote as follows: (1) “FOR” the ratification of the appointment of Ernst & Young LLP as our independent registered public accounting firm for the year ending December 31, 2014 (“Proposal One”), and (2) “FOR” the approval, on an advisory basis, of the compensation of our named executive officers, as set forth in this Proxy Statement (“Proposal Two”). In addition, the Board believes outstanding voting shares owned by current executive officers and directors of the Company will be voted “FOR” each of Proposal One and Proposal Two. Shares owned by these persons represent less than 1% of the total shares of our voting stock outstanding as of the Record Date.

You may revoke your proxy at any time before it is exercised by a member of the Board or the Chief Executive Officer at the Annual Meeting. If you decide to do this, you will need to give the Secretary of the Company written notice that you want to revoke the proxy or you can submit a new proxy to the Secretary, or submit a new vote electronically via the Internet or by telephone. In addition, if you attend the Annual Meeting in person, you may withdraw your proxy and vote in person. Shares of common stock and Preferred Stock entitled to vote and represented by properly executed, returned and unrevoked proxies will be considered present at the Annual Meeting for purposes of establishing a quorum. This includes shares for which votes are withheld, abstentions are cast or there are broker non-votes. The holders of our common stock and Preferred Stock representing at least a majority of our voting stock issued and outstanding on the Record Date must be present at the Annual Meeting, either in person or by proxy, in order for there to be a quorum.

Under rules that govern banks, brokers and others who have record ownership of company stock held in brokerage accounts for their clients who beneficially own the shares, these banks, brokers and other such holders who do not receive voting instructions from their clients have the discretion to vote uninstructed shares on certain matters (“discretionary matters”) but do not have discretion to vote uninstructed shares as to certain other matters (“non-discretionary matters”). A broker may return a proxy card on behalf of a beneficial owner from whom the broker has not received voting instructions that casts a vote with regard to discretionary matters but expressly states that the broker is not voting as to non-discretionary matters. The broker’s inability to vote with respect to the non-discretionary matters with respect to which the broker has not received voting instructions from the beneficial owner is referred to as a “broker non-vote.”

As a result of a change in rules related to discretionary voting and broker non-votes, banks, brokers and other such record holders are no longer permitted to vote the uninstructed shares of their customers on a discretionary basis on executive compensation

program matters. Because broker non-votes are not considered under Delaware law to be entitled to vote at the Annual Meeting, they will have no effect on the outcome of the vote on Proposal Two (advisory vote to approve named executive compensation). As a result, if you hold your shares in street name and you do not instruct your bank, broker or other such holder how to vote your shares on the advisory vote related to our named executive compensation, no votes will be cast on your behalf on these proposals. Therefore, it is critical that you indicate your vote on these proposals if you want your vote to be counted. Proposal One (ratification of the appointment of Ernst & Young LLP as our independent registered public accounting firm for the year ending December 31, 2014) should be considered a routine matter. Therefore, your broker will be able to vote on this proposal even if it does not receive instructions from you, so long as it holds your shares in its name.

Reverse Stock Split

On January 15, 2014, the Board approved a reverse split of our common stock at a ratio of one-for-twelve. This reverse stock split became effective on January 27, 2014 and all share amounts, per share data, share prices, exercise prices and conversion rates set forth in this Proxy Statement have, where applicable, been adjusted retroactively to reflect this reverse stock split.

Required Votes

On the Record Date there were 7,353,695 issued and outstanding shares of our common stock, 2,586,205 issued and outstanding shares of Series A Preferred Stock and 1,443,297 issued and outstanding shares of Series B Preferred Stock. Each share of common stock is entitled to one vote on each matter to be voted on at the Annual Meeting. Series A Preferred Stock holders are entitled to one vote for every three shares of Series A Preferred Stock held on each matter to be voted on at the Annual Meeting. Accordingly, the owners of Series A Preferred Stock have an aggregate of 862,057 votes with respect to each proposal to be voted on at the Annual Meeting. Each share of Series B Preferred Stock is entitled to one vote on each matter to be voted on at the Annual Meeting. Accordingly, the owners of Series B Preferred Stock have an aggregate of 1,443,297 votes with respect to each proposal to be voted on at the Annual Meeting. The Preferred Stockholders will vote together as a single class on an as-converted basis with the holders of common stock on each of Proposal One and Proposal Two.

Proposal One-Ratification of the appointment of Ernst & Young LLP as our independent registered public accounting firm for the year ending December 31, 2014. The affirmative vote of a majority of the voting power present in person or represented by proxy held by the holders of our common stock and Preferred Stock, voting together as a single class on an as-converted to common stock basis, at the Annual Meeting is required to ratify the appointment of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2014. Abstentions will be counted as votes against this proposal. Broker non-votes will have no effect on the outcome of this proposal.

Proposal Two-Approval, on an advisory basis, of the compensation of our named executive officers, as set forth in this Proxy Statement. The affirmative vote of a majority of the voting power present in person or represented by proxy held by the holders of our common stock and Preferred Stock, voting together as a single class on an as-converted to common stock basis, at the Annual Meeting is required to approve, on an advisory basis, the compensation of our named executive officers, as set forth in this Proxy Statement. Abstentions will be counted as votes against this proposal. Broker non-votes will have no effect on the outcome of this proposal.

Election of Directors

As a Class II director, the term of Antonius P. Schuh, Ph.D. will expire at the Annual Meeting. Dr. Schuh informed us that due to his schedule, he would have less time to devote to serving on our Board of Directors going forward.

Therefore, based on discussions with Dr. Schuh, the Board has determined not to nominate Dr. Schuh for re-election as a Class II director when his term expires at the Annual Meeting, and the Board has not designated a nominee for election to the seat held by Dr. Schuh. Accordingly, the Board is not nominating an individual to serve as a Class II director, and is not soliciting votes for a Class II director nominee to be elected by the holders of our common stock at the Annual Meeting. We are not soliciting proxies for the election of a Class II director from the holders of the Series A Preferred Stock and the Series B Preferred Stock (together, the “Preferred Stockholders”) as the Preferred Stockholders are entitled to elect a Class II director as a separate voting group.

VOTING SECURITIES AND BENEFICIAL OWNERSHIP BY
PRINCIPAL STOCKHOLDERS, DIRECTORS AND OFFICERS

Beneficial Ownership of Common Stock

On the Record Date there were 7,353,695 issued and outstanding shares of our common stock.

The following table provides information known to us with respect to beneficial ownership of our common stock by our directors and all nominees for director, by those of our executive officers who are named in the Summary Compensation Table, by all of our current executive officers and directors as a group, and by each person we believe beneficially owns more than 5% of our outstanding common stock as of March 19, 2014, the record date established for our Annual Meeting of Stockholders. Except as indicated in the footnotes to this table, to our knowledge the persons named in the table below have sole voting and investment power with respect to all common stock of the Company beneficially owned and such shares are owned directly by such person. The number of shares beneficially owned by each person or group as of March 19, 2014 includes shares of common stock that such person or group had the right to acquire on or within 60 days after March 19, 2014, including, but not limited to, upon the exercise of options or warrants to purchase common stock or the conversion of securities into common stock. Beneficial ownership information of persons other than our current executive officers and directors is based on available information including, but not limited to, Schedules 13D, 13F or 13G filed with the Securities and Exchange Commission (the "SEC") or information supplied by these persons.

| Name and Address of Beneficial Owner ⁽¹⁾ | Number of Shares Beneficially Owned | | Percent of Class |
|--|-------------------------------------|------|------------------|
| Directors and Executive Officers | | | |
| Paul Kinnon, President and Chief Executive Officer, Director | — | | * |
| Mark P. Colonnese, Executive Vice President and Chief Financial Officer | 12,500 | (2) | * |
| Craig J. Tuttle, Former President and Chief Executive Officer ⁽³⁾ | — | | * |
| Doit L. Koppler II, Director | 13,529 | (4) | * |
| Rodney S. Markin, M.D., Ph.D., Director | 8,750 | (5) | * |
| Robert M. Patzig, Director | 12,164 | (6) | * |
| Antonius P. Schuh, Ph.D., Director ⁽⁷⁾ | 7,916 | (8) | * |
| Michael A. Luther, Director ⁽⁹⁾ | — | | * |
| All directors and executive officers as a group (7 persons) | 54,859 | (10) | * |
| Other Stockholders | | | |
| Randal J. Kirk | 3,916,716 | (11) | 37.3% |
| LeRoy C. Kopp | 1,181,294 | (12) | 16.1% |
| Kevin Douglas | 709,568 | (13) | 9.6% |
| Fidelity Select Biotechnology Portfolio | 423,998 | (14) | 5.8% |
| AMH Equity, LLC and Leviticus Partners, L.P. | 416,667 | (15) | 5.7% |

* Represents less than 1% of our outstanding common stock.

(1) The address for all of our directors and executive officers is the address of our principal executive offices located at 12325 Emmet Street, Omaha, Nebraska 68164.

(2) Includes 12,500 shares issuable upon the exercise of options that are exercisable or will become exercisable within 60 days after March 19, 2014.

(3) Mr. Tuttle's service as our President and Chief Executive Officer terminated on September 30, 2013.

(4) Includes (i) 4,166 shares owned by Mr. Koppler, (ii) 7,500 shares issuable upon the exercise of options that are exercisable or will become exercisable within 60 days after March 19, 2014 and (iii) 1,863 shares issuable upon the

exercise of warrants that are exercisable or will become exercisable within 60 days after March 19, 2014.

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(5) Includes 8,750 shares issuable upon the exercise of options that are exercisable or will become exercisable within 60 days after March 19, 2014.

(6) Includes (i) 3,333 shares owned by Mr. Patzig, (ii) 7,500 shares issuable upon the exercise of options that are exercisable or will become exercisable within 60 days after March 19, 2014 and (iii) 1,331 shares issuable upon the exercise of warrants that are exercisable or will become exercisable within 60 days after March 19, 2014 .

(7) Dr. Schuh's service on the Board will terminate on the date of the Annual Meeting.

(8) Includes 7,916 shares issuable upon the exercise of options that are exercisable or will become exercisable within 60 days after March 19, 2014.

(9) Dr. Luther was appointed to the Board on March 13, 2014.

(10) Includes shares which may be acquired by executive officers and directors as a group within 60 days after March 19, 2014 through the exercise of stock options or warrants.

(11) Consists of (i) 770,490 shares of common stock; (ii) warrants to purchase 409,845 shares of common stock; (iii) shares of Series A Preferred Stock convertible into 862,057 shares of common stock; (iv) warrants to purchase shares of Series A Preferred Stock which are convertible into 431,027 shares of common stock; and (v) shares of Series B Preferred Stock convertible into 1,443,297 shares of common stock. These shares of common stock, the warrants to purchase common stock, the shares of Series A Preferred Stock and the warrants to purchase Series A Preferred Stock are held 40% by Third Security Senior Staff 2008 LLC, 40% by Third Security Staff 2010 LLC and 20% by Third Security Incentive 2010 LLC, which companies are affiliated with the beneficial owner. The shares of Series B Preferred Stock are held 40% by Third Security Senior Staff 2008 LLC, 40% by Third Security Staff 2014 LLC and 20% by Third Security Incentive 2010 LLC, which companies are affiliated with the beneficial owner. Mr. Randal J. Kirk could be deemed to have indirect beneficial ownership of these shares. The business address of these beneficial owners is 1881 Grove Avenue, Radford, Virginia 24141.

(12) Based solely on our review of a Schedule 13D/A filed with the SEC on November 1, 2013, consists of shares owned directly by Mr. Kopp, shares held in individual retirement accounts established for Mr. Kopp and his spouse, shares held in the Kopp Family Foundation of which he is a director and shares held in discretionary client accounts managed by Kopp Investment Advisors, LLC of which he is the Chief Executive Officer. The business address of each of these beneficial owners is 8400 Normandale Lake Boulevard, Suite 1450, Bloomington, Minnesota 55437.

(13) Based solely on our review of a Schedule 13G/A filed with the SEC on February 14, 2013, Mr. Douglas has dispositive power over all of the shares owned by the Douglas affiliates. The Douglas affiliates include shares owned directly by James E. Douglas, III as well as shares held in the following trusts: K&M Douglas Trust, Douglas Family Trust and the James Douglas and Jean Douglas Irrevocable Descendants' Trust. The business address of this beneficial owner is 125 East Sir Francis Drake Boulevard, Suite 400, Larkspur, California 94939.

(14) Based solely on our review of a Schedule 13G filed with the SEC on February 14, 2013, Fidelity Management & Research Company ("Fidelity"), a wholly-owned subsidiary of FMR LLC and an investment adviser registered under Section 203 of the Investment Advisers Act of 1940, as amended, is the beneficial owner of 423,998 shares of common stock as a result of acting as investment adviser to various investment companies registered under Section 8 of the Investment Company Act of 1940, as amended. Each of Edward C. Johnson 3d and FMR LLC, through its control of Fidelity and the funds has sole power to dispose of the 423,998 shares owned by the funds. Members of the family of Edward C. Johnson 3d, Chairman of FMR LLC, are the predominant owners, directly or through trusts, of Series B voting common shares of FMR LLC, representing 49% of the voting power of FMR LLC. The Johnson

family group and all other Series B shareholders have entered into a shareholders' voting agreement under which all Series B voting common shares will be voted in accordance with the majority vote of Series B voting common shares. Accordingly, through their ownership of voting common shares and the execution of the shareholders' voting agreement, members of the Johnson family may be deemed, under the Investment Company Act of 1940, as amended, to form a controlling group with respect to FMR LLC. Neither FMR LLC nor Edward C. Johnson 3d, Chairman of FMR LLC, has the sole power to vote or direct the voting of the shares owned directly by the Fidelity funds, which power resides with the funds' Boards of Trustees. Fidelity carries out the voting of the shares under written guidelines established by the funds' Boards of Trustees. The business address of this beneficial owner is 82 Devonshire Street, Boston, Massachusetts 02109.

(15) Based solely on our review of a Schedule 13G filed with the SEC on July 18, 2013, consists of shares held by AMH Equity, LLC, which is the general partner of Leviticus Partners, L.P. The business address of this beneficial owner is 60 East 42nd Street, Suite 901, New York, New York 10165.

Beneficial Ownership of Preferred Stock

Series A Preferred Stock

As of March 19, 2014, there were 2,586,205 issued and outstanding shares of our Series A Preferred Stock.

The following table provides information known to us with respect to beneficial ownership of the Series A Preferred Stock by each person we believe beneficially owns more than 5% of our outstanding Series A Preferred Stock as of March 19, 2014. The number of shares of Series A Preferred Stock beneficially owned by each person or group as of March 19, 2014 includes shares of Series A Preferred Stock that such person or group had the right to acquire on or within 60 days after March 19, 2014, including, but not limited to, upon the exercise of warrants to purchase shares of Series A Preferred Stock. Except as indicated in the footnotes to this table, to our knowledge the persons named in the table below have sole voting and investment power with respect to all of the shares of Series A Preferred Stock beneficially owned and such shares are owned directly by such person. Beneficial ownership information of such persons is based on available information including, but not limited to, Schedules 13D, 13F or 13G filed with the SEC or information supplied by these persons.

| Name and Address of Beneficial Owner | Number of Shares Beneficially Owned | | Percent of Class | |
|--------------------------------------|--|-----|------------------|---|
| Randal J. Kirk | 3,879,307 | (1) | 100 | % |

(1) Includes warrants to purchase 1,293,102 shares of Series A Preferred Stock. These shares of Series A Preferred Stock and warrants are held 40% by Third Security Senior Staff 2008 LLC, 40% by Third Security Staff 2010 LLC and 20% by Third Security Incentive 2010 LLC, which companies are affiliated with the beneficial owner.

Mr. Randal J. Kirk could be deemed to have indirect beneficial ownership of these shares. The business address of these beneficial owners is 1881 Grove Avenue, Radford, Virginia 24141.

Series B Preferred Stock

As of March 19, 2014, there were 1,443,297 issued and outstanding shares of our Series B Preferred Stock.

The following table provides information known to us with respect to beneficial ownership of Series B Preferred Stock by each person we believe beneficially owns more than 5% of our outstanding Series B Preferred Stock as of March 19, 2014. The number of shares of Series B Preferred Stock beneficially owned by each person or group as of March 19, 2014 includes shares of Series B Preferred Stock that such person or group had the right to acquire on or within 60 days after March 19, 2014. Except as indicated in the footnotes to this table, to our knowledge the persons named in the table below have sole voting and investment power with respect to all of the shares of Series B Preferred Stock beneficially owned and such shares are owned directly by such person. Beneficial ownership information of such persons is based on available information including, but not limited to, Schedules 13D, 13F or 13G filed with the SEC or information supplied by these persons.

| Name and Address of Beneficial Owner | Number of Shares Beneficially Owned | | Percent of Class | |
|--------------------------------------|--|-----|------------------|---|
| Randal J. Kirk | 1,443,297 | (1) | 100 | % |

(1) The shares of Series B Preferred Stock are held 40% by Third Security Senior Staff 2008 LLC, 40% by Third Security Staff 2014 LLC and 20% by Third Security Incentive 2010 LLC, which companies are affiliated with the beneficial owner. Mr. Randal J. Kirk could be deemed to have indirect beneficial ownership of these shares. The business address of these beneficial owners is 1881 Grove Avenue, Radford, Virginia 24141.

BOARD OF DIRECTORS AND CORPORATE GOVERNANCE

Board of Directors and Committees

Our Board consists of six directors. The Board is divided into three classes with directors in each class serving for a term of three years. The terms of office of the current Class I, Class II and Class III directors will expire in 2016, 2014 and 2015, respectively. The Preferred Stockholders are entitled, as a separate voting group, to elect two of the six directors (the “Preferred Stock Directors”). The Common Stockholders are entitled, as a separate voting group, to elect the four remaining directors (the “Common Stock Directors”). There is one Common Stock Director in both Class I and Class II and two Common Stock Directors in Class III. There is one Preferred Stock Director in each of Class I and Class II, but not a Preferred Stock Director in Class III.

Robert M. Patzig is the current Preferred Stock Director in Class I, Paul Kinnon is the current Common Stock Director in Class I, Doit L. Koppler, II is the current Preferred Stock Director in Class II, Antonius P. Schuh, Ph.D. is the current Common Stock Director in Class II and Michael A. Luther, Ph.D. and Rodney S. Markin, M.D., PhD. are the current Common Stock Directors in Class III. We expect the Preferred Stockholders to reelect Mr. Koppler as the Class II Preferred Director at the Annual Meeting or by written consent prior to such meeting.

Dr. Schuh informed us that due to his schedule, he would have less time to devote to serving on our Board of Directors going forward. Therefore, based on discussions with Dr. Schuh, the Board has determined not to nominate Dr. Schuh for re-election as a Class II director when his term expires at the Annual Meeting. In light of the fact that the Board only recently determined not to nominate Dr. Schuh for re-election as a Class II director, and because the Nominating and Corporate Governance Committee of the Board (the “Nominating Committee”) did not have the opportunity to properly identify, interview, assess and recommend a replacement candidate in time for the Annual Meeting, the Nominating Committee and the Board determined not to nominate a candidate for consideration as the Class II director to be elected by the holders of our common stock at the Annual Meeting. This decision will result in a vacant Board seat for Class II upon completion of the Annual Meeting in the event the Board has not appointed an individual to fill the vacancy by the Annual Meeting. The Nominating Committee and the Board are seeking to fill the Class II director vacancy that will be created upon completion of the Annual Meeting as promptly as practicable. In the event the Board appoints an additional director to the Board following the mailing of this proxy statement to the Company’s stockholders and prior to the Annual Meeting, the Board does not expect to place the newly-appointed director on the agenda for election at the Annual Meeting.

Certain biographical information regarding our directors continuing in office after the Annual Meeting and our director nominees, including their ages as of March 19, 2014 and the dates that they were first elected to our Board, is set forth below. In each individual’s biography we have highlighted specific experience, qualifications, and skills that have led the Board to conclude that such individual is a valued member of our Board. In addition to these specific attributes, all of our directors have significant expertise in one or more areas of importance to our business and have high-level managerial experience in relatively complex organizations or are accustomed to dealing with complex problems. We believe all of our directors are individuals of high character and integrity, are able to work well with others, and have sufficient time to devote to the affairs of our company.

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| Name | Age | Principal Occupation | Director Since | Term to Expire |
|--|-----|--|----------------|----------------|
| CLASS II PREFERRED DIRECTOR NOMINEE | | | | |
| Doit L. Koppler, II, Preferred Stock Director | 50 | Managing Director and Treasurer, Third Security, LLC | 2010 | 2014 |
| CLASS I DIRECTORS CONTINUING IN OFFICE | | | | |
| Robert M. Patzig, Preferred Stock Director | 45 | Senior Managing Director and Chief Investment Officer, Third Security, LLC | 2010 | 2016 |
| Paul Kinnon, Common Stock Director | 51 | President and Chief Executive Officer of Transgenomic, Inc. | 2013 | 2016 |
| CLASS III DIRECTORS CONTINUING IN OFFICE | | | | |
| Rodney S. Markin, M.D., Ph.D., Common Stock Director | 57 | Chairman of the Board, Transgenomic, Inc., Chief Technology Officer, University of Nebraska Medical Center | 2007 | 2015 |
| Michael A. Luther, Ph.D., Common Stock Director | 57 | Senior Vice President, Discovery and Development Services, Albany Molecular Research, Inc. | 2014 | 2015 |

Doit L. Koppler, II. Mr. Koppler joined Third Security as Managing Director and Treasurer in 2001 and manages the finance function of Third Security and is involved with several portfolio companies of Third Security's managed investment funds. Mr. Koppler served as Vice President, Treasurer and a member of the Board of Directors of Vital Diagnostics Holding Corp., a global supplier of products and services for the clinical laboratory in the traditional in vitro diagnostics market with a focus on the physician's office, hospital and small-to-medium sized laboratory segments from its inception in 2006 through 2012. Mr. Koppler served as Chairman and Chief Executive Officer of New River Funds, a family of no-load mutual funds, from its inception in 2003 through 2008 and as the Chief Investment Officer of New River Advisers, LLC, the investment adviser to New River Small Cap Fund, predecessor to Southern Sun Small Cap Fund. Mr. Koppler served as a member of the Board of Directors of IntelliMat, Inc. from November 2006 to July 2008. Prior to joining Third Security, Mr. Koppler served as Vice President and Controller of General Injectables & Vaccines, Inc., a \$120 million distributor of injectable biologics and vaccines primarily to outpatient physician offices, from 1992 to 2000. From 1987 to 1992, he was a Manager in the audit practice of Ernst & Young LLP. Mr. Koppler is a Certified Public Accountant, Chartered Global Management Accountant and a Member of the American Institute of Certified Public Accountants. He has also held Series 7 and Series 66 securities registrations. Mr. Koppler received a B.S. in Accounting from Salem International University. The Board selected Mr. Koppler to serve as a director because of his valuable financial expertise, including his public accounting and financial reporting experience.

Robert M. Patzig. Mr. Patzig is a Senior Managing Director and the Chief Investment Officer for Third Security, LLC. Mr. Patzig joined Third Security upon the company's inception in 1999. Mr. Patzig's responsibilities include identifying and researching investment opportunities for Third Security and its funds, securities valuation and portfolio management. Mr. Patzig was a Director of Cytellect Inc., a privately held scientific instrumentation company. Mr. Patzig has served as Chairman of the Board of Intrexon Corporation and Cytellect, Inc. and served as a member of the Board of Directors of Synchrony, Inc. He previously served as a Director of the Virginia Biotechnology Association, a non-profit industry advocacy group, from 2006 to 2011. Mr. Patzig served as the head of the Investment Committee for Howe and Rusling, Inc., a registered investment advisor, from 2001 until its sale in 2006. Mr. Patzig served as the Chief Executive Officer and Chief Compliance Officer of New River Advisers LLC

from June 2003 until August of 2007. Prior to the formation of Third Security, Mr. Patzig served as Director of Market Research and Analysis at GIV Holdings, Inc. and Director of Research Services at General Injectables & Vaccines, Inc. Mr. Patzig received a B.A. in Philosophy and English from Virginia Tech, where he taught as an instructor for several years prior to 1996. The Board selected Mr. Patzig as a director because of his substantial biotechnology industry experience as well as his securities and investment expertise.

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Paul Kinnon. Mr. Kinnon has served as our President and Chief Executive Officer and a Director since September 2013. Mr. Kinnon has more than 20 years of global leadership experience in innovative life science and diagnostics companies. From January through August 2013, he provided consulting services to the life science sector as a Partner at Arch Global Research. During a portion of this time, Mr. Kinnon provided consulting services to us. From January 2007 to December 2012, Mr. Kinnon was President, Chief Executive Officer and a Director of ZyGEM Corporation Limited, a biotechnology company, where he transformed the company from a regional enzyme provider into a leader in integrated microfluidic technologies for forensic and clinical diagnostic applications. From May 2006 to June 2007, Mr. Kinnon was Vice President & General Manager Environmental Diagnostics (later expanded to Applied Markets) at Invitrogen Corporation (now Life Technologies), a high growth life sciences and diagnostics firm, and from October 2004 until April 2006, he was Vice President, Global Strategic Alliances at Invitrogen. Previously, Mr. Kinnon also held business, sales and marketing roles of increasing responsibility at Guava Technologies, Inc., Cellomics, Inc. and other life science companies. Mr. Kinnon earned his Bachelor of Sciences degree in Applied Chemistry at Coventry University in the United Kingdom and holds a Diploma of Marketing. The Board selected Mr. Kinnon to serve as a director because he is our Chief Executive Officer and because of his expansive knowledge and experience in the life science industry, as well as his past executive management roles at both life science and biotechnology companies.

Rodney S. Markin, M.D., Ph.D. Dr. Markin is Chief Technology Officer and Associate Vice Chancellor for Business Development at the University of Nebraska Medical Center and a Professor of Pathology and Microbiology; David T. Purtilo Distinguished Professor Pathology and Microbiology and Courtesy Professor of Surgery. Dr. Markin is also a director on the Board of Children's Hospital and Medical Center Foundation and on the Board of Trustees for Keck Graduate Institute. The Board selected Dr. Markin to serve as a director because he has valuable executive experience in the healthcare business. Dr. Markin also has extensive experience serving on other boards. His experience and ability to encourage discussion makes him an effective Chairman of the Board.

Michael A. Luther, Ph.D. Dr. Luther has served as Senior Vice President, Discovery and Development Services, at Albany Molecular Research, Inc. (NASDAQ: AMRI), a global contract research and manufacturing organization offering drug discovery, development and manufacturing services, since October 2013, where he is responsible for the strategic, operational and business development activities for Albany Molecular Research, Inc.'s global discovery and development divisions. From August 2012 to September 2013, Dr. Luther was Corporate Vice President of Global Discovery Research Services at Charles River Laboratories (NYSE: CRL), a global provider of products and services to pharmaceutical and biotechnology companies, government agencies and academic institutions, where he served as the general manager of the firm's discovery business unit, including developing and implementing strategic and operating plans. Prior to his role at Charles River, from March 2009 to August 2012, he was President and a member of the Board of Directors of the David H. Murdock Research Institute, a non-profit contract research organization located in Kannapolis, North Carolina, where he led and directed all activities of the institute, including applied research and development activities. From November 2006 to March 2009, Dr. Luther held the position of Vice President and Site Head at Merck Frosst, a pharmaceutical company in Montreal, Canada, focused on the delivery of Phase I product candidates from target to clinic for novel therapeutics in respiratory and metabolic disorders. Prior to Merck Frosst, from 1991 to 2006, he held positions of increasing responsibilities at GlaxoSmithKline, a global healthcare company that researches and develops a broad range of innovative medicines and brands, culminating in his appointment as Vice President, High Throughput Biology. Dr. Luther holds a Bachelor of Science degree in Biology and Chemistry from North Carolina State University, a Master in Business Administration from Duke University, Fuqua School of Business, and a Ph.D. in Biophysical Chemistry from Saint Louis University School of Medicine. He has served as a member of the board of directors of Islet Sciences, Inc., a biopharmaceutical company (OTC: ISLT), since March 2014. The Board selected Dr. Luther to serve as a director because it believes he possesses valuable experience in the healthcare and pharmaceutical industries and extensive strategic, scientific and business experience in such industries, which brings a unique and valuable perspective to the Board.

Code of Business Conduct and Ethics

Our Board has adopted a code of ethical conduct that applies to our principal executive officer, principal financial officer and senior financial management. This code of ethical conduct is embodied within our Code of Business Conduct and Ethics, which applies to all persons associated with our Company, including our directors, officers and employees (including our principal executive officer, principal financial officer, principal accounting officer and controller). The Code of Business Conduct and Ethics is available in the Investor Relations section of our website at www.transgenomic.com. In order to satisfy our disclosure requirements under Item 5.05 of Form 8-K, we will disclose amendments to, or waivers of, certain provisions of our Code of Business Conduct and Ethics relating to our chief executive officer, chief financial officer, chief accounting officer, controller or persons performing similar functions on our website promptly following the adoption of any such amendment or waiver.

Corporate Governance

Board Leadership Structure

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Our Board has determined that having an independent director serve as the Chairman of the Board is in the best interests of our stockholders. Our Chairman of the Board is Rodney S. Markin, Ph.D. Our President and Chief Executive Officer, Paul Kinnon, is the only member of our Board who is not an independent director. We believe that this leadership structure enhances the accountability of our President and Chief Executive Officer to the Board and strengthens the Board's independence from management. While both leaders are actively engaged in significant matters affecting our Company, such as long-term strategy, we believe splitting these leadership positions enables Mr. Kinnon to focus his efforts on running our business and managing our Company while permitting Dr. Markin to focus more on the governance of our Company, including oversight of our Board.

Director Attendance at Meetings

Our Board conducts its business through meetings of the Board, both in person and telephonic, and actions taken by written consent in lieu of meetings. During the year ended December 31, 2013, the Board held eight meetings and acted by written consent in lieu of a meeting one time. All directors attended at least 75% of the meetings of the Board and of the committees of the Board on which they served during 2013.

Our Board encourages all directors to attend our annual meetings of stockholders unless it is not reasonably practicable for a director to do so. One of the persons serving as a director at the time of our 2013 Annual Meeting of Stockholders attended our 2013 Annual Meeting of Stockholders.

Committees of our Board of Directors

Our Board has established and delegated certain responsibilities to its standing Audit Committee, Compensation Committee and Nominating and Corporate Governance Committee.

Audit Committee

We have a separately designated standing Audit Committee established in accordance with Section 3(a)(58)(A) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). The Audit Committee's primary duties and responsibilities include monitoring the integrity of our financial statements, monitoring the independence and performance of our external auditors, and monitoring our compliance with applicable legal and regulatory requirements. The functions of the Audit Committee also include reviewing periodically with our independent registered public accounting firm the performance of the services for which they are engaged, including reviewing the scope of the annual audit and its results, reviewing with management and the auditors the adequacy of our internal accounting controls, reviewing with management and the auditors the financial results prior to the filing of quarterly and annual reports, reviewing fees charged by our independent registered public accounting firm and reviewing any transactions between our Company and related parties. Our independent registered public accounting firm reports directly and is accountable solely to the Audit Committee. The Audit Committee has the sole authority to hire and fire the independent registered public accounting firm and is responsible for the oversight of the performance of their duties, including ensuring the independence of the independent registered public accounting firm. The Audit Committee also approves in advance the retention of, and all fees to be paid to, the independent registered public accounting firm. The rendering of any auditing services and all non-auditing services by the independent registered public accounting firm is subject to prior approval of the Audit Committee.

The Audit Committee operates under a written charter which is available in the Investor Relations section of our website at www.transgenomic.com. The Audit Committee is required to be composed of directors who are independent under the rules of the SEC and the listing standards of The Nasdaq Stock Market LLC ("NASDAQ").

The current members of the Audit Committee are directors Dr. Markin, Dr. Schuh and Dr. Luther, each of whom has been determined by the Board to be independent under the NASDAQ listing standards and rules adopted by the SEC

applicable to audit committee members. The Board has determined that each of Dr. Markin and Dr. Luther qualifies as an “audit committee financial expert” under the rules adopted by the SEC and the Sarbanes Oxley Act of 2002. The Audit Committee met six times during 2013 and did not take any actions by written consent.

REPORT OF THE AUDIT COMMITTEE

The Audit Committee is comprised of Rodney S. Markin, M.D., Ph.D., Antonius P. Schuh, Ph.D. and Michael A. Luther, Ph.D., each of whom is an independent director of the Company under the rules adopted by the SEC.

The Company’s management is responsible for the preparation of the Company’s financial statements and for maintaining an adequate system of internal controls and processes for that purpose. Ernst & Young LLP (“E&Y”) acts as the Company’s

independent registered public accounting firm and they are responsible for conducting an independent audit of the Company's annual financial statements in accordance with auditing standards generally accepted in the United States of America and issuing a report on the results of their audit. The Audit Committee is responsible for providing independent, objective oversight of both of these processes.

The Audit Committee has reviewed and discussed the Company's audited financial statements for the year ended December 31, 2013 with management of the Company and with representatives of E&Y. Our discussions with E&Y also included the matters required by Auditing Standard No. 16, Communications with Audit Committees, as adopted by the Public Company Accounting Oversight Board (PCAOB). In addition, we received the written disclosures and the letter from E&Y required by applicable requirements of the PCAOB regarding its communications with the Audit Committee concerning independence, and have discussed with E&Y its independence from the Company and its management.

Based on the foregoing, the Audit Committee has recommended to the Board of Directors, and the Board of Directors has approved, that the audited financial statements of the Company for the year ended December 31, 2013 be included in the Company's Annual Report on Form 10-K for filing with the SEC.

Rodney S. Markin, M.D., Ph.D.

Antonius P. Schuh, Ph.D.

Michael A. Luther, Ph.D

Compensation Committee

The primary duties and responsibilities of our standing Compensation Committee are to review, modify and approve the overall compensation policies for the Company, including the compensation of the Company's Chief Executive Officer and other senior management; establish and assess the adequacy of director compensation; and approve the adoption, amendment and termination of the Company's stock option plans, pension and profit sharing plans, bonus plans and similar programs. The Compensation Committee may delegate to one or more officers the authority to make grants of options and restricted stock to eligible individuals other than officers and directors, subject to certain limitations. Additionally, the Compensation Committee has the authority to form subcommittees and to delegate authority to any such subcommittee. The Compensation Committee also has the authority, in its sole discretion, to select, retain and obtain, at the expense of the Company, advice and assistance from internal or external legal, accounting or other advisors and consultants. Moreover, the Compensation Committee has sole authority to retain and terminate any compensation consultant to assist in the evaluation of director, Chief Executive Officer or senior executive compensation, including sole authority to approve such consultant's reasonable fees and other retention terms, all at the Company's expense.

The Compensation Committee operates under a written charter which is available in the Investor Relations section of our website at www.transgenomic.com. All members of the Compensation Committee must satisfy the independence requirements of NASDAQ applicable to compensation committee members.

The Compensation Committee currently consists of directors Dr. Schuh, Dr. Markin and Mr. Patzig, each of whom has been determined by the Board to be independent under NASDAQ listing standards applicable to compensation committee members. The Compensation Committee met four times during 2013 and acted by written consent in lieu of a meeting one time.

Nominating and Corporate Governance Committee

The Nominating Committee identifies, reviews and evaluates candidates to serve on the Board; reviews and assesses the performance of the Board and the committees of the Board; and assesses the independence of our directors. The

Nominating Committee is also responsible for reviewing the composition of the Board's committees and making recommendations to the entire Board regarding the chairmanship and membership of each committee. In addition, the Nominating Committee is responsible for developing corporate governance principles and periodically reviewing and assessing such principles, as well as periodically reviewing the Company's policy statements to determine their adherence to the Company's Code of Business Conduct and Ethics.

The Nominating Committee has adopted a Director Nominees Consideration Policy, whereby Board candidates are identified primarily through suggestions made by directors, management and stockholders of the Company. We have implemented no material changes to the procedures by which stockholders may recommend nominees for the Board. The Nominating Committee will consider director nominees recommended by stockholders that are submitted in writing to the Company's Corporate Secretary in a timely manner and which provide necessary biographical and business experience information regarding the nominee. The Nominating Committee does not intend to alter the manner in which it evaluates candidates, including the criteria considered by

the Nominating Committee, based on whether or not the candidate was recommended by a stockholder. The Board does not prescribe any minimum qualifications for director candidates, and all candidates for director will be evaluated based on their qualifications, diversity, age, skill and such other factors as deemed appropriate by the Nominating Committee given the current needs of the Board, the committees of the Board and the Company. Although the Nominating Committee does not have a specific policy on diversity, it considers the criteria noted above in selecting nominees for directors, including members from diverse backgrounds who combine a broad spectrum of experience and expertise. Absent other factors which may be material to its evaluation of a candidate, the Nominating Committee expects to recommend to the Board for selection incumbent directors who express an interest in continuing to serve on the Board. Following its evaluation of a proposed director's candidacy, the Nominating Committee will make a recommendation to whether the Board should nominate the proposed director candidate for election by the stockholders of the Company.

The Nominating Committee operates under a written charter which is available in the Investor Relations section of our website at www.transgenomic.com. No member of the Nominating Committee may be an employee of the Company and each member must satisfy the independence requirements of NASDAQ and the SEC.

The Nominating Committee currently consists of directors Dr. Schuh, Dr. Markin and Mr. Patzig, each of whom has been determined by the Board to be independent under NASDAQ listing standards. The Nominating Committee was formed by the Board in February 2014 and therefore did not meet in 2013.

Oversight of Risk Management

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 economic risks, financial risks, legal and regulatory risks and others, such as the impact of competition. Management is responsible for the day-to-day management of the risks that we face, while the Board, as a whole and through its committees, has responsibility for the oversight of risk management. In its risk oversight role, our Board is responsible for satisfying itself that the risk management processes designed and implemented by management are adequate and functioning as designed. Our Board assesses major risks facing our Company and options for their mitigation in order to promote our stockholders' interests in the long-term health of the Company and our overall success and financial strength. A fundamental part of risk management is not only understanding the risks a company faces and what steps management is taking to manage those risks, but also understanding what level of risk is appropriate for us. The involvement of our full Board in the risk oversight process allows our Board to assess management's appetite for risk and also determine what constitutes an appropriate level of risk for our Company. Our Board regularly includes agenda items at its meetings relating to its risk oversight role and meets with various members of management on a range of topics, including corporate governance and regulatory obligations, operations and significant transactions, risk management, insurance, pending and threatened litigation and significant commercial disputes.

While our Board is ultimately responsible for risk oversight, various committees of the Board oversee risk management in their respective areas and regularly report on their activities to our entire Board. In particular, the Audit Committee has the primary responsibility for the oversight of financial risks facing our Company. The Audit Committee's charter provides that it will discuss our major financial risk exposures and the steps we have taken to monitor and control such exposures. The Board has also delegated primary responsibility for the oversight of all executive compensation and our employee benefit programs to the Compensation Committee. The Compensation Committee strives to create incentives that encourage a level of risk-taking behavior consistent with our business strategy.

We believe the division of risk management responsibilities described above is an effective approach for addressing the risks facing our Company and that our Board's leadership structure provides appropriate checks and balances against undue risk taking.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Exchange Act and the rules of the SEC require our directors, certain officers and beneficial owners of more than 10% of our outstanding common stock to file reports of their ownership and changes in ownership of our common stock with the SEC. We believe all Section 16 reports were filed in a timely manner during 2013.

Review and Approval of Related Person Transactions

We recognize that related person transactions can present potential or actual conflicts of interest and create the appearance that our decisions are based on considerations which may not be in our best interests or the best interests of our stockholders. Accordingly, as a general matter, we prefer to avoid related person transactions. Nevertheless, we recognize that there are situations where related person transactions may be in, or may not be inconsistent with, our best interests. Pursuant to the Audit Committee

Charter, the Audit Committee is responsible for reviewing and overseeing related-party transactions as required by Nasdaq and SEC rules. Related persons include our directors, executive officers, 5% beneficial owners of our common stock or their respective immediate family members. Our Board will also review related party transactions in accordance with applicable law and the provisions of our Third Amended and Restated Certificate of Incorporation, as amended.

In addition, our Audit Committee has adopted a written Related Persons Transactions Policy. Under our Related Persons Transactions Policy, if any director or executive officer or any immediate family member or related entity of a related person proposes to enter into a transaction, or if the Company proposes to enter into a transaction with a 5% beneficial owner of our common stock, then, prior to entering into such transaction, the related person must notify the Company's Compliance Officer (currently, the Chief Financial Officer) and provide sufficient knowledge regarding the proposed transaction as is reasonably available to assist the Compliance Officer in determining whether approval of the Audit Committee is required. The Audit Committee must review and consider any proposed related person transaction, and the Audit Committee will only approve the transactions it deems are fair to and in the best interests of the Company. Additionally, the Audit Committee may ratify transactions that were previously unapproved if it finds the transactions are fair to and in the best interests of the Company. The following is a description of transactions or series of transactions since January 1, 2012, or any currently proposed transaction, to which we were or are to be a participant in which the amount involved in the transaction or series of transactions exceeds \$120,000, and in which any of our directors, executive officers or persons who we know to be 5% beneficial owners of our common stock, including their immediate family members, had or will have a direct or indirect material interest, other than compensation arrangements that are described under "Agreements with Our Named Executive Officers" below:

Third Security Securities Purchase Agreements and Preferred Stock Purchase Agreement

On December 30, 2011, we entered into a Convertible Promissory Note Purchase Agreement (the "Note Purchase Agreement") with Third Security Senior Staff 2008 LLC, a Virginia limited liability company, Third Security Staff 2010 LLC, a Virginia limited liability company, and Third Security Incentive 2010 LLC, a Virginia limited liability company (collectively, the "Third Security Entities"), in the aggregate amount of \$3,000,000. The Third Security Entities are currently the holders of 100% of our Series A Preferred Stock and collectively represent a more than 10% beneficial ownership interest in our common stock.

Under the Note Purchase Agreement, we sold to each of the Third Security Entities a convertible note with a March 31, 2012 maturity date (collectively, the "Convertible Notes"). The Note Purchase Agreement and Convertible Notes provided for conversion of any amount remaining due to the Third Security Entities under the Convertible Notes into our equity of the same class(es) or series and at the same price as our equity securities sold in our first sale or issuance of our equity securities after December 30, 2011, in the aggregate amount of at least \$3,000,000. A majority of the disinterested directors approved our entrance into the Note Purchase Agreement and issuance of the Convertible Notes to the Third Security Entities.

On February 2, 2012, we entered into a securities purchase agreement with certain institutional and other accredited investors (the "2012 Investors") pursuant to which we: (i) sold to the 2012 Investors an aggregate of 1,583,333 shares of our common stock at a price per share of \$12.00 for aggregate gross proceeds of approximately \$19,000,000; and (ii) issued to the 2012 Investors warrants (the "2012 Warrants") to purchase up to an aggregate of 823,333 shares of our common stock with an exercise price of \$15.00 per share (collectively, the "2012 Offering"). The 2012 Warrants may be exercised, in whole or in part, at any time from February 7, 2012 until February 7, 2017 and contain both cash and "cashless exercise" features.

As part of the 2012 Offering, in connection with the conversion of the Convertible Notes, the Third Security Entities received an aggregate of 250,000 shares of our common stock (the "Third Security Common Shares") and warrants to

purchase up to 125,000 shares of our common stock (the “Third Security Warrants”) upon the same terms as the 2012 Investors. As part of the 2012 Offering, our Preferred Stock Directors, Doit L. Koppler, II and Robert M. Patzig, purchased shares of our common stock and warrants on the same terms as the other 2012 Investors.

On January 24, 2013, we entered into a securities purchase agreement with certain institutional and other accredited investors (the “2013 Investors”) pursuant to which we: (i) sold to the 2013 Investors an aggregate of 1,383,333 shares of our common stock at a price per share of \$6.00 (the “Common Shares”) for aggregate gross proceeds of approximately \$8,300,000; and (ii) issued to the 2013 Investors warrants (the “Warrants”) to purchase up to an aggregate of 691,656 shares of our common stock with an exercise price of \$9.00 per share (collectively, the “2013 Offering”). The Warrants may be exercised, in whole or in part, at any time from January 30, 2013 until January 30, 2018 and contain both cash and “cashless exercise” features. The 2013 Investors include Third Security Senior Staff 2008 LLC, a Virginia limited liability company, Third Security Staff 2010 LLC, a Virginia limited liability company, and Third Security Incentive 2010 LLC, a Virginia limited liability company (collectively, the “Third Security Entities”). As part of the 2013 Offering, the Third Security entities purchased 500,000 Common Shares and 250,000 Warrants on the same terms as the other 2013 Investors.

Third Security Loan and Security Agreement

On March 13, 2013 (the “Effective Date”), we entered into a Loan and Security Agreement with the Third Security entities (the “Lenders”) for (1) a revolving line of credit (the “Revolving Line”) with borrowing availability of up to \$4 million, subject to reduction based on our eligible accounts receivable, and (2) a term loan (the “Term Loan”) of \$4 million (the “Loan Agreement”).

To secure the repayment of any amounts borrowed under the Revolving Line and the Term Loan, we granted the Lenders a security interest in all of our assets. The occurrence of an event of default under the Loan Agreement could result in the acceleration of our obligations under the Loan Agreement and would increase the applicable interest rate under the Revolving Line or the Term Loan (or both) by 5%, and permit the Lenders to exercise remedies with respect to the collateral under the Loan Agreement.

On August 2, 2013, we entered into a first amendment to the Loan Agreement. The first amendment, which became effective as of June 30, 2013, reduces our future minimum revenue covenants under the Loan Agreement and modifies the interest rates applicable to the amounts advanced under the Revolving Line. On November 14, 2013, we entered into a second amendment to the Loan Agreement, effective as of October 31, 2013, which reduces our future minimum revenue covenant under the Loan Agreement.

On January 27, 2014, we entered into a third amendment to the Loan Agreement. Pursuant to the third amendment, the Lenders agreed to waive certain events of default under the Loan Agreement, and the parties amended certain provisions of the Loan Agreement, including the minimum liquidity ratio that we must maintain during the term of the Loan Agreement. On March 3, 2014, we entered into a fourth amendment to the Loan Agreement, which provides that we will not be required to make any principal or interest payments under the Term Loan for the period from March 1, 2014 through March 31, 2015. Accordingly, pursuant to the amended Loan Agreement, the next principal and interest payment under the Term Loan will be due on April 1, 2015.

Revolving Line of Credit. Amounts advanced under the Revolving Line bear interest at an annual rate equal to the greater of (a) 4.25% or (b) the Wall Street Journal prime rate plus 1%. Interest is payable on a monthly basis, with the balance payable at the maturity of the Revolving Line. Amounts advanced under the Revolving Line bear interest at an annual rate equal to the greater of (x) 6.25% or (y) the Wall Street Journal prime rate plus 3%. The current interest rate is 6.25%. Under the Loan Agreement, we paid the Lenders an upfront fee of \$20,000, and will pay the Lenders an additional commitment fee of \$20,000 on each one year anniversary of the Effective Date during the term of the Revolving Line. In addition, a fee of 0.5% per annum is payable quarterly on the unused portion of the Revolving Line. The Revolving Line matures on September 1, 2016.

Term Loan. We received \$4.0 million under the Term Loan on the Effective Date. Pursuant to the terms of the Loan Agreement, as amended by the fourth amendment, we are required to make monthly payments of interest to the Lenders commencing on April 1, 2015. The current interest rate is 9.1%.

Since the Effective Date, the largest aggregate amount of principal outstanding under the Loan Agreement was \$8,000,000. As of March 31, 2014, an aggregate of \$3,757,576 was outstanding under the Loan Agreement. To date, we have paid a total of \$242,424 in principal payments and we have paid a total of \$560,081 in interest payments pursuant to the Loan and Security Agreement.

Issuance of Series B Preferred Stock

On March 5, 2014, the Company entered into a Series B Convertible Preferred Stock Purchase Agreement (the “Series B Purchase Agreement”) with affiliates of Third Security, LLC (the “2014 Third Security Investors”), pursuant to which

the Company, in a private placement, sold and issued an aggregate of 1,443,297 shares of the Company's Series B Preferred Stock, at a price per share of \$4.85 for an aggregate purchase price of approximately \$7,000,000. Each share of Series B Preferred Stock issued pursuant to the Series B Purchase Agreement is initially convertible into shares of the Company's common stock at a rate of 1-for-1, which conversion rate is subject to further adjustment as set forth in the Certificate of Designation of Series B Convertible Preferred Stock.

In connection with the Series B financing, the Company also entered into a Registration Rights Agreement, dated March 5, 2014, with the 2014 Third Security Investors, pursuant to which the Company granted certain demand, "piggy-back" and S-3 registrations rights covering the resale of the shares of common stock underlying the Series B Preferred Stock issued pursuant to the Series B Purchase Agreement and all shares of common stock issuable upon any dividend or other distribution with respect thereto.

Third Security, LLC and its affiliates, which hold more than 10% of the outstanding voting stock of the Company, participated in the Series B financing. Additionally, Doit L. Koppler, II and Robert M. Patzig, directors of the Company, are affiliated with Third Security, LLC.

Director Independence

Our Company is governed by our Board. Currently, each member of our Board, other than our President and Chief Executive Officer, Paul Kinnon (who is not independent by virtue of his employment with us), is an independent director and all standing committees of the Board are composed entirely of independent directors, in each case under NASDAQ's independence definition applicable to boards of directors. For a director to be considered independent, the Board must determine that the director has no relationship which, in the opinion of the Board, would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. Members of the Audit Committee also must satisfy a separate SEC independence requirement, which provides that they may not accept directly or indirectly any consulting, advisory or other compensatory fee from us or any of our subsidiaries other than their directors' compensation. In addition, under SEC rules, an Audit Committee member who is an affiliate of the issuer (other than through service as a director) cannot be deemed to be independent. In determining the independence of members of the Compensation Committee, NASDAQ listing standards require the Board to consider certain factors, including but not limited to: (1) the source of compensation of the director, including any consulting, advisory or other compensatory fee paid by the Company to the director, and (2) whether the director is affiliated with the Company, a subsidiary of the Company or an affiliate of a subsidiary of the Company. Under our Compensation Committee Charter, members of the Compensation Committee also must qualify as "outside directors" for purposes of Section 162(m) of the Internal Revenue Code of 1986, as amended (the "Code"), and as "non-employee directors" for purposes of Rule 16b-3 under the Exchange Act. The five independent members of the Board are Rodney S. Markin, M.D., Ph.D., Doit L. Koppler, II, Robert M. Patzig, Antonius P. Schuh, Ph.D. and Michael A. Luther, Ph.D.

Information Regarding Executive Officers

Our executive officers, their ages as of March 19, 2014 and their respective positions are as follows:

| Name | Age | Title(s) |
|-------------------|-----|--|
| Paul Kinnon | 51 | President and Chief Executive Officer |
| Mark P. Colonnese | 58 | Executive Vice President and Chief Financial Officer |

A description of the business experience of Paul Kinnon is provided above under the heading "Board of Directors and Corporate Governance-Board of Directors and Committees".

Mark P Colonnese. Mr. Colonnese was appointed as our Executive Vice President and Chief Financial Officer by the Board in September 2012. Mr. Colonnese has nearly 30 years of experience in leading business growth and financial strategies for life sciences companies. He most recently served as Executive Vice President, Commercial Operations and Chief Financial Officer at Salutria Pharmaceuticals, LLC, a privately-held, development-stage pharmaceutical company from April 2009 to August 2012. Prior to that, Mr. Colonnese served as an executive in a number of capacities at AtheroGenics, Inc., a development-stage pharmaceutical company, from January 1999 to April 2009, including Executive Vice President, Commercial Operations and Chief Financial Officer from May 2006 to April 2009, as Senior Vice President of Finance and Administration and Chief Financial Officer since 2002, and as Vice President of Finance and Administration and Chief Financial Officer since 1999. Prior to joining AtheroGenics, Mr. Colonnese served as Senior Vice President and Chief Financial Officer at Medaphis Corporation and has also held executive positions at Applied Analytical Industries, Inc. and Schering-Plough Corporation. Mr. Colonnese is a Certified Public Accountant.

Family Relationships

There are no family relationships between or among any of our executive officers or directors.

PROPOSAL ONE: RATIFICATION OF APPOINTMENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Our Audit Committee has appointed Ernst & Young LLP (“E&Y”) as our independent registered public accounting firm for the year ending December 31, 2014. The Board recommends that stockholders vote for the ratification of such appointment. In the event of a negative vote on such ratification, the Board and Audit Committee will reconsider the selection, though a change will not necessarily be made. Even if the appointment is ratified, the Audit Committee may, in its discretion, direct the appointment of a different independent registered accounting firm at any time during the year if it determines that such a change would be in our stockholders’ best interests.

The Board of Directors recommends that you vote “FOR” Proposal One.

Former Independent Registered Public Accounting Firm

McGladrey LLP (“McGladrey”) was our independent registered public accounting firm for the year ended December 31, 2012. On July 8, 2013, the Audit Committee, acting on behalf of the Board, dismissed McGladrey as the independent registered public accounting firm of the Company. July 8, 2013 is also the date that the Company’s relationship with McGladrey ended for purposes of performing audit services. Representatives of McGladrey are not expected to be present at the Annual Meeting.

McGladrey’s reports for the fiscal years ended December 31, 2012 and 2011 did not contain any adverse opinion or disclaimer of opinion, and such reports were not qualified or modified as to uncertainty, audit scope or accounting principles.

During the fiscal years ended December 31, 2012 and 2011 and the subsequent interim period through July 8, 2013, there were no disagreements between the Company and McGladrey on any matter of accounting principles or practices, financial statement disclosure or auditing scope or procedures, which disagreements, if not resolved to the satisfaction of McGladrey, would have caused McGladrey to make reference to the subject matter thereof in its report on the Company’s financial statements for such fiscal years. No “reportable events” (as defined by Item 304(a)(1)(v) of Regulation S-K) occurred during the fiscal years ended December 31, 2012 or 2011 or through July 8, 2013.

We provided McGladrey with a copy of the foregoing disclosures and requested that McGladrey provide a letter addressed to the SEC stating whether it agrees with the foregoing statements. McGladrey furnished such a letter, dated July 12, 2013, and a copy was filed as Exhibit 16 to our Current Report on Form 8-K that was filed with the SEC on July 12, 2013.

Independent Registered Public Accounting Firm

On July 8, 2013, the Audit Committee, acting on behalf of the Board, appointed E&Y as the Company’s independent registered public accounting firm, replacing McGladrey. The Company did not, nor did anyone on its behalf, consult E&Y during the fiscal years ended December 31, 2012 or 2011 or during the subsequent interim period prior to the Company’s engagement of E&Y regarding the application of accounting principles to a specified transaction (completed or proposed), the type of audit opinion that might be rendered on the Company’s financial statements, any matter being the subject of a disagreement or “reportable event” or any other matter described in Item 304(a)(1)(v) of Regulation S-K.

E&Y has audited our balance sheet as of December 31, 2013, and our related consolidated statements of operations, comprehensive loss, shareholders’ equity, and cash flow for the year ended December 31, 2013. We expect a

representative of E&Y to be present in person or by telephone at the Annual Meeting and available to respond to appropriate questions. E&Y will also have the opportunity to make a statement if they desire to do so. The following tables show information about fees paid, that were billed or were expected to be billed by E&Y and McGladrey during the fiscal years ended December 31, 2013 and 2012.

Principal Accountant Fees and Services

E&Y - fees that were paid, that were billed or were expected to be billed:

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| | 2013 | 2012 |
|--------------------|-----------|------|
| Audit fees | \$293,000 | \$— |
| Audit-related fees | — | — |
| Tax fees | 20,000 | — |
| All other fees | — | — |
| Total fees | \$313,000 | \$— |

Audit Fees. E&Y billed us for professional services rendered for the audit of our annual financial statements for fiscal year 2013 and review of our interim financial statements included in Quarterly Reports on Form 10-Q filed by us with the SEC during 2013.

Audit-Related Fees. None.

Tax Fees. E&Y billed us for tax services. Tax services consist primarily of planning, advice and compliance, or return preparation, for U.S. federal, state and local, as well as international jurisdictions.

All Other Fees. None.

McGladrey - fees that were paid, that were billed or were expected to be billed:

| | 2013 | 2012 |
|--------------------|----------|-----------|
| Audit fees | \$25,000 | \$275,305 |
| Audit-related fees | 9,000 | 31,250 |
| Tax fees | 20,000 | 28,035 |
| All other fees | — | — |
| Total fees | \$54,000 | \$334,590 |

Audit Fees. McGladrey billed us for professional services rendered for the review of our interim financial statements for the first fiscal quarter of 2013 included in our Quarterly Report on Form 10-Q for the period ended March 31, 2013, filed by us with the SEC. McGladrey billed us for professional services rendered for the audit of our annual financial statements for fiscal year 2012 and review of our interim financial statements included in Quarterly Reports on Form 10-Q filed by us with the SEC during 2012.

Audit-Related Fees. McGladrey billed us for audit-related services. Audit-related services generally include fees for the audits of our employee benefit plans and fees incurred in connection with services associated with SEC registration statements, periodic reports and other documents filed with the SEC.

Tax Fees. McGladrey billed us for tax services. Tax services consist primarily of planning, advice and compliance, or return preparation, for U.S. federal, state and local, as well as international jurisdictions.

All Other Fees. None.

Pre-Approval of Audit and Non-Audit Services

Under the Audit Committee Charter, the Audit Committee is required to pre-approve all audit and non-audit services to be provided to us by our independent registered public accounting firm and its member firms. All services provided by our independent registered public accounting firm in 2013 were pre-approved by the Audit Committee.

PROPOSAL TWO: CONDUCT AN ADVISORY VOTE TO APPROVE NAMED EXECUTIVE COMPENSATION

As required by Section 14A of the Exchange Act, we are providing our stockholders with the opportunity to approve, on a non-binding, advisory basis, the compensation of our named executive officers as disclosed in this Proxy Statement in accordance with the compensation disclosure rules of the SEC. In accordance with these requirements, at our 2013 Annual Meeting of Stockholders, our stockholders voted in favor of holding an advisory vote to approve named executive compensation every year. The Board considered the voting results on that proposal and determined to hold future advisory votes on the compensation of our named executive officers on an annual basis.

Our compensation policies are designed to align our key executives' compensation with both our business objectives and the interests of our stockholders. We also seek to provide compensation policies that attract, motivate and retain key executives who are critical to our success. A significant portion of the compensation we provide to our key executives is directly related to our financial performance and stockholder value.

We recommend that our stockholders review the application of our compensation philosophy and the elements of compensation provided to each named executive officer as reflected in the discussion and tables included in the "2013 Executive Compensation" section of this Proxy Statement.

We believe our executive compensation policies are designed appropriately and are functioning as intended to produce long-term value for our stockholders. Accordingly, we are asking our stockholders to approve the overall application of our compensation policies to our named executive officers through this advisory vote. The vote on this resolution is not intended to address any specific element of compensation, but rather the overall compensation of our named executive officers and the policies and procedures described in this Proxy Statement.

For the reasons stated above, the Board recommends that our stockholders vote "for" the following advisory resolution at our Annual Meeting:

"RESOLVED, that the compensation paid to Transgenomic's named executive officers, as disclosed in the proxy statement for the 2014 Annual Meeting of Stockholders of Transgenomic pursuant to the compensation disclosure rules of the Securities and Exchange Commission, including the 2013 Executive Compensation, compensation tables and related narrative discussion, is hereby APPROVED on an advisory, non-binding basis."

The affirmative vote of a majority of the voting power present in person or represented by proxy held by the holders of our common stock and Preferred Stock, voting together as a single class on an as-converted to common stock basis, at the Annual Meeting is required to approve this advisory resolution. Because this proposal is advisory, the results of the vote on this proposal will not be binding on our Board, Compensation Committee or our management. To the extent there is any significant vote against the compensation of our named executive officers as disclosed in this Proxy Statement, however, the Compensation Committee will evaluate whether any actions are necessary in the future to address those concerns.

The Board of Directors recommends that you vote "FOR" Proposal Two.

2013 EXECUTIVE COMPENSATION

Summary Compensation Table

The following table sets forth compensation awarded to, paid to or earned by our “named executive officers” for services rendered during fiscal years 2013 and 2012.

| Name and Principal Position | Year | Salary (\$) | SARs and Option Awards ⁽¹⁾ (\$) | All Other Compensation (\$) | Total (\$) |
|--|------|-------------|--|-----------------------------|--------------------------|
| Paul Kinnon ⁽²⁾ President and Chief Executive Officer | 2013 | 87,500 | 939,325 | ⁽³⁾ 125,536 | ⁽⁴⁾ 1,152,361 |
| Mark P. Colonnese ⁽⁵⁾ Executive Vice President and Chief Financial Officer | 2013 | 275,000 | 243,754 | 143,676 | ⁽⁶⁾ 662,430 |
| | 2012 | 96,106 | 198,250 | 2,056 | ⁽⁷⁾ 296,412 |
| Craig J. Tuttle ⁽⁸⁾ Former President and Chief Executive Officer | 2013 | 262,500 | 69,650 | 138,693 | ⁽⁹⁾ 470,843 |
| | 2012 | 345,833 | — | 17,973 | ⁽¹⁰⁾ 363,806 |

⁽¹⁾ The amounts in this column reflect the aggregate grant date fair value of the stock appreciation rights (“SARs”) and stock option awards granted during the respective fiscal year as computed in accordance with Financial Accounting Standards Board (“FASB”) Accounting Standards Codification (“ASC”) Topic 718, excluding the effect of estimated forfeitures. The amounts shown do not correspond to the actual value that will be recognized by the named executive officer. The assumptions used in the calculation of these amounts are included in Footnote 11 “Equity Incentive Plan” to the consolidated financial statements contained in the Company’s Annual Report on Form 10-K for the year ended December 31, 2013, as filed with the SEC on March 27, 2014. See the “2013 Grants of Plan-Based Awards” table for information on SARs and stock options granted in 2013.

⁽²⁾ Mr. Kinnon was appointed as our President and Chief Executive Officer effective as of September 30, 2013. See “Agreements with Our Named Executive Officers - Paul Kinnon Employment Agreement” for a description of Mr. Kinnon’s employment agreement with us.

⁽³⁾ On May 3, 2013, Mr. Kinnon was granted an option to purchase 12,500 shares of common stock. This option was rescinded and terminated effective September 30, 2013, in accordance with the terms of the employment agreement, dated September 27, 2013, between Mr. Kinnon and the Company. See “Agreements with Our Named Executive Officers - Paul Kinnon Employment Agreement.” The grant date fair value of this option, \$41,790, is included in this column.

⁽⁴⁾ Amounts paid to Mr. Kinnon in 2013 consisted of \$2,917 in 401(k) matching contributions, \$119 in long term disability insurance and \$122,500 in consulting fees paid to Mr. Kinnon during 2013 prior to his hiring as our President and Chief Executive Officer effective as of September 30, 2013. See “Agreements with Our Named Executive Officers - Former Consulting Agreement with Paul Kinnon” for a description of Mr. Kinnon’s former consulting agreement with us.

⁽⁵⁾ Mr. Colonnese was appointed as our Executive Vice President and Chief Financial Officer on September 12, 2012. See “Agreements with Our Named Executive Officers - Mark P. Colonnese Employment Agreement” for a description of Mr. Colonnese’s employment agreement with us.

(6) Amounts paid to Mr. Colonnese in 2013 consisted of \$10,201 in 401(k) matching contributions, \$475 in long term disability insurance and \$133,000 in relocation expenses. The relocation expenses include a tax “gross up” of \$60,020.

(7) Amounts paid to Mr. Colonnese in 2012 consisted of \$1,719 in 401(k) matching contributions, \$129 in group life insurance and \$208 in long term disability insurance.

(8) Mr. Tuttle’s employment with the Company was terminated on September 30, 2013. For further discussion, see “Agreements with Our Named Executive Officers - Employment Agreement with Former Chief Executive Officer.”

⁽⁹⁾ Amounts paid to Mr. Tuttle in 2013 consisted of \$7,266 in automobile allowances as provided in his employment agreement, \$9,917 in 401(k) matching contributions, \$356 in long term disability insurance, \$33,654 in unused vacation pay and \$87,500 in severance payments as a result of his termination as our President and Chief Executive Officer on September 30, 2013.

⁽¹⁰⁾ Amounts paid to Mr. Tuttle in 2012 consisted of \$9,600 in automobile allowances as provided in his employment agreement, \$6,768 in 401(k) matching contributions, \$990 in group life insurance and \$615 in long term disability insurance.

2013 Grants of Plan-Based Awards

The following table sets forth certain information with respect to grants of plan-based awards in fiscal year 2013 to our named executive officers. The SARs and stock option awards granted in fiscal year 2013 were granted under our 2006 Equity Incentive Plan, as amended (the “2006 Plan”). During the year ended December 31, 2013, no other equity awards were granted to our named executive officers. The option awards vest over three years and have a term of ten years. See the notes below the table for details on option vesting schedules.

| Name | Grant Date | All Other Option Awards: Number of Securities Underlying Options (#) | Exercise or Price of Option Awards (\$/sh) ⁽¹⁾ | Grant Date Fair Value of Option Awards (\$) ⁽²⁾ |
|--------------------------------|------------|--|---|--|
| Paul Kinnon | | | | |
| Stock options ⁽³⁾ | 5/3/13 | 12,500 | 4.20 | 41,790 |
| Stock options ⁽⁴⁾ | 9/30/13 | 179,166 | 4.32 | 612,635 |
| SARs ⁽⁵⁾ | 9/30/13 | 83,333 | 4.32 | 284,900 |
| Mark P. Colonnese | | | | |
| Stock options ⁽⁶⁾ | 5/3/13 | 16,666 | 4.20 | 55,720 |
| SARs ⁽⁵⁾ | 9/30/13 | 55,000 | 4.32 | 188,034 |
| Craig J. Tuttle ⁽⁷⁾ | | | | |
| Stock options ⁽⁶⁾ | 5/3/13 | 20,833 | 4.20 | 69,650 |

⁽¹⁾The exercise price of the stock awards represent the fair market value of our common stock on the date of grant as defined in the 2006 Plan.

⁽²⁾ The amount in this column reflects the aggregate grant date fair value of each stock award granted to our named executive officers during the fiscal year as computed in accordance with FASB ASC Topic 718, excluding the effect of estimated forfeitures. The amount shown does not correspond to the actual value that will be recognized by the named executive officer. The assumptions used in the calculation of this amount are included in Footnote 11 “Equity Incentive Plan” to the consolidated financial statements contained in the Company’s Annual Report on Form 10-K for the year ended December 31, 2013, as filed with the SEC on March 27, 2014.

⁽³⁾ This award was to vest over a three year period, with one-third vesting on the anniversary of the grant date, and had a term of ten years. This award was rescinded and terminated effective September 30, 2013, in accordance with the terms of the employment agreement, dated September 27, 2013, between Mr. Kinnon and the Company. See “Agreements with Our Named Executive Officers - Paul Kinnon Employment Agreement.”

(4) The award vests over a three year period, with one-third of the shares subject to the award vesting on the first anniversary of the grant date and the balance vesting ratably over the next 24 months, subject to the executive's continued employment with the Company. The award has a term of ten years.

(5) The award vests over a three year period, with 34% of the shares subject to the award vesting on the first anniversary of the grant date and the balance vesting ratably over the next 24 months, subject to the executive's continued employment with the Company. The award has a term of ten years.

(6) The award vests over a three year period, with one-third vesting on the anniversary of the grant date, and has a term of ten years.

(7) Mr. Tuttle's employment with the Company was terminated on September 30, 2013. For further discussion, see "Agreements with Our Named Executive Officers - Employment Agreement with Former Chief Executive Officer."

Outstanding Equity Awards at Fiscal 2013 Year-End

The following table provides certain information concerning outstanding option awards held by our named executive officers as of December 31, 2013. As of December 31, 2013, no other equity awards granted to our named executive officers were outstanding.

| Name | SARs and Option Award Grant Date | Stock Appreciation Rights and Option Awards | | | |
|---------------------|----------------------------------|--|--|-------------------------------------|---------------------------------|
| | | Number of Securities Underlying Unexercised SARs and Options (#) (Exercisable) | Number of Securities Underlying Unexercised SARs and Options (#) (Unexercisable) | SARs and Option Exercise Price (\$) | SARS and Option Expiration Date |
| Paul Kinnon | | | | | |
| Stock options | 9/30/2013 | — | 179,166 | (1) 4.32 | 9/30/2023 |
| SARs | 9/30/2013 | — | 83,333 | (2) 4.32 | 9/30/2023 |
| Mark P. Colonnese | | | | | |
| Stock options | 9/12/2012 | 6,945 | 13,888 | (3) 11.76 | 9/12/2022 |
| Stock options | 5/3/2013 | — | 16,666 | (4) 4.20 | 5/3/2023 |
| SARs | 9/30/2013 | — | 55,000 | (2) 4.32 | 9/30/2023 |
| Craig J. Tuttle (5) | — | — | — | — | — |

(1) The award vests over a three year period, with one-third of the shares subject to the award vesting on the first anniversary of the grant date and the remaining two-thirds vesting ratably over the next 24 months, subject to the holder's continued employment with the Company.

(2) The award vests over a three year period, with 34% of the shares subject to the award vesting on the first anniversary of the grant date and the balance vesting ratably over the next 24 months, subject to the executive's continued employment with the Company. The award has a term of ten years.

(3) The award vests over three years, with one-third vesting on the anniversary of the grant date. The first 33.3% of the shares subject to the option became exercisable on September 12, 2013.

(4) The award vests over a three year period, with one-third vesting on the anniversary of the grant date.

(5) Mr. Tuttle's employment with the Company was terminated on September 30, 2013. For further discussion, see "Agreements with Our Named Executive Officers - Employment Agreement with Former Chief Executive Officer." Mr. Tuttle had no outstanding equity awards as of December 31, 2013.

Fiscal Year 2013 SARs and Option Exercises and Stock Vested

No SARs or stock options were exercised by any of our named executive officers during fiscal year 2013.

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Agreements with Our Named Executive Officers

Paul Kinnon Employment Agreement

We have entered into an employment agreement dated September 27, 2013 with Paul Kinnon, our President and Chief Executive Officer (the “Kinnon Employment Agreement”). The Kinnon Employment Agreement provides that Mr. Kinnon will be employed by us for a period of one year, subject to automatic renewal for additional one-year periods unless terminated by either party upon written notice to the other at least three months prior to the subsequent one-year term. Under the terms of the Kinnon Employment Agreement, Mr. Kinnon will be paid an initial base salary of \$350,000 per year. His base salary will be reviewed by the Compensation Committee of the Board for an increase on at least an annual basis and may be adjusted at any time in the Compensation Committee’s sole and absolute discretion, provided that any decrease in base salary must either be with Mr. Kinnon’s written permission, or be part of an across-the-board reduction that affects all senior executives of the Company by the same percentage. Commencing January 1, 2014, Mr. Kinnon became eligible to receive an annual bonus based on his performance under agreed upon goals, objectives and formulas, provided that his target bonus for any year may not be less than 40% of his then-current base salary. The Kinnon Employment Agreement provides for a severance payment to Mr. Kinnon equal to 12 months of Mr. Kinnon’s then-current base salary if he is discharged without “Cause” (as defined in the Kinnon Employment Agreement), other than due to Mr. Kinnon’s disability, or if Mr. Kinnon resigns for “Good Reason” (as defined in the Kinnon Employment Agreement), in each case provided that Mr. Kinnon executes a severance agreement and general release in favor of the Company. The Kinnon Employment Agreement also provides that Transgenomic will reimburse Mr. Kinnon for certain expenses associated with commuting from Solana Beach, California to the Company’s offices in Omaha, Nebraska and New Haven, Connecticut. The Kinnon Employment Agreement further provides that the vesting of the equity awards granted by the Company to Mr. Kinnon described below, as well as all future equity awards granted to Mr. Kinnon by the Company, will accelerate in full and become fully vested upon a Change in Control, as defined in the 2006 Plan.

Pursuant to the terms of the Kinnon Employment Agreement, Mr. Kinnon was granted an option to purchase 179,166 shares of the Company’s common stock with an exercise price equal to the fair market value of one share of the Company’s common stock on the date of grant, which was September 30, 2013. One-third of the shares subject to the option will vest on the first anniversary of the date of grant, with the remaining shares vesting in 24 substantially equal installments thereafter, subject to Mr. Kinnon’s continued employment with the Company on each such date. If the Company terminates Mr. Kinnon’s employment without Cause or Mr. Kinnon terminates his employment for Good Reason prior to September 30, 2014, one-third of the shares subject to the option will be deemed automatically vested. The option will accelerate in full and become fully vested upon Mr. Kinnon’s death, disability or retirement provided that he has continuously served as a director, employee or advisor of the Company for the two-year period immediately preceding such event.

Mr. Kinnon was also granted stock appreciation rights (“SARs”) pursuant to the terms of the Kinnon Employment Agreement with respect to 83,333 shares of the Company’s common stock with an exercise price equal to the fair market value of one share of the Company’s common stock on the date of grant, which was September 30, 2013. 34% of the shares subject to the SARs will vest on the first anniversary of the date of grant, with the remaining shares subject to the SARs vesting ratably over the remaining 24 months, subject to Mr. Kinnon’s continued employment with the Company on each such date. If the Company terminates Mr. Kinnon’s employment without Cause or Mr. Kinnon terminates his employment for Good Reason prior to September 30, 2014, 34% of the SARs shall be deemed automatically vested. The SARs will accelerate in full and become fully vested upon Mr. Kinnon’s death, disability or retirement if he has continuously served as a director, employee or advisor of the Company for the two-year period immediately preceding such event. The SARs were granted pursuant to the 2006 Plan and a SARs agreement. Upon exercise of the SARs, Mr. Kinnon will be entitled to receive shares of Company common stock or cash, subject to the terms of the SARs agreement.

On May 3, 2013, in connection with Mr. Kinnon’s services to us and pursuant to the terms of the Consulting Agreement (as defined below), Mr. Kinnon was granted an option to purchase 12,500 shares of common stock. Pursuant to the terms of the Kinnon Employment Agreement, the option was rescinded and terminated on September

30, 2013.

Former Consulting Agreement with Paul Kinnon

For the period from February 20, 2013 through immediately prior to his appointment as our Chief Executive Officer and President, Mr. Kinnon provided consulting services to us pursuant to a Consulting Agreement, dated as of February 20, 2013, between us and Mr. Kinnon, as amended (the "Consulting Agreement"). Pursuant to the Consulting Agreement, Mr. Kinnon assisted us in researching and developing commercial plans, supporting business development for our technology, developing a market pricing strategy and negotiating certain commercial contracts. Mr. Kinnon received fees from us in the amount of \$10,000-\$20,000

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per month. The Consulting Agreement terminated effective September 30, 2013, concurrent with our appointment of Mr. Kinnon as our Chief Executive Officer and President pursuant to the Kinnon Employment Agreement.

Mark P. Colonnese Employment Agreement

We have entered into an employment agreement dated September 12, 2012 with Mark P. Colonnese, our Executive Vice President and Chief Financial Officer (the "Colonnese Employment Agreement"). The Colonnese Employment Agreement may be terminated 30 days following delivery of written notice of termination for any reason or no reason, by Mr. Colonnese or us.

Pursuant to the Colonnese Employment Agreement, Mr. Colonnese was issued options to purchase 20,833 shares of our common stock, which vest over three years, with one-third vesting on each anniversary of the grant date; provided, however, that the options shall vest in full contingent upon, and effective as of immediately prior to, a "Change in Control", as that term is defined in the Colonnese Employment Agreement. The Colonnese Employment Agreement also provides that Mr. Colonnese will be entitled to receive severance payments from us if his employment is terminated involuntarily except if such termination is based on "Just Cause", as that term is defined in the Colonnese Employment Agreement. The severance payment payable in such circumstances is equal to nine months of his annual base salary at the time of termination and any earned but unpaid bonus, which will be paid to him over a nine-month period. The severance payment is conditioned on Mr. Colonnese executing a severance and release agreement. The Colonnese Employment Agreement provides that the severance payment provisions will be honored if Mr. Colonnese is terminated by us as part of a Change in Control. This severance payment is designed to provide him with an amount of cash sufficient to provide for living expenses and other needs which would normally be paid from his monthly base salary payments in situations where the executive officer's employment was not terminated voluntarily or for just cause. In addition, the payments are designed so as to not exceed the maximum amount which may be paid without imposition of the excise tax imposed by Section 4999 of the Code or to not result in a loss of our income tax deduction for any portion of these payments under Section 280G of the Code if such payments are made after, or in contemplation of, a change in control transaction.

On May 3, 2013, we granted Mr. Colonnese an option to purchase up to an aggregate of 16,666 shares of our common stock with an exercise price equal to \$4.20 per share. One-third of the shares subject to the option will vest on each of the first three anniversaries of the grant date, subject to Mr. Colonnese's continued employment with the Company on each applicable vesting date. The option to Mr. Colonnese was granted pursuant to the 2006 Plan and the form of option agreement related thereto.

On September 30, 2013, we granted Mr. Colonnese SARs with respect to 55,000 shares of our common stock with an exercise price equal to the fair market value of one share of the Company's common stock on the date of grant. 34% of the shares subject to the SARs will vest on the first anniversary of the date of grant, with the remaining shares subject to the SARs vesting ratably over the remaining 24 months, subject to Mr. Colonnese's continued employment with the Company on each such date. If the Company terminates Mr. Colonnese's employment without "Just Cause" (as defined in the Colonnese Employment Agreement) prior to September 30, 2014, the SARs shall be deemed to have vested on a monthly basis at a rate of 1/36th per month from the grant date. The SARs will accelerate in full and become fully vested upon Mr. Colonnese's death, disability or retirement if he has continuously served as a director, employee or advisor of the Company for the two-year period immediately preceding such event. The SARs were granted pursuant to the 2006 Plan and a SARs agreement. Upon exercise of the SARs, Mr. Colonnese will be entitled to receive shares of Company common stock or cash, subject to the terms of the SARs agreement.

Employment Agreement with Former Chief Executive Officer

We were party to an employment agreement with Craig J. Tuttle, our former President and Chief Executive Officer, which was terminated on September 30, 2013. Prior to the termination of his employment agreement, Mr. Tuttle's base salary was \$350,000. Pursuant to the terms of his employment agreement, Mr. Tuttle will receive severance pay in the amount of \$350,000, payable in installments over 12 months in accordance with our payroll practices.

Potential Payments Upon Termination or Change of Control

We have employment agreements with Mr. Kinnon and Mr. Colonnese. In the event of involuntary discharge, Mr. Kinnon is entitled to receive a severance payment equal to his then current annual base salary and Mr. Colonnese is eligible to receive a severance payment equal to nine months of his then current annual base salary and any earned but unpaid bonus.

Compensation Risk Analysis

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We have reviewed our material compensation policies and practices for all employees and have concluded that these policies and practices are not reasonably likely to have a material adverse effect on us. While risk-taking is a necessary part of growing a business, our compensation philosophy is focused on aligning compensation with the long-term interests of our stockholders as opposed to rewarding short-term management decisions that could pose long-term risks.

DIRECTOR COMPENSATION

It is our Board's general policy that compensation for independent directors should be a mix of cash and equity-based compensation. As part of a director's total compensation, and to create a direct linkage between corporate performance and stockholder interests, our Board believes that a meaningful portion of a director's compensation should be provided in, or otherwise based on, the value of appreciation in our common stock.

Our Board has the authority to approve all compensation payable to our directors, although our Compensation Committee is responsible for making recommendations to our Board regarding this compensation. Additionally, our Chief Executive Officer may also make recommendations or assist our Compensation Committee in making recommendations regarding director compensation. Our Board and Compensation Committee annually review our director compensation. In connection with director compensation decisions in 2013, our Board and the Compensation Committee reviewed in 2012 the market director compensation data paid by companies in the life sciences industry as reported by Top 5 Data Services, Inc. (the "2011 Director Competitive Analysis"). The 2011 Director Competitive Analysis contained data for 217 publicly traded medical device companies and 331 biopharmaceutical companies, with 65 companies assigned to both sectors based on their mix of products. Based on its review of the 2011 Director Competitive Analysis, the Board did not make any changes to our director compensation program in 2013 and continued with the program adopted in 2011 and used in 2012, which is further discussed below.

Cash Compensation

Directors who are also one of our employees are not separately compensated for serving on the Board other than reimbursement for out-of-pocket expenses related to attendance at Board and committee meetings. Independent directors are paid an annual retainer of \$20,000 and receive reimbursement for out-of-pocket expenses related to attendance at Board and committee meetings. Independent directors serving on any committee of the Board are paid an additional annual retainer of \$2,500 unless they are also a chairman of a committee. The chairman of the Audit Committee receives an additional annual retainer of \$8,000 and the chairman of any other committee receives an additional annual retainer of \$4,000. All directors' fees paid annually or quarterly were prorated for partial periods. In addition, any independent director who attends more than four meetings per quarter, which includes committee meetings, receives \$500 for each meeting attended over the four.

Equity-Based Compensation

From 2011 through 2013, our director compensation policy was to grant annually to each continuing independent director an option to purchase 2,083 shares of our common stock, which option vests after one year, subject to the director's continued service with the Company through the vesting date. Under our policy, additional annual grants of options may be made each year by the Compensation Committee in its sole discretion. Upon initial appointment to the Board, our independent directors are also entitled to receive an option to purchase shares of our common stock under the 2006 Plan, with the number of shares as determined by the Board or the Compensation Committee, which option vests after one year, subject to the director's continued service with the Company through the vesting date. All options granted to independent directors have exercise prices equal to the fair market value of our common stock on the grant date, as determined in accordance with the 2006 Plan.

On February 26, 2013 (the grant date), our independent directors were each granted a non-qualified option to purchase 2,083 shares of our common stock with an exercise price equal to \$5.16. The options vested in full on February 26,

2014.

Director Summary Compensation Table

The following table provides information regarding our compensation for non-employee directors during the year ended December 31, 2013. Directors who are our employees did not receive compensation for serving on the Board or its committees in fiscal 2013.

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| Name ⁽¹⁾ | Fees Earned or Paid in Cash (\$) | Option Awards (\$) ⁽²⁾ | Total (\$) |
|--------------------------------------|----------------------------------|-----------------------------------|------------|
| Doit Koppler, II | 20,000 | 8,012 | 28,012 |
| Robert Patzig | 22,500 | 8,012 | 30,512 |
| Rodney Markin, M.D., Ph.D. | 31,500 | 8,012 | 39,512 |
| Antonius Schuh, Ph.D. ⁽³⁾ | 27,000 | 8,012 | 35,012 |

⁽¹⁾ Dr. Luther was appointed to our Board effective March 13, 2014 and was not a member of our Board as of December 31, 2013; therefore, Dr. Luther is not included in this table.

⁽²⁾ The amounts reflected in this column reflect the grant date fair value of each option award granted during 2013, as determined in accordance with FASB ASC Topic 718. The amounts shown do not correspond to the actual value that will be realized by the independent director. The assumptions used in the calculation of these amounts are included in Footnote 11 "Equity Incentive Plan" to the consolidated financial statements contained in the Company's Annual Report on Form 10-K for the year ended December 31, 2013, as filed with the SEC on March 27, 2014. The average grant date fair value of the options granted to our independent directors in 2013 was \$3.85 per share. The aggregate grant date fair value for all options granted to our independent directors in 2013 was \$32,048.

⁽³⁾ Dr. Schuh's service on the Board will terminate on the date of the Annual Meeting.

The following table sets forth each independent director's aggregate number of option awards outstanding as of December 31, 2013:

| Name ⁽¹⁾ | Vested Stock Option Awards | Unvested Stock Option Awards | Aggregate Stock Option Awards |
|--------------------------------------|----------------------------|------------------------------|-------------------------------|
| Doit Koppler, II | 5,416 | 2,084 | 7,500 |
| Robert Patzig | 5,416 | 2,084 | 7,500 |
| Rodney Markin, M.D., Ph.D. | 6,666 | 2,084 | 8,750 |
| Antonius Schuh, Ph.D. ⁽²⁾ | 5,833 | 2,083 | 7,916 |

⁽¹⁾ Dr. Luther was appointed to our Board effective March 13, 2014 and was not a member of our Board as of December 31, 2013; therefore, Dr. Luther is not included in this table

⁽²⁾ Dr. Schuh's service on the Board will terminate on the date of the Annual Meeting.

Equity Compensation Plan Information

The following equity compensation plan information summarizes plans and securities approved and not approved by security holders as of December 31, 2013.

| PLAN CATEGORY | (a) Number of securities to be issued upon exercise of outstanding options, warrants and rights | (b) Weighted-average exercise price of outstanding options, warrants and rights | (c) Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) |
|---|--|--|---|
| Equity compensation plans approved by security holders ⁽¹⁾ | 703,361 | \$6.63 | 54,658 |
| Equity compensation plans not approved by security holders | — | — | — |

| | | | |
|--|---------|--------|--------|
| Total | 703,361 | \$6.63 | 54,658 |
| (1) Consists of our 2006 Equity Compensation Plan. | | | |

SUBMISSION OF STOCKHOLDER PROPOSALS

Pursuant to our Bylaws, stockholder proposals submitted for presentation at the Annual Meeting, including nominations for Common Stock Directors, must be received by our Corporate Secretary at c/o Transgenomic, Inc., 12325 Emmet Street, Omaha, NE 68164 no later than 35 days prior to the date of the Annual Meeting. If less than 35 days' notice of the Annual Meeting is given, then stockholder proposals must be received by our Corporate Secretary no later than 7 days after the mailing date of the notice of the Annual Meeting to stockholders. Accordingly, stockholder proposals to be submitted for presentation at the Annual Meeting must be received by our Corporate Secretary no later than May 1, 2014. Any stockholder nomination for a Common Stock Director must set forth the name, age, address and principal occupation of the person nominated, the number of shares of our common stock owned by the nominee and the nominating stockholder and other information required to be disclosed about the nominee under federal proxy solicitation rules. In order to be included in our proxy statement relating to next year's annual meeting, stockholder proposals must be submitted in writing by December 25, 2014 to our Corporate Secretary at c/o Transgenomic, Inc., 12325 Emmet Street, Omaha, NE 68164. The inclusion of any such proposal in our proxy materials will be subject to the requirements of the proxy rules adopted under the Exchange Act.

IMPORTANT NOTICE REGARDING DELIVERY OF STOCKHOLDER DOCUMENTS

A copy of our Annual Report is being mailed to our stockholders along with this Proxy Statement. We are sending only one Annual Report and Proxy Statement to "street name" stockholders who share a single address unless we received contrary instructions from any stockholder at that address. This practice, known as "householding," is designed to reduce our printing and postage costs. However, if a stockholder is residing at such an address and wishes to receive a separate annual report or proxy statement in the future, such stockholder may request them by calling our Corporate Secretary at (402) 452-5400, or by submitting a request in writing to our Corporate Secretary, c/o Transgenomic, Inc., 12325 Emmet Street, Omaha, NE 68164. If a stockholder is receiving multiple copies of our Annual Report and proxy statement, such stockholder can request householding by contacting the Corporate Secretary in the same manner described above. In addition, we will promptly deliver, upon written or oral request to the address or telephone number above, a separate copy of the Annual Report or Proxy Statement to a stockholder at a shared address to which a single copy of the documents was delivered.

OTHER MATTERS

Management does not currently intend to bring any matter before the Annual Meeting other than those disclosed in the Notice of Annual Meeting of Stockholders, and it does not know of any business which persons, other than the management, intend to present at the meeting. The enclosed proxy for the Annual Meeting confers discretionary authority on the Board to vote on any matter proposed by stockholders for consideration at the Annual Meeting.

We will bear the cost of soliciting proxies for the Annual Meeting. To the extent necessary, proxies may be solicited by our directors, officers and employees, but these persons will not receive any additional compensation for such solicitation. We will reimburse brokerage firms, banks and other custodians, nominees and fiduciaries for reasonable expenses incurred by them in sending proxy materials to the beneficial owners of our common stock. In addition to solicitation by mail, we will supply banks, brokers, dealers and other custodian nominees and fiduciaries with proxy materials to enable them to send a copy of such materials by mail to each beneficial owner of our common stock that they hold of record and will, upon request, reimburse them for their reasonable expenses in so doing.

Stockholders may communicate with any director, including the Chairman of the Board and the chairman of any committee of the Board, by sending a written communication to the Board or the appropriate director (which may be marked as confidential), addressed to the attention of our Corporate Secretary at our home office. All communications received by the Corporate Secretary will be screened by the Corporate Secretary to determine whether it is appropriate for presentation to the Board or such director. Communications determined by the Corporate Secretary to be appropriate for presentation to the Board or such director will be submitted to the Board or such director on a periodic basis. Any communications that concern questionable accounting or auditing matters will be handled in accordance with the terms of the Company's policies.

Our Form 10-K, as filed by the Company with the SEC, is included in our Annual Report that is being delivered to our stockholders together with this Proxy Statement. The Form 10-K is not, however, to be considered part of this proxy solicitation material. A copy of our Annual Report and our Form 10-K is available without charge upon written request to our Corporate Secretary, c/o Transgenomic, Inc., 12325 Emmet Street, Omaha, NE 68164.

None of the information set forth in this Proxy Statement under the heading "Report of the Audit Committee" is deemed to be "soliciting material" or to be "filed" with the SEC or subject to the SEC's proxy rules or to the liabilities of Section 18 of the Exchange Act, and this information will not be deemed to be incorporated by reference into any prior or subsequent filing by the Company under the Securities Act of 1933, as amended, or the Exchange Act.

By Order of the Board of Directors
/S/ MARK P. COLONNESE
Mark P. Colonnese, Executive Vice President
and Chief Financial Officer

Omaha, Nebraska
April 24, 2014

