

SENESCO TECHNOLOGIES INC  
Form PRE 14A  
April 13, 2010

SCHEDULE 14A  
(Rule 14a-101)  
INFORMATION REQUIRED IN PROXY STATEMENT  
SCHEDULE 14A INFORMATION

PROXY STATEMENT PURSUANT TO SECTION 14(A) OF THE SECURITIES  
EXCHANGE ACT OF 1934 (AMENDMENT NO. )

Filed by the Registrant   
Filed by a Party other than the Registrant   
Check the appropriate box:  
 Preliminary Proxy Statement

Confidential, for Use of the  
Commission Only (as permitted  
by Rule 14a-6(e)(2))

Definitive Proxy Statement  
 Definitive Additional Materials  
 Soliciting Material Pursuant to Rule 14a-11(c) or Rule 14a-12

SENESCO TECHNOLOGIES, 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):

- No fee required.  
 Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.
- (1) Title of each class of securities to which transaction applies:
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- (3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):
- (4) Proposed maximum aggregate value of transaction:
- (5) Total fee paid:
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the form or schedule and the date of its filing.

- (1) Amount Previously Paid:
  - (2) Form, Schedule or Registration Statement no.:
  - (3) Filing Party:
  - (4) Date Filed:
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SENESCO TECHNOLOGIES, INC.  
303 George Street, Suite 420  
New Brunswick, New Jersey 08901

To Our Stockholders:

You are cordially invited to attend the 2010 Annual Meeting of Stockholders of Senesco Technologies, Inc. at 10:00 A.M., local time, on May [ ], 2010, at the offices of Morgan, Lewis & Bockius LLP at 101 Park Avenue, New York, NY 10178.

The Notice of Meeting and Proxy Statement on the following pages describe the matters to be presented at the meeting.

It is important that your shares be represented at this meeting to assure the presence of a quorum. Whether or not you plan to attend the meeting, we hope that you will have your stock represented by voting as soon as possible, by signing, dating and returning your proxy card in the enclosed envelope, which requires no postage if mailed in the United States. Your stock will be voted in accordance with the instructions you have given in your proxy.

Thank you for your continued support.

Sincerely,

/s/ Harlan W. Waksal, M.D.

Harlan W. Waksal, M.D.  
Chairman of the Board

SENESCO TECHNOLOGIES, INC.  
303 George Street, Suite 420  
New Brunswick, New Jersey 08901  
NOTICE OF ANNUAL MEETING OF STOCKHOLDERS  
To Be Held May [\_\_\_], 2010

The Annual Meeting of Stockholders (the “Meeting”) of Senesco Technologies, Inc., a Delaware corporation (the “Company”), will be held at the office of Morgan, Lewis & Bockius, LLP at 101 Park Avenue, New York, NY 10178 on May [\_\_\_], 2010, at 10:00 A.M., local time, for the following purposes. Capitalized terms are defined in the attached proxy statement.

1. To elect nine (9) Directors to serve until the next Meeting of Stockholders and until their respective successors shall have been duly elected and qualified.
2. To approve an amendment to the Senesco Technologies, Inc. 2008 Incentive Compensation Plan to increase the number of shares of common stock reserved for issuance thereunder from 6,137,200 shares to 11,137,200 shares.
3. To approve an amendment to the Company’s Certificate of Incorporation to increase the total number of authorized shares of common stock, \$0.01 par value per share, of the Company from 120,000,000 shares to 250,000,000 shares.
4. To approve, for purposes of section 713 of the NYSE Amex Company Guide, the issuance of Preferred Stock, Warrants and Placement Agent Warrants (and the shares of common stock issuable upon exercise of the Warrants, the Placement Agent Warrants and the conversion of the Preferred Stock and payment of dividends thereon), which, when converted, in the aggregate exceed 20% of the Company’s currently outstanding shares of common stock pursuant to the terms and conditions of the Securities Purchase Agreements, dated as of March 26, 2010, between certain investors who are a party thereto and the Company.
5. To approve, for purposes of section 711 of the NYSE Amex Company Guide, the issuance of the Company’s shares of Preferred Stock and Warrants (and the shares of common stock issuable upon the exercise of the Warrants and the conversion of the Preferred Stock and payment of dividends thereon) pursuant to the terms and conditions of the Securities Purchase Agreement, dated as of March 26, 2010, between each of Harlan W. Waksal, M.D. and Christopher Forbes and the Company.
6. To approve, for purposes of section 711 of the NYSE Amex Company Guide, the issuance of common stock upon the conversion of certain convertible debentures held by Christopher Forbes, Rudolf Stalder, Harlan W. Waksal, M.D., David Rector, John N. Braca, Jack Van Hulst, Warren Isabelle and the Thomas C. Quick Charitable Foundation.
7. To ratify the appointment of McGladrey & Pullen, LLP as the Company’s independent registered public accounting firm for the fiscal year ending June 30, 2010.
8. To transact such other business as may properly come before the Meeting or any adjournment or adjournments thereof.

The holders of common stock (the “Stockholders”) of record at the close of business on April [\_\_\_], 2010 (the “Record Date”), are entitled to notice of and to vote at the Meeting, or any adjournment or adjournments thereof. A complete list of such Stockholders will be open to the examination of any Stockholder at the Company’s principal executive offices at 303 George Street, Suite 420, New Brunswick, New Jersey 08901 for a period of ten (10) days prior to the Meeting and at the New York offices of Morgan, Lewis & Bockius on the day of the Meeting. The Meeting may be

adjourned from time to time without notice other than by announcement at the Meeting; provided, however, if the adjournment is for more than thirty (30) days after the date of the Meeting, or if after the adjournment a new Record Date is fixed for the adjourned meeting, a notice of the adjourned meeting is required to be given to each Stockholder.

IT IS IMPORTANT THAT YOUR SHARES BE REPRESENTED REGARDLESS OF THE NUMBER OF SHARES YOU MAY HOLD. WHETHER OR NOT YOU PLAN TO ATTEND THE MEETING IN PERSON, PLEASE COMPLETE, DATE, SIGN AND RETURN THE ENCLOSED PROXY CARD PROMPTLY IN THE ENCLOSED RETURN ENVELOPE. THE PROMPT RETURN OF PROXIES WILL ENSURE A QUORUM AND SAVE THE COMPANY THE EXPENSE OF FURTHER SOLICITATION. EACH PROXY GRANTED MAY BE REVOKED BY THE STOCKHOLDER APPOINTING SUCH PROXY AT ANY TIME BEFORE IT IS VOTED. IF YOU RECEIVE MORE THAN ONE PROXY CARD BECAUSE YOUR SHARES ARE REGISTERED IN DIFFERENT NAMES OR ADDRESSES, EACH PROXY SHOULD BE SIGNED AND RETURNED TO ENSURE THAT ALL OF YOUR SHARES WILL BE VOTED.

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Important Notice Regarding the Availability of  
Proxy Materials for the Annual Meeting of Stockholders to be held on May [ ], 2010

Our proxy statement is attached. Financial and other information concerning our company is contained in our Annual Report for the fiscal year ended June 30, 2009 and our Quarterly Report for the quarter ended December 31, 2009. Pursuant to new rules promulgated by the SEC, we have elected to provide access to our proxy materials both by sending you this full set of proxy materials, including a proxy card, and by notifying you of the availability of our proxy materials on the internet. This proxy statement, our June 30, 2009 Annual Report and our December 31, 2009 Quarterly Report are available on our website at [www.senesco.com](http://www.senesco.com).

By Order of the Board of  
Directors  
/s/ Jack Van Hulst  
Jack Van Hulst  
Secretary

New Brunswick, New Jersey  
April [ ], 2010

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SENESCO TECHNOLOGIES, INC.  
303 George Street, Suite 420  
New Brunswick, New Jersey 08901

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PROXY STATEMENT

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This proxy statement is furnished in connection with the solicitation by the board of directors, or the board, of Senesco Technologies, Inc., a Delaware corporation, referred to herein as the Company, Senesco, we, us or our, of proxies to be voted at our annual meeting of stockholders to be held on May [\_\_\_], 2010, referred to herein as the Meeting, at the offices of Morgan Lewis & Bockius, LLP at 101 Park Avenue, New York, NY 10178, at 10:00 A.M., local time, and at any adjournment or adjournments thereof. The holders of record of our common stock, \$0.01 par value per share, also referred to herein as common stock, as of the close of business on April [\_\_\_], 2010, also referred to herein as the Record Date, will be entitled to notice of and to vote at the Meeting and any adjournment or adjournments thereof. As of the Record Date, there were [\_\_\_\_\_] shares of our common stock issued and outstanding and entitled to vote. Each share of our common stock is entitled to one (1) vote on any matter presented at the Meeting.

If proxies in the accompanying form are properly voted and received, the shares of our common stock represented thereby will be voted in the manner specified therein. If not otherwise specified, the shares of our common stock represented by the proxies will be voted. Capitalized terms are defined elsewhere in this proxy statement.

1. FOR the election of the nine (9) nominees named below as directors;
2. FOR a proposal to approve an amendment to the Senesco Technologies, Inc. 2008 Incentive Compensation Plan to increase the number of shares of common stock reserved for issuance thereunder from 6,137,200 shares to 11,137,200 shares;
3. FOR a proposal to amend our Certificate of Incorporation to increase the total number of authorized shares of common stock, \$0.01 par value per share, from 120,000,000 shares to 250,000,000 shares;
4. FOR a proposal to approve for purposes of section 713 of the NYSE Amex Company Guide, the issuance of Preferred Stock, Warrants and Placement Agent Warrants (and the shares of common stock issuable upon exercise of the Warrants, the Placement Agent Warrants and the conversion of the Preferred Stock and payment of dividends thereon), which, when converted, in the aggregate exceed 20% of our currently outstanding shares of common stock pursuant to the terms and conditions of the Securities Purchase Agreements, dated as of March 26, 2010, between certain investors who are a party thereto and us;
5. FOR a proposal to approve, for purposes of section 711 of the NYSE Amex Company Guide, the issuance of our shares of Preferred Stock and Warrants (and the shares of common stock issuable upon the exercise of the Warrants and the conversion of the Preferred Stock and payment of dividends thereon) pursuant to the terms and conditions of the Securities Purchase Agreement, dated as of March 26, 2010, between each of Harlan W. Waksal, M.D. and Christopher Forbes and us;
6. FOR a proposal to approve, for purposes of section 711 of the NYSE Amex Company Guide, the issuance of common stock upon the conversion of certain convertible debentures held by Christopher Forbes, Rudolf Stalder, Harlan W. Waksal, M.D., David Rector, John N. Braca, Jack Van Hulst, Warren Isabelle and the Thomas C. Quick Charitable Foundation;
- 7.

FOR the ratification of the appointment of McGladrey & Pullen, LLP as our independent registered public accounting firm for the fiscal year ending June 30, 2010; and

8. In the discretion of the persons named in the enclosed form of proxy, on any other proposals which may properly come before the Meeting or any adjournment or adjournments thereof. Any stockholder who has submitted a proxy may revoke it at any time before it is voted, by written notice addressed to and received by our Corporate Secretary, by submitting a duly executed proxy bearing a later date or by electing to vote in person at the Meeting. The mere presence at the Meeting of the person appointing a proxy does not, however, revoke the appointment.
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The presence, in person or by proxy, of holders of shares of our common stock having a majority of the votes entitled to be cast at the Meeting shall constitute a quorum. The affirmative vote by the holders of a plurality of the shares of our common stock represented at the Meeting is required for the election of directors (Proposal 1), provided a quorum is present in person or by proxy. Proposal 3 requires the affirmative vote of our stockholders possessing a majority of the shares of our common stock issued and outstanding as of the record date. Proposals 2, 4, 5, 6 and 7 require the affirmative vote of our stockholders representing a majority of the votes cast by holders of shares present, or represented by proxy, and entitled to vote thereon.

Abstentions are included in the shares present at the Meeting for purposes of determining whether a quorum is present, and are counted as a vote against for purposes of determining whether any of the foregoing proposals are approved. Broker non-votes are when shares are represented at the Meeting by a proxy specifically conferring only limited authority to vote on certain matters and no authority to vote on other matters. Therefore, broker non-votes are included in the determination of the number of shares represented at the Meeting for purposes of determining whether a quorum is present but are not counted for purposes of determining whether a proposal has been approved in matters where the proxy does not confer the authority to vote on such proposal. In this year's vote, brokers are entitled to vote without instructions on Proposals No. 3 and 7, but not on Proposals No. 1, 2, 4, 5, 6 and 8. Accordingly, broker non-votes are not counted as a vote against and will not affect the outcome of Proposals No. 1, 2, 4, 5, 6 and 8.

Your vote is very important. All properly executed proxy cards delivered pursuant to this solicitation and not revoked will be voted at the Annual Meeting in accordance with the directions given. In voting by proxy with regard to the election of directors, you may vote in favor of all nominees, withhold your votes as to all nominees or withhold your votes as to specific nominees. With regard to other proposals, you may vote in favor of each proposal or against each proposal, or in favor of some proposals and against others or you may abstain from voting on any or all proposals. You should specify your respective choices on the proxy card. If you do not give specific instructions with regard to the matters to be voted upon, the shares of common stock represented by your signed proxy card will be voted "FOR" Proposal Nos. 1, 2, 3, 4, 5, 6, 7 and 8. If any other matters properly come before the Annual Meeting, the persons named as proxies will vote for or against these matters according to their best judgment. Please note that because of a change in the New York Stock Exchange rules, unlike at previous annual meetings, your broker will not be able to vote your shares with respect to the election of directors if you have not provided directions to your broker. We strongly encourage you to submit your voting instructions and exercise your right to vote as a stockholder.

You may revoke your proxy and reclaim your right to vote up to and including the day of the Annual Meeting by giving written notice to the Secretary of Senesco, by delivering a proxy card dated after the date of the proxy or by voting in person at the Meeting. All written notices of revocation and other communications with respect to revocations of proxies should be addressed to: Secretary, Senesco Technologies, Inc., 303 George Street, Suite 420, New Brunswick, New Jersey 08901.

On or about April [ ], 2010, this proxy statement, together with the related proxy card, is being mailed to our stockholders of record as of the Record Date. Our annual report to our stockholders for the fiscal year ended June 30, 2009 and our Quarterly Report for the quarter ended December 31, 2009, including our financial statements, is being mailed together with this proxy statement to all of our stockholders of record as of the Record Date. In addition, we have provided brokers, dealers, banks, voting trustees and their nominees, at our expense, with additional copies of our annual report and our quarterly report so that our record holders could supply these materials to our beneficial owners as of the Record Date.

Our common stock is listed on the NYSE Amex under the symbol "SNT". On April [ ], 2010, the closing price for the common stock as reported by NYSE Amex was \$[ ] per share.



## PROPOSAL 1

## ELECTION OF DIRECTORS

At the Meeting, nine (9) directors are to be elected, which number shall constitute our entire board, to hold office until the next annual meeting of stockholders and until their successors shall have been duly elected and qualified.

Unless otherwise specified in the proxy, it is the intention of the persons named in the enclosed form of proxy to vote the stock represented thereby for the election as directors, each of the nominees whose names and biographies appear below. All of the nominees whose names and biographies appear below are at present our directors. In the event any of the nominees should become unavailable or unable to serve as a director, it is intended that votes will be cast for a substitute nominee designated by our board. Our board has no reason to believe that the nominees named will be unable to serve if elected. Each nominee has consented to being named in this proxy statement and to serve if elected.

The following are the nominees for election to our board, and all of these nominees are current members of our board:

| Name                    | Age | Served<br>as<br>a<br>Director<br>Since | Position<br>with Senesco   |
|-------------------------|-----|--|--|
| Harlan W. Waksal, M.D.  | 57  | 2008                                   | Chairman of the Board and Director                                 |
| David Rector            | 63  | 2002                                   | Lead Director  |
| Jack Van Hulst          | 70  | 2007                                   | Director, Chief Executive Officer and Secretary                    |
| John N. Braca           | 52  | 2003                                   | Director   |
| Christopher Forbes      | 58  | 1999                                   | Director   |
| Warren J. Isabelle      | 58  | 2009                                   | Director   |
| Thomas C. Quick         | 54  | 1999                                   | Director   |
| Rudolf Stalder          | 69  | 1999                                   | Director   |
| John E. Thompson, Ph.D. | 68  | 2001                                   | Executive Vice President, Chief Scientific<br>Officer and Director |

The principal occupations and business experience, for at least the past five (5) years, of each director and nominee is as follows:

Harlan W. Waksal, M.D. has been our chairman of the board of directors since June 2009 and a director since October 2008. From July 2003 to present, Dr. Waksal has been the President and Sole Proprietor of Waksal Consulting L.L.C., which provides strategic business and clinical development counsel to biotechnology companies. Dr. Waksal co-founded the biotechnology company, ImClone Systems Inc. in 1984. From March, 1987 through July 2003, Dr. Waksal had served in various senior roles for ImClone Systems Incorporated as follows: March 1987 through April 1994 – President; April 1994 through May 2002 – Executive Vice President and Chief Operating Officer; May 2002 through July 2003 – President, Chief Executive Officer and Chief Operating Officer. Dr. Waksal also served as a director of ImClone Systems Incorporated from March 1987 through January 2005. Dr. Waksal is currently a member of the Board of Trustees of Oberlin College. Dr. Waksal received a Bachelor of Arts in Biology from Oberlin College and an M.D. from Tufts University School of Medicine. Dr. Waksal is knowledgeable in science, drug development, regulatory and clinical affairs. In addition, he ran and operated a public biotechnology company and is familiar with the issues of corporate governance.



David Rector has been our director since February 2002. Mr. Rector also serves as a director and member of the compensation and audit committee of the Dallas Gold and Silver Exchange (formerly Superior Galleries, Inc.) From May 2004 through December 2006, Mr. Rector had served in senior management positions with Nanoscience Technologies, Inc., a development stage company engaged in the development of DNA Nanotechnology. Also, since 1985, Mr. Rector has been the Principal of The David Stephen Group, which provides enterprise consulting services to emerging and developing companies in a variety of industries. From 1983 until 1985, Mr. Rector served as President and General Manager of Sunset Designs, Inc., a domestic and international manufacturer and marketer of consumer product craft kits, and a wholly-owned subsidiary of Reckitt & Coleman N.A. From 1980 until 1983, Mr. Rector served as the Director of Marketing of Sunset Designs. From 1971 until 1980, Mr. Rector served in progressive roles in both the financial and product marketing departments of Crown Zellerbach Corporation, a multi-billion dollar pulp and paper industry corporation. Mr. Rector received a Bachelor of Science degree in Business/Finance from Murray State University in 1969. As a result of these professional and other experiences, Mr. Rector has a deep business understanding of developing companies. Mr. Rector also brings corporate governance experience through his service on other company boards.

Jack Van Hulst has been our director since January 2007. Mr. Van Hulst was appointed as our President and Chief Executive Officer effective November 16, 2009. Mr. Van Hulst was further appointed as our Secretary effective February 1, 2010. Mr. Van Hulst also serves as a director and member of the compensation and audit committees of Napo Pharmaceuticals, Inc. and HiTech Pharmacal, Inc. He has more than 42 years of international experience in the pharmaceutical industry. He began his career in 1968 at Organon, which was subsequently acquired by AKZO, N.V., the multinational human and animal healthcare company, where he was based in Europe and the US and responsible for establishing AKZO's position in the US in the manufacturing and sales and marketing of fine chemicals. Mr. Van Hulst later became President of AKZO's US Pharmaceutical Generic Drug Business and was responsible for establishing AKZO in the US generic drug industry. From 1989 to 1999, Mr. Van Hulst successively owned and led two generic pharmaceutical companies, improving their operations and then selling them to a private equity group and a pharmaceutical company. From 1999 to 2005, he was Executive Vice President at Puerto Rico-based MOVA Pharmaceutical Corporation, a contract manufacturer to the pharmaceutical industry that recently merged with Canadian-based Patheon. Mr. Van Hulst also serves as Chairman of the Board of The International Center in New York, a non-profit organization. Mr. Van Hulst received a Masters degree in law from the University in Utrecht, Netherlands in 1968. Mr. Van Hulst possesses management experience as a result of his prior positions. Mr Van Hulst spent years holding a number of management roles at other pharmaceutical companies and this experience assists the Company in working though the similar issues that it may face in its own operations.

John N. Braca has been our director since October 2003. Mr. Braca has also served as a director and board observer for other healthcare, technology and biotechnology companies over the course of his career. From April 2006, Mr. Braca has been the managing director of Fountainhead Venture Group, a healthcare information technology venture fund based in the Philadelphia area and has been working with both investors and developing companies to establish exit and business development opportunities. From May 2005 through March 2006, Mr. Braca was a consultant and advisor to GlaxoSmithKline management in their research operations. From 1997 to April 2005, Mr. Braca was a general partner and director of business investments for S.R. One, Limited, or S.R. One, the venture capital subsidiary of GlaxoSmithKline. In addition, from January 2000 to July 2003, Mr. Braca was a general partner of Euclid SR Partners Corporation, an independent venture capital partnership. Prior to joining S.R. One, Mr. Braca held various finance and operating positions of increasing responsibility within several subsidiaries and business units of GlaxoSmithKline. Mr. Braca is a licensed Certified Public Accountant in the state of Pennsylvania and is affiliated with the American Institute of Certified Public Accountants and the Pennsylvania Institute of Certified Public Accountants. Mr. Braca received a Bachelor of Science in Accounting from Villanova University and a Master of Business Administration in Marketing from Saint Joseph's University. Mr. Braca's financial background, operating experience with both large pharmaceutical companies and developing biotechnology companies, provides the board with practical experience for issues facing the Company. In addition, Mr. Braca also has a strong corporate

governance background through his experience with other company boards.

Christopher Forbes has been our director since January 1999. Since 1989, Mr. Forbes has been Vice Chairman of Forbes, Inc., which publishes Forbes Magazine and Forbes.com. From 1981 to 1989, Mr. Forbes was Corporate Secretary at Forbes. Prior to 1981, he held the position of Vice President and Associate Publisher. Mr. Forbes has been a director of Forbes, Inc. since 1977. Mr. Forbes is the Chairman of the American Friends of the Louvre, and he also sits on the Boards of The Friends of New Jersey State Museum, The New York Academy of Art, and the Prince Wales Foundation. He is also a member of the Board of Advisors of The Princeton University Art Museum. Mr. Forbes received a Bachelor of Arts degree in Art History from Princeton University in 1972. In 1986, he was awarded the honorary degree of Doctor of Humane Letters by New Hampshire College and in 2003 was appointed a Chevalier of the Legion of Honor by the French Government. Mr. Forbes knowledge regarding corporate operations as well as his business acumen, provide the board with experience in running a corporation and addressing the issues that a growing company, such as ours, face.

Warren J. Isabelle has been our director since June 2009. Mr. Isabelle, is a founder and principal of Ironwood Investment Management L.L.C., located in Boston, MA. Mr. Isabelle founded Ironwood Investment management L.L.C in August, 1997. From 1983 until 1997 Mr. Isabelle was with Pioneer Management Corporation where he served most recently as Director of Research and Head of U.S. Equities. Mr. Isabelle has also, since January 2004, served as a member of the Public Board and Vice-Chairman of the Investment Committee of the University of Massachusetts Foundation. Mr. Isabelle is a Chartered Financial Analyst and member of the CFA institute and the American Chemical Society. Mr. Isabelle received a Bachelor of Science degree in chemistry from Lowell Technological Institute, a Master of Science degree in Polymer Science and Engineering from the University of Massachusetts, and a MBA from the Wharton School, University of Pennsylvania. Mr. Isabelle's prior experience and dealings in financial management provides the Company with valuable insight in its attempts to raise capital through financings.

Thomas C. Quick has been our director since February 1999. Since 2003, Mr. Quick has been the President of First Palm Beach Properties, Inc. From 2001 through 2003, Mr. Quick was the Vice Chairman of Quick & Reilly/Fleet Securities, Inc., successor to The Quick & Reilly Group, Inc., a holding company for four (4) major financial services businesses. From 1996 until 2001, Mr. Quick was the President and Chief Operating Officer and a director of Quick & Reilly/Fleet Securities, Inc. From 1985 to 1996, he was President of Quick & Reilly, Inc., a Quick & Reilly subsidiary and a national discount brokerage firm. Mr. Quick serves as a member of the Board of Directors and compensation committee of B.F. Enterprises. He is also a member of the Board of Directors of Best Buddies, The American Ireland Fund, Venetian Heritage, Inc. and serves on the Investment Advisory Board for the St. Jude Children's Hospital. He is a trustee of the National Corporate Theater Fund, Cold Spring Harbor Laboratories, the Norton Museum, the Inter-City Scholarship Foundation of New York City and an advisory board member of Christie, European. Mr. Quick is a graduate of Fairfield University. As a result of his professional and other experiences, Mr. Quick has a deep understanding of corporate operations and strategy, and operations in both the US and internationally. Mr. Quick also has significant corporate governance experience through his service on other company boards.

Rudolf Stalder has been our director since February 1999 and was appointed as our Chairman and Chief Executive Officer on January 10, 2000. On October 4, 2001, Mr. Stalder resigned as our Chief Executive Officer. On June 8, 2009 Mr. Stalder resigned as our Chairman. Mr. Stalder is a former member of the Executive Boards of Credit Suisse Group and Credit Suisse First Boston and former Chief Executive Officer of the Americas Region of Credit Suisse Private Banking. Mr. Stalder joined Credit Suisse in 1980 as a founding member and Deputy Head of the Multinational Services Group. In 1986, he became Executive Vice President. He was named to Credit Suisse's Executive Board in 1989. In 1990, he became Head of the Commercial Banking Division and a Member of the Executive Committee. From 1991 to 1995, Mr. Stalder was Chief Financial Officer of Credit Suisse First Boston and a Member of the Executive Boards of Credit Suisse Group and Credit Suisse First Boston. He became head of the Americas Region of Credit Suisse Private Banking in 1995 and retired in 1998. Prior to moving to the United States, Mr. Stalder was a member of the Board of Directors for several Swiss subsidiaries of major corporations including AEG, Bayer, BTR, Hoechst, Saint Gobain, Solvay and Sony. He is a fellow of the World Economic Forum. He currently serves on the Board of the Greater Bridgeport Symphony. He was a member of the Leadership Committee of the Consolidated Corporate Fund of Lincoln Center for the Performing Arts, Board of The American Ballet Theatre and a Trustee of Carnegie Hall. From 1991 through 1998, Mr. Stalder was Chairman of the New York Chapter of the Swiss-American Chamber of Commerce. He continues to serve as an Advisory Board Member of the American-Swiss Foundation. Mr. Stalder received a diploma in advanced finance management at the International Management Development Institute in Lausanne, Switzerland in 1976. He completed the International Senior Managers Program at Harvard University in 1985. Mr. Stalder is an experienced executive with former CEO experience, senior executive level experience at large multinational companies. He also has corporate governance experience through service on other public company boards.





John E. Thompson, Ph.D. has been our director since October 2001. Dr. Thompson was appointed our President and Chief Executive Officer in January 1999, and he continued in that capacity until September 1999 when he was appointed Executive Vice President of Research and Development. In July 2004, Dr. Thompson became our Executive Vice President and Chief Scientific Officer. Dr. Thompson is the inventor of the technology that we develop. Since July 2001, he has been the Associate Vice President, Research and, from July 1990 to June 2001, he was the Dean of Science at the University of Waterloo in Waterloo, Ontario, Canada. Dr. Thompson has a Ph.D. in Biology from the University of Alberta, Edmonton, and he is a Fellow of the Royal Society of Canada. Dr. Thompson is also the recipient of a Lady Davis Visiting Fellowship, the Sigma Xi Award for Excellence in Research, the CSPP Gold Medal and the Technion Visiting Fellowship. Dr. Thompson has an in-depth knowledge and understanding of the science underlying our technology and how it relates to human health and agricultural applications.

#### Director Experience, Qualifications, Attributes and Skills

We believe that the backgrounds and qualifications of our directors, considered as a group, should provide a composite mix of experience, knowledge and abilities that will allow the board to fulfill its responsibilities. The board is composed of a diverse group of leaders in their respective fields. Many of the current directors have leadership experience at major domestic and international companies with operations inside and outside the United States, which provides an understanding of different business processes, challenges and strategies. Other directors have prior experience as former executive officers of other entities, which brings unique perspectives to the board. Further, the Company's directors also have other experience that makes them valuable members, such as prior public policy or regulatory experience that provides insight into issues faced by companies.

OUR BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" THE ELECTION OF EACH OF  
THE NOMINEES TO THE BOARD OF DIRECTORS.

### Board Leadership Structure and Role in Risk Oversight

The board evaluates its leadership structure and role in risk oversight on an ongoing basis. In March 2010, the Company's board leadership structure has separated the Chairman of the Board, the Chief Executive Officer and the Lead Director roles into three positions. Currently, Harlan W. Waksal, M.D. is the Chairman of the Board, Jack Van Hulst is the Chief Executive Officer and David Rector is the Lead Director. The Board determines what leadership structure it deems appropriate based on factors such as the experience of the applicable individuals, the current business environment of the Company or other relevant factors. In his capacity as Lead Director, Mr. Rector consults independently of the Chairman of the Board with other members of the board in matters that are presented for the independent board member's consideration. After considering these factors, the Board determined that continuing to separate the positions of Chairman of the Board, Lead Director and Chief Executive Officer is the appropriate board leadership structure at this time.

The board is also responsible for oversight of the Company's risk management practices while management is responsible for the day-to-day risk management processes. This division of responsibilities is the most effective approach for addressing the risks facing the Company, and the Company's board leadership structure supports this approach. The board receives periodic reports from management regarding the most significant risks facing the Company. In addition, the Audit Committee assists the board in its oversight role by receiving periodic reports regarding the Company's risk and control environment.

### Corporate Governance Guidelines

Our board has long believed that good corporate governance is important to ensure that we are managed for the long-term benefit of our stockholders. During the past year, our board has continued to review our governance practices in light of the Sarbanes-Oxley Act of 2002, the new rules and regulations of the Securities and Exchange Commission and the new listing standards, policies and requirements of NYSE Amex.

Our board has adopted corporate governance guidelines to assist it in the exercise of its duties and responsibilities and to serve the best interests of Senesco and its stockholders. These guidelines, which provide a framework for the conduct of our board's business, include that:

- the principal responsibility of the directors is to oversee the management of Senesco;
- a majority of the members of our board shall be independent directors;
- the independent directors met regularly in executive session;
- directors have full and free access to management and, as necessary and appropriate, independent advisors;
- new directors participate in an orientation program and all directors are expected to participate in continuing director education on an ongoing basis; and
- at least annually, our board and its committees will conduct a self-evaluation to determine whether they are functioning effectively.

### Board Determination of Independence

Under the current rules set forth in the NYSE Amex Company Guide, a director will, among other things, qualify as an "independent director" if, in the determination of our board, that person does not have a relationship that would

interfere with his or her exercise of independent judgment in carrying out the responsibilities of a director. Our board currently consists of Rudolf Stalder, John E. Thompson, Ph.D., John N. Braca, Christopher Forbes, Warren J. Isabelle, Thomas C. Quick, David Rector, Jack Van Hulst and Harlan W. Waksal, M.D. We are currently traded on the NYSE Amex, which requires our board be comprised of a majority of independent directors. Our board has determined that each of Messrs. Stalder, Braca, Forbes, Isabelle, Quick and Rector is an “independent director” as defined under Section 803 of the NYSE Amex Company Guide.

### Committees and Meetings of our Board of Directors

Our board held (8) eight meetings during Fiscal 2009. Throughout this period, except for Mr. Quick, each member of our board attended or participated in at least 75% of the aggregate of the total number of meetings of our board held during the period for which such person has been a director, and the total number of meetings held by all committees of our board on which each the director served during the periods the director served. Our board has five standing committees: the Compensation Committee, the Audit Committee and the Nominating and Corporate Governance Committee, a Finance Committee and an Executive Committee. Except for the Finance Committee and Executive Committee, each committee operates under a charter that has been approved by our board. Each of these charters are also posted on our website at [www.senesco.com](http://www.senesco.com). Our corporate governance guidelines provide that directors are expected to attend the annual meeting of stockholders. All directors except for Dr. Waksal attended the 2008 annual meeting of stockholders.

**Compensation Committee.** Our Compensation Committee was established in July 1999, pursuant to the Compensation Committee Charter. Our Compensation Committee generally makes recommendations concerning salaries and incentive compensation for our management and our employees. The primary responsibilities of our Compensation Committee, as more fully set forth in the Compensation Committee Charter adopted in July 1999 and amended and restated on June 27, 2008, include:

- annually reviewing and approving corporate goals and objectives relevant to CEO compensation;
- reviewing and approving, or recommending for approval by our board, the salaries and incentive compensation of our executive officers;
- preparing the Compensation Committee report, including the Compensation Discussion and Analysis;
- administering our 2008 Incentive Compensation Plan, or similar stock plan adopted by our stockholders; and
- reviewing and making recommendations to our board with respect to director compensation.

Our Compensation Committee is currently comprised of David Rector and John. N. Braca. Mr. Rector currently serves as the chairman of the Compensation Committee. All members of our Compensation Committee are considered independent pursuant to Section 803 of the NYSE Amex Company Guide. Our Compensation Committee held four (4) meetings during Fiscal 2009.

### Compensation Committee Interlocks and Insider Participation

No member of the Compensation Committee is or has been an officer or employee of our company or any of our subsidiaries. In addition, no member of the Compensation Committee had any relationships with us or any other entity that requires disclosure under the proxy rules and regulations promulgated by the SEC and none of our executive officers served on the Compensation Committee or board of any company that employed any member of our board.

**Audit Committee.** Our Audit Committee was established in July 1999. On June 27, 2008, our board adopted an Amended and Restated Audit Committee Charter. The primary responsibilities of our Audit Committee include:

- appointing, approving the compensation of, and assessing the independence of our independent registered public accounting firm;
-

overseeing the work of our independent registered public accounting firm, including through the receipt and consideration of certain reports from our independent registered public accounting firm;

- reviewing and discussing with management and our independent registered public accounting firm our annual and quarterly financial statements and related disclosures;
- monitoring our internal control over financial reporting, disclosure controls and procedures and code of business conduct and ethics;
  - discussing our risk management policies;
- establishing policies regarding hiring employees from our independent registered public accounting firm and procedures for the receipt and retention of accounting related complaints and concerns;
  - meeting independently with independent registered public accounting firm and management; and
- preparing the audit committee report required by SEC rules, which is included on page [\_\_] of this proxy statement.

Our Audit Committee is currently comprised of John N. Braca, David Rector and Rudolf Stalder. Mr. Braca currently serves as the chairman of the Audit Committee. The NYSE Amex currently requires an Audit Committee comprised solely of independent directors. Messrs. Braca, Rector and Stalder are “independent” members of our board as defined in Rule 10A-3 under the Securities Exchange Act of 1934, as amended, or the Exchange Act, and Section 803 of the NYSE Amex Company Guide. In addition, our board of directors has determined that Mr. Braca satisfies the definition of an audit committee “financial expert” as set forth in Item 401(e) of Regulation S-B promulgated by the SEC. Our Audit Committee held four (4) meetings during Fiscal 2009.

#### Review and Approval of Related Person Transactions

Our Audit Committee Charter requires that our Audit Committee review and approve or ratify transactions involving us and any executive officer, director, director nominee, 5% stockholder and certain of their immediate family members, also referred to herein as a related person. The policy and procedures cover any transaction involving a related person, also referred to herein as a related person transaction, in which the related person has a material interest and which does not fall under an explicitly stated exception set forth in the applicable disclosure rules of the SEC.

A related person transaction will be considered approved or ratified if it is authorized by the Audit Committee after full disclosure of the related person’s interest in the transaction. In considering related person transactions, the Audit Committee will consider any information considered material to investors and the following factors:

- the related person’s interest in the transaction;
- the approximate dollar value of the transaction;
- whether the transaction was undertaken in the ordinary course of our business;
- whether the terms of the transaction are no less favorable to us than terms that we could have reached with an unrelated third party; and
  - the purpose and potential benefit to us of the transaction.

Nominating and Corporate Governance Committee. The primary responsibilities of our Nominating and Corporate Governance Committee, as more fully set forth in the Nominating and Corporate Governance Committee Charter and

Corporate Governance Guidelines adopted on October 15, 2004, and amended and restated on June 27, 2008 include:

- identifying individuals qualified to become our board members;

- evaluating and recommending to our board the persons to be nominated for election as directors at any meeting of stockholders and to each of our board's committees;
  - reviewing and making recommendations to our board with respect to management succession planning;
- developing and recommending to our board a set of corporate governance principles applicable to Senesco; and
  - overseeing the evaluation of our board.

Our Nominating and Corporate Governance Committee was formed on September 29, 2004, and it is currently comprised of Messrs. Stalder, Forbes and Quick. Mr. Forbes currently serves as the chairman of the Nominating and Corporate Governance Committee. All members of our Nominating and Corporate Governance Committee are independent, as independence for nominating and corporate governance committee members is defined under Section 803 of the NYSE Amex Company Guide. The Nominating and Corporate Governance Committee had two (2) meetings during Fiscal 2009.

The Nominating and Corporate Governance Committee does not have a specific policy with regard to the consideration of diversity in identifying director nominees. The Nominating and Corporate Governance Committee considers the diversity of the professional experience, education and skill set in identifying the director nominees.

Code of Business Ethics and Conduct. Pursuant to the requirements of Section 406 of the Sarbanes-Oxley Act of 2002 and Section 807 of the NYSE Amex Company Guide, on March 17, 2003, our board adopted a Code of Business Ethics and Conduct, which may also be found on our website at [www.senesco.com](http://www.senesco.com). Our Code of Ethics contains written standards designed to deter wrongdoing and to promote:

- honest and ethical conduct, including the ethical handling of actual or apparent conflicts of interest between personal and professional relationships;
  - full, fair, accurate, timely, and understandable disclosure in reports and documents filed with the SEC;
  - compliance with applicable governmental laws, rules and regulations;
- the prompt internal reporting of violations of our Code of Ethics to an appropriate person or persons identified in our Code of Ethics; and
  - accountability for adherence to our Code of Ethics.

Each of our employees, officers and directors completed a signed certification to document his or her understanding of and compliance with our Code of Ethics.

#### Director Candidates

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

In considering whether to recommend any particular candidate for inclusion in the board's slate of recommended director nominees, our Nominating and Corporate Governance Committee will apply the criteria contained in the



committee's charter. These criteria include the candidate's integrity, business acumen, knowledge of our business and industry, age, experience, diligence, conflicts of interest and the ability to act in the interests of all stockholders. Our Nominating and Corporate Governance Committee does not assign specific weights to particular criteria and no particular criterion is a prerequisite for each prospective nominee. In addition, although we do not have a formal diversity policy, we review diversity as one of the criteria for nomination. We believe that the backgrounds and qualifications of our directors, considered as a group, should provide a composite mix of experience, knowledge and abilities that will allow the board to fulfill its responsibilities.

Stockholders may recommend individuals to our Nominating and Corporate Governance Committee for consideration as potential director candidates by submitting their names, together with appropriate biographical information and background materials and a statement as to whether the stockholder or group of stockholders making the recommendation has beneficially owned more than 5% of our common stock for at least one (1) year as of the date such recommendation is made, to: Nominating and Corporate Governance Committee, c/o Corporate Secretary, Senesco Technologies, Inc., 303 George Street, Suite 420, New Brunswick, New Jersey 08901. Assuming that appropriate biographical and background material has been provided on a timely basis, the committee will evaluate stockholder-recommended candidates by following substantially the same process, and applying substantially the same criteria, as it follows for candidates submitted by others.

#### Communicating with our Independent Directors

Our board will give appropriate attention to written communications that are submitted by stockholders, and will respond if and as appropriate. The Chairman of the Board, with the assistance of our outside counsel, is primarily responsible for monitoring communications from our stockholders and for providing copies or summaries to the other directors as he considers appropriate. Communications are forwarded to all directors if they relate to important substantive matters and include suggestions or comments that the Chairman considers to be important for the directors to know. In general, communications relating to corporate governance and long-term corporate strategy are more likely to be forwarded than communications relating to ordinary business affairs, personal grievances and matters as to which we tend to receive repetitive or duplicative communications.

Stockholders who wish to send communications on any topic to our board should address such communications to: Board of Directors, c/o Corporate Secretary, Senesco Technologies, Inc., 303 George Street, Suite 420, New Brunswick, New Jersey 08901.

#### Compensation of Directors

##### Equity Grants Fiscal 2009 and Fiscal 2010:

We do not automatically grant options or other equity to our board. Our Compensation Committee reviews the equity program each year with its compensation consultant and determines the appropriate level of the equity awards as disclosed above. We provide reimbursement to directors for reasonable and necessary expenses incurred in connection with attendance at meetings of the board of directors and other Senesco business.

In accordance with a resolution unanimously approved by our board on November 19, 2008, we granted to our non-employee board members, options to purchase shares of our common stock, pursuant to and in accordance with our 1998 Stock Plan, as consideration for their service on our board through June 30, 2008, or Fiscal 2008 as follows:

| Director           | Number of Shares<br>Underlying<br>Options Granted | Grant Date           | Exercise Price<br>Per Share |
|--------------------|---|----------------------|-----------------------------|
| Rudolf Stalder     | 80,000  | November 19,<br>2008 | \$ 0.60                     |
| Christopher Forbes | 50,000  | November 19,<br>2008 | \$ 0.66                     |
| Thomas C. Quick    | 40,000  | November 19,<br>2008 | \$ 0.60                     |
| John N. Braca      | 70,000  | November 19,<br>2008 | \$ 0.60                     |

|              |        |                      |    |      |
|--------------|--------|----------------------|----|------|
| David Rector | 70,000 | November 19,<br>2008 | \$ | 0.60 |
|--------------|--------|----------------------|----|------|

| Director          | Number of Shares<br>Underlying<br>Options Granted | Grant Date           | Exercise Price<br>Per Share |
|-------------------|---|----------------------|-----------------------------|
| Jack Van Hulst(1) | 40,000  | November 19,<br>2008 | \$ 0.60                     |

(1) Mr. Van Hulst became an employee of the Company effective November 16, 2009.

Except for options granted to Christopher Forbes, the options granted to the board have (i) an exercise price equal to the fair market value of our common stock on the date of grant, (ii) have a term of ten (10) years, and (iii) are exercisable as follows: (y) one-half (1/2) of the options were exercisable as of the date of grant; and (z) one-half (1/2) of the options shall become exercisable on the first anniversary of the date of grant. The options granted to Christopher Forbes have an exercise price equal to 110% of the fair market value of our common stock on the date of grant and have a term of five (5) years.

Commencing in Fiscal 2009, after review and consultation with the Compensation Committee's compensation consultant, we implemented a new compensation plan for our directors pursuant to which we pay to each director cash compensation as consideration for their service on our board as follows:

|  |             |
|--|-------------|
| Annual (Base) Retainer   | \$ 10,000   |
| Per Scheduled Board Meeting Fee                                    | \$ 1,500(1) |
| Per Committee Meeting Fee  | \$ 750(2)   |
| Additional Annual Retainer:  |             |
| Chairman of the Board  | \$ 5,000    |
| Audit Committee Chair  | \$ 3,500    |
| Compensation Committee Chair                                       | \$ 3,500    |
| Nominating and Corporate Governance Committee Chair                | \$ 1,500    |
| Non-Chair Committee Member Additional Retainer<br>(All Committees) | \$ 1,000    |
| Maximum Per Diem For All Meetings                                  | \$ 2,000    |

(1) \$750 for telephonic meetings (less than 30 minutes: \$375).

(2) \$375 for telephonic meetings.

Such cash compensation is paid in quarterly increments. A director may elect, provided such election is made prior to the time the cash award is made, to receive, in lieu of such cash payments, either (i) restricted stock units, or RSU's, in an amount equal to such cash award or (ii) twice the number of options in an amount equal to such cash award. Such election to receive (y) cash or (z) equity in the form of RSU's or options applies for the entire year. The directors have all elected to receive options in lieu of cash for Fiscal 2010, except for Messrs. Braca and Rector, who have elected to receive their retainer fees in cash and their meeting fees in options, and Mr. Isabelle, who has elected to receive his fees in cash. The RSU's or options are granted effective two (2) days following the filing of our quarterly reports on Form 10-Q. The exercise price will be the closing price on the day before the grant date.

The board also approved a plan for Fiscal 2009 whereby the outside directors were granted the following options which were granted two (2) trading days after we filed our Form 10-Q for the first quarter of Fiscal 2010, or on November 19, 2009. Except for Christopher Forbes, the exercise price was the closing price on the day before the grant date, or \$0.29. The options granted to Christopher Forbes have an exercise price equal to 110% of the fair market value of our common stock on the date of grant, or \$0.32, and have a term of five (5) years.

| Director               | Total # of<br>Options<br>Granted |
|------------------------|----------------------------------|
| Rudolf Stalder         | 70,000                           |
| Christopher Forbes     | 40,000                           |
| Thomas C. Quick        | 25,000                           |
| John N. Braca          | 50,000                           |
| David Rector           | 50,000                           |
| Jack Van Hulst(1)      | 30,000                           |
| Harlan W. Waksal, M.D. | 70,000                           |
| Warren J. Isabelle     | 25,000                           |

(1) Mr. Van Hulst was employed by the Company effective November 16, 2009.

Such grants vested one-half (1/2) upon the date of grant and the remaining one-half (1/2) will vest one (1) year from the date of grant.

#### Director Compensation

The table below shows the compensation paid or awarded to our independent directors during the fiscal year ended June 30, 2009.

| Name<br>(a)               | Fees<br>Earned<br>or Paid in<br>Cash (\$)<br>(b) | Stock<br>Awards<br>(\$)<br>(c) | Option<br>Awards (1)<br>(\$)<br>(d) | Non-Equity<br>Incentive<br>Plan<br>Compensation<br>(\$)<br>(e) | Change in<br>Pension<br>Value and<br>Nonqualified<br>Deferred<br>Compensation<br>Earnings<br>(\$)<br>(f) | All Other<br>Compensation<br>(\$)<br>(g) | Total (\$)<br>(h) |
|---------------------------|--|--------------------------------|-------------------------------------|--|--|--|-------------------|
|                           |  |                                |                                     |  |  |  |                   |
| Rudolf Stalder            | —  | —                              | \$ 66,114                           | —  | —  | —  | \$ 66,114         |
| Christopher Forbes        | —  | —                              | \$ 41,946                           | —  | —  | —  | \$ 41,946         |
| Thomas C. Quick           | —  | —                              | \$ 40,427                           | —  | —  | —  | \$ 40,427         |
| John N. Braca             | \$ 10,875  | —                              | \$ 46,559                           | —  | —  | —  | \$ 57,434         |
| David Rector              | \$ 10,875  | —                              | \$ 46,559                           | —  | —  | —  | \$ 57,434         |
| Jack Van Hulst(3)         | —  | —                              | \$ 43,673                           | —  | —  | —  | \$ 43,673         |
| Harlan W. Waksal,<br>M.D. | —  | —                              | \$ 11,519                           | —  | —  | —  | \$ 11,519         |
| Warren J.<br>Isabelle(2)  | —  | —                              | —                                   | —  | —  | —  | —                 |

(1) Represents the aggregate grant date fair value for stock options granted in the 2009 fiscal year accounted for in accordance with the FASB ASC Topic 718. For information regarding assumptions underlying the FASB ASC

Topic 718 valuation of equity awards, see Note 7 of the Consolidated Financial Statements in our Annual Report on Form 10-K/A for the fiscal year ended June 30, 2009.

- (2) Mr. Isabelle became a member of our board in June 2009.
- (3) Mr. Van Hulst was employed by the Company effective November 16, 2009.

| Director               | Option Grant Date | Exercise Price | # of Shares Associated With Charge | Compensation Cost in Fiscal 2009 |
|------------------------|-------------------|----------------|------------------------------------|----------------------------------|
| Rudolf Stalder         | 5/06/2009         | \$ 0.59        | 23,729                             | \$ 10,915                        |
|                        | 2/20/2009         | \$ 0.47        | 28,191                             | \$ 10,149                        |
|                        | 11/19/2008        | \$ 0.60        | 98,334                             | \$ 45,050                        |
| Christopher Forbes     | 5/06/2009         | \$ 0.65        | 18,077                             | \$ 6,508                         |
|                        | 2/20/2009         | \$ 0.52        | 23,404                             | \$ 7,021                         |
|                        | 11/19/2008        | \$ 0.66        | 64,584                             | \$ 28,417                        |
| Thomas C. Quick        | 5/06/2009         | \$ 0.59        | 16,949                             | \$ 7,797                         |
|                        | 2/20/2009         | \$ 0.47        | 22,340                             | \$ 8,042                         |
|                        | 11/19/2008        | \$ 0.60        | 53,750                             | \$ 24,588                        |
| John N. Braca          | 5/06/2009         | \$ 0.59        | 11,441                             | \$ 5,263                         |
|                        | 2/20/2009         | \$ 0.47        | 12,766                             | \$ 4,596                         |
|                        | 11/19/2008        | \$ 0.60        | 80,000                             | \$ 36,700                        |
| David Rector           | 5/06/2009         | \$ 0.59        | 11,441                             | \$ 5,263                         |
|                        | 2/20/2009         | \$ 0.47        | 12,766                             | \$ 4,596                         |
|                        | 11/19/2008        | \$ 0.60        | 80,000                             | \$ 36,700                        |
| Jack Van Hulst(1)      | 5/06/2009         | \$ 0.59        | 20,763                             | \$ 9,551                         |
|                        | 2/20/2009         | \$ 0.47        | 21,277                             | \$ 7,660                         |
|                        | 11/19/2008        | \$ 0.60        | 57,916                             | \$ 26,462                        |
| Harlan W. Waksal, M.D. | 5/06/2009         | \$ 0.59        | 19,492                             | \$ 8,966                         |
|                        | 2/20/2009         | \$ 0.47        | 7,092                              | \$ 2,553                         |
| Warren J. Isabelle     | —                 | —              | —                                  | —                                |

(1) Mr. Van Hulst was employed by the Company effective November 16, 2009.

As described above, on November 19, 2008, February 20, 2009, and May 6, 2009, each of our non-employee directors received options to purchase shares of our common stock pursuant to the provisions of the 1998 and 2008 Stock Plans. The options have an exercise price of \$0.60 per share, \$0.47 per share and \$0.59 per share, respectively, the fair market value of the common stock on the grant dates (except for the grant to Christopher Forbes, which have an exercise price of \$0.66 per share, \$0.52 per share and \$0.65 per share, respectively (110% of the fair market value of the common stock on the grant date).

The following table shows the total number of shares of our common stock subject to option awards (vested and unvested) for each non-employee director as of June 30, 2009:

| Director               | Total # of Options Outstanding |
|------------------------|--------------------------------|
| Rudolf Stalder         | 750,254                        |
| Christopher Forbes     | 356,065                        |
| Thomas C. Quick        | 293,039                        |
| John N. Braca          | 274,207                        |
| David Rector           | 304,207                        |
| Jack Van Hulst(1)      | 149,956                        |
| Harlan W. Waksal, M.D. | 26,584                         |
| Warren J. Isabelle     | —                              |

(1) Mr. Van Hulst was employed by the Company effective November 16, 2009.

Dr. Thompson has received compensation for providing research and development management services to us. See “Certain Relationships and Related Transactions” which sets forth the details of the compensation for Dr. Thompson.



In October, 2009, the Committee granted the following options to the directors for their service during Fiscal 2009. Such grants were effective two (2) trading days after we filed our quarterly report on Form 10-Q for the quarter ended September 30, 2009, or November 19, 2009:

| Director               | Total # of Options<br>Granted |
|------------------------|-------------------------------|
| Rudolf Stalder         | 70,000                        |
| Christopher Forbes     | 40,000                        |
| Thomas C. Quick        | 25,000                        |
| John N. Braca          | 50,000                        |
| David Rector           | 50,000                        |
| Jack Van Hulst         | 30,000                        |
| Harlan W. Waksal, M.D. | 70,000                        |
| Warren J. Isabelle     | 25,000                        |

Such grants vested one-half (1/2) upon the date of grant and the remaining one-half (1/2) will vest one (1) year from the date of grant. The exercise price is the closing price on the day before the grant date, or \$0.39 and have a term of ten (10) years. The options granted to Christopher Forbes have an exercise price equal to 110% of the fair market value of our common stock on the date of grant and have a term of five (5) years.

Further, in consideration for his service on a Finance Committee of the board, Mr. Braca will receive additional board compensation in the amount of \$6,000 a month as well as 10,000 options per month to purchase shares of the Company's common stock. Such options shall vest on the last business day of the fiscal quarter in accordance with the terms of the Company's 2008 Incentive Compensation Plan, but shall not be issued until at least two (2) trading days after the Company issues its financial results for such quarter. The Committee further indicated that such compensation shall be in addition to any other fees received by Mr. Braca for his service on the Board and its other committees.

#### Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Exchange Act requires a company's directors, officers and stockholders who beneficially own more than 10% of any class of equity securities of the company registered pursuant to Section 12 of the Exchange Act, collectively referred to herein as the Reporting Persons, to file initial statements of beneficial ownership of securities and statements of changes in beneficial ownership of securities with respect to the company's equity securities with the SEC. All Reporting Persons are required by SEC regulation to furnish us with copies of all reports that such Reporting Persons file with the SEC pursuant to Section 16(a).

Based solely on our review of the copies of such forms received by us and upon written representations of the Reporting Persons received by us, we believe that there has been compliance with all Section 16(a) filing requirements applicable to our Reporting Persons except that Forms 4 which were due in connection with May 6, 2009 option grants to our independent directors were filed on November 19, 2010 by each of Harlan W. Waksal, John N. Braca, Jack Van Hulst, Christopher Forbes, Rudolf Stalder, Thomas C. Quick and David Rector.

## EXECUTIVE OFFICERS

The following table identifies our current executive officers:

| Name                    | Age | Capacities in Which Served                                      | In Current Position Since |
|-------------------------|-----|---|---------------------------|
| Jack Van Hulst          | 70  | President, Chief Executive Officer, Secretary and Director      | November 2009             |
| John E. Thompson, Ph.D. | 68  | Executive Vice President and Chief Scientific Officer, Director | July 2004                 |
| Joel P. Brooks(1)       | 51  | Chief Financial Officer and Treasurer                           | December 2000             |
| Richard Dondero(2)      | 60  | Vice President of Research and Development                      | July 2004                 |

(1) Mr. Brooks was appointed our Chief Financial Officer and Treasurer in December 2000. From September 1998 until November 2000, Mr. Brooks was the Chief Financial Officer of Blades Board and Skate, LLC, a retail establishment specializing in the action sports industry. Mr. Brooks was Chief Financial Officer from 1997 until 1998 and Controller from 1994 until 1997 of Cable and Company Worldwide, Inc. He also held the position of Controller at USA Detergents, Inc. from 1992 until 1994, and held various positions at several public accounting firms from 1983 through 1992. Mr. Brooks received his Bachelor of Science degree in Commerce with a major in Accounting from Rider University in February 1983. Mr. Brooks also serves on the board of directors and is chairman of the audit committee of USA Technologies, Inc.

(2) Mr. Dondero was appointed our Vice President of Research and Development in July 2004. From July 2002 until July 2004, Mr. Dondero was a Group Leader in the Proteomics Reagent Manufacturing division of Molecular Staging, Inc., a biotech firm engaged in the measurement and discovery of new biomarkers. From 1985 through June 2001, Mr. Dondero served in several roles of increasing responsibility through Vice President of Operations and Product Development at Cistron Biotechnology, Inc. From 1977 through 1985, Mr. Dondero served as a senior scientist at Johnson and Johnson, and from 1975 through 1977, as a scientist at Becton Dickinson. Mr. Dondero received his Bachelor of Arts degree from New Jersey State University in 1972 and his Master of Science degree from Seton Hall University in 1976.

None of our current executive officers are related to any other executive officer or to any of our directors. Our executive officers are elected annually by our board and serve until their successors are duly elected and qualified.

## COMPENSATION DISCUSSION AND ANALYSIS

This Compensation Discussion and Analysis explains the principles underlying our compensation policies and decisions and the principal elements of compensation paid to our executive officers during Fiscal 2009. Our Chief Executive Officer, Chief Financial Officer and all of our other executive officers included in the Summary Compensation Table will be referred to as the “named executive officers” for purposes of this discussion.

### Compensation Objectives and Philosophy

The Compensation Committee, also referred to herein as the Committee, of the board is responsible for the following:

- to discharge the board’s responsibilities relating to compensation of our directors and named executive officers;
- to have overall responsibility for approving and evaluating our director and officer compensation plans, policies and programs;
- to have responsibility for producing an annual report on executive compensation for inclusion in our proxy statement; and
- to review and discuss with Senesco management the Compensation Discussion & Analysis, which is included in Senesco’s annual proxy statement.

As part of this process, the Committee seeks to accomplish the following objectives with respect to our executive compensation programs:

- to motivate, recruit and retain executives capable of meeting our strategic objectives;
- to provide incentives to ensure superior executive performance and successful financial results for us; and
- to align the interests of executives with the long-term interests of our stockholders.

The Committee seeks to achieve these objectives by:

- linking a substantial portion of compensation to our achievement of long-term and short-term financial objectives and the individual’s contribution to the attainment of those objectives;
- providing long-term equity-based incentives and encouraging direct share ownership by executives with the intention of providing incentive-based compensation to encourage a long-term focus on company profitability and stockholder value; and
- understanding the marketplace and establishing a compensation structure that is adjusted for our position in the marketplace and our current financial condition and limited capital resources.

### Setting Executive Compensation

In Fiscal 2008 and Fiscal 2009, the Committee engaged J. Richard and Co., also referred to herein as J. Richard, a nationally recognized compensation consulting firm, to provide competitive compensation data and general advice on our compensation programs and policies for our Chief Executive Officer, and J. Richard was available for consultation with the Committee to discuss the compensation programs for our other named executive

officers. During Fiscal 2008 and Fiscal 2009, J. Richard performed a market analysis of the compensation paid by comparable companies and provided the Committee with recommended compensation ranges for the Chief Executive Officer based on the competitive data. In addition, the former Chief Executive Officer provided recommendations to the Committee with respect to the compensation packages for those other named executive officers for Fiscal 2009, and the Committee also reviewed the former Chief Executive Officer's recommendation against compensation paid by comparable companies.

For Fiscal 2008 and 2009, the Committee's objective to target each component of compensation listed below to be competitive with comparable positions at peer group companies, and to target the total annual compensation of each named executive officer at the appropriate level for comparable positions at the competitive peer group companies. For Fiscal 2008, our list of peer group companies was as follows: Introgen Therapeutics, Inc.; Kosan BioSciences, Inc.; Avalon Pharmaceuticals, Inc.; Atherogenics, Inc.; Keryx BioPharmaceuticals, Inc.; Targeted Genetics Corporation; Neopharm, Inc.; Genta, Inc.; and Vion Pharmaceuticals, Inc.

During the current compensation review process, the Committee elected not to engage an independent compensation consultant. This decision was based on the Committee's belief that prior years analysis did not closely enough parallel the scope of our business relative to the breadth of operations in general, executive officers scope of duties and responsibilities, position in the life cycle, financial responsibilities, capitalization and size of management staff. The Committee also met with the former Chief Executive Officer, Bruce C. Galton, who agreed with the approach not to engage an outside consultant and agreed to provide a review of management's performance against objectives for the period to assist in ascertaining equity award levels.

The Committee elected to identify various companies in the biotech sector we felt were somewhat close in scope of operation to the Company. It became evident, as in prior years, that due to the key banner points listed above (the breadth of operations in general, executive officers scope of duties and responsibilities, position in the life cycle, financial responsibilities, capitalization and size of management staff) it is very difficult to identify such public entities for comparative purposes. For Fiscal 2009, the companies we elected to evaluate were as follows: Adolor Corporation (ADLR); MDRNA Inc. (MRNA); Anesiva Inc. (ANSV); Santarus Inc. (SNTS); Sequenom, Inc.(SQNM); Cubist (CBST); Lexicon (LXX); and Targacept, Inc. (TRGT).

However, in determining the compensation of each named executive officer, the Committee also considers a number of other factors, including Senesco's recent performance and the named executive officer's individual performance, the former Chief Executive Officer's recommendations and the importance of the executive's position and role in relation to execution of the Company's strategic plan. There is no pre-established policy for allocation of compensation between cash and non-cash components or between short-term and long-term components. Instead, the Committee determines the mix of compensation for each named executive officer based on its review of the competitive data, its subjective analysis of that individual's performance and contribution to our financial performance, the financial strength and outlook of the Company and, most of all, what is considered fair and reasonable based on the scope of operations and responsibilities. For the former Chief Executive Officer, for Fiscal 2009, the Committee set his performance targets and compensation levels based upon the input from the Committee's analysis and from the former Chief Executive Officer. For other named executive officers, the Committee sets performance targets and compensation levels after receiving recommendations from the former Chief Executive Officer and reviewing those recommendations with the full Committee.

In selecting companies to survey for such compensation purposes, the Compensation Committee considered many factors not directly associated with the stock price performance of those companies, such as geographic location, development stage, organizational structure and market capitalization. For this reason, there is not a meaningful correlation between the companies included within the peer group identified for comparative compensation purposes and the companies included within the RDG Micro Biotechnology Index.

#### Components of Compensation

For Fiscal 2008, our executive compensation program included the following components:

- base salary;



- annual short-term equity incentives;
- long-term equity incentive awards; and
- change in control and other severance arrangements.

For Fiscal 2009, our executive compensation program included the following components:

- base salary;
- annual short-term equity incentives;
- a continuation of the long-term equity incentive program; and
- change in control and other severance arrangements.

Currently, for Fiscal 2010, our executive compensation program includes the following components:

- base salary;
- annual short-term equity incentives; and
- a continuation of the long-term equity incentive program.

The Committee seeks to align the named executive officers' and stockholders' interests in a pay for performance environment. On average, a large portion of an executive officer's total compensation is at risk, with the amount actually paid tied to achievement of pre-established objectives and individual goals.

#### Base Salary

In General – It is the Committee's objective to set a competitive rate of annual base salary or consulting fees for each named executive officer. The Committee believes competitive base salaries are necessary to attract and retain top quality executives, since it is common practice for public companies to provide their executive officers with a guaranteed annual component of compensation that is not subject to performance risk. However, the Committee recognizes that Senesco is still a development stage company, with little to no revenue currently and believes that developing too rigid of a compensation structure can become detrimental to the progress of the company.

When compared to comparable positions at the competitive peer group companies, it is the Committee's objective to target the base compensation level of executive officers below the 50th percentile because of our current financial position. Historically the compensation levels for our executive officers has been below the 25th percentile of competitive peer group companies. However, in determining the compensation of each executive officer, the Committee also considers a number of other factors, including recent Company and individual performance and the CEO's recommendations. There is no pre-established policy for allocation of compensation between cash and non-cash components or between short-term and long-term components. Instead, the Committee determines the mix of compensation for each executive officer based on its review of the competitive data and its subjective analysis of that individual's performance and contribution to the Company's financial performance.





Base Salary for Fiscal 2009 – For Fiscal 2009, each named executive officer’s salary, except for the President and Chief Executive Officer and the Executive Vice-President and Chief Scientific Officer, was increased to cover cost of living increases. The table below shows annual Fiscal 2009 and Fiscal 2008 base salary or consulting rates for each named executive officer:

| Name                  | Title   | 2008 Salary  | 2009 Salary (1) | % Increase |
|-----------------------|---|--------------|-----------------|------------|
| Bruce C. Galton (3)   | President and Chief Executive Officer                 | \$ 255,000   | \$ 255,000      | 0.0%       |
| John E. Thompson      | Executive Vice-President and Chief Scientific Officer | \$ 65,000(2) | \$ 65,000(2)    | 0.0%       |
| Sascha P. Fedyszyn(4) | Vice-President of Corporate Development and Secretary | \$ 101,400   | \$ 107,500      | 6.0%       |
| Joel P. Brooks        | Chief Financial Officer and Treasurer                 | \$ 150,800   | \$ 160,000      | 6.1%       |
| Richard Dondero       | Vice-President of Research and Development            | \$ 130,000   | \$ 143,000      | 10.0%      |

(1) Annual salary increase became effective July 1, 2008.

(2) Represents consulting fees paid under a consulting agreement.

(3) Mr. Galton resigned from the Company on November 16, 2009.

(4) Mr. Fedyszyn resigned from the Company on February 1, 2010.

There were no increases in base salary approved for Bruce C. Galton and John E. Thompson as the Compensation Committee deemed the scope of their resource management (i.e. personnel, operating budgets, and outside relationships) were commensurate, fair and reasonable relative to their current base salary rate.

Messrs. Fedyszyn and Brooks received approximately a 6% increase in base salary to (i) reflect a cost of living adjustment and (ii) their relative performance. Mr. Dondero also received approximately a 10% increase in base salary to reflect each of the foregoing plus an additional \$5,000 range adjustment to bring his salary more in line with the other named executive officers. The Committee wishes to provide additional compensation to all of the named executive officers, including the chief executive officer, through the development of incentive programs based on the named executives performance and attainment of stated objectives that enhance shareholder value in order to (i) link a substantial portion of their compensation to the achievement of short-term and long-term objectives and (ii) to save cash given our limited capital resources.

During the course of the year, the Committee determined that we could in no manner financially support the terms of the various employment agreements in effect. The Committee issued a notice of non-renewal to all named executive officers in effect not renewing the employment agreements moving forward following the various upcoming anniversary dates of each agreement. We anticipate that each of the named executive officers will, following the expiration of their employment agreements, continue as employees on an “at will basis”, meaning that either we or the employees may discontinue their employment with or without notice or cause. The employees’ respective salaries, duties and titles will remain unchanged.

Base Salary for Fiscal 2010 – For Fiscal 2010, after a review of the factors discussed above, each named executive officer’s salary was not increased.

Effective November 16, 2009, Jack Van Hulst, a current member of our board of directors, assumed the role of President and Chief Executive Officer of Senesco. We have not and do not anticipate entering into a new employment agreement with Mr. Van Hulst, however, the Compensation Committee and independent members of the board determined to pay to Mr. Van Hulst a monthly salary in the amount of \$5,000 and to grant to Mr. Van Hulst options to purchase shares of the our common stock, par value \$0.01, in the amount of 25,000 options per month, pursuant to our 2008 Incentive Compensation Plan, which such options shall vest immediately upon each issuance. Such options shall be granted quarterly, two (2) trading days following the Company's filing of its quarterly report for the respective quarterly period.

Annual Bonuses for Fiscal 2009 and Fiscal 2010 – Bonuses are determined at the discretion of the board based upon the recommendation of the Committee. There were no cash bonuses granted during Fiscal 2009. The Committee is currently reviewing whether or not there will be cash bonuses granted for Fiscal 2010.

#### Short Term Incentive Equity Awards

In General – A portion of each named officer's compensation is provided in the form of short-term equity awards. It is the Committee's belief that properly structured equity awards are an effective method of aligning the short-term interests of our named executive officers with those of our stockholders.

Equity awards were made in the form of incentive stock options. The Committee has followed a grant practice of tying equity awards to its annual calendar year-end review of individual performance, its assessment of our performance and our operational results.

Restricted Stock Unit and Incentive Stock Option Short-Term Incentive Plan for Fiscal 2008 – Pursuant to the Company's Restricted Stock Unit and Incentive Stock Option Short-Term Incentive Plan, or STIP, covering Fiscal 2008, equity grants to our named executive officers were in the form of restricted stock units, also referred to herein as RSU's, and incentive stock options, also referred to herein as ISO's. Each RSU and ISO entitles the recipient to receive one (1) share of our common stock upon vesting or upon a designated date or event following such vesting. Each ISO was granted with an exercise price of \$0.99. Each named executive had the option of receiving their RSU grant in the form of RSU's or ISO's. If a named executive chose to receive ISO's in lieu of RSU's, then such named executive was granted twice as many ISO's, due to the \$0.99 exercise price of such ISO's. All RSU's and ISO's were awarded together and were distributed in November 2008 after evaluation of the performance objectives identified further below under the heading STIP Performance Objectives, or SPO's.

The Committee will follow a grant practice of tying equity awards to its annual year-end review of individual performance, its assessment of our performance and our financial results. Accordingly, it is expected that any equity awards to the named executive officers will be made on an annual basis promptly after the release of our financial results. The Committee has established short-term incentive grant guidelines for eligible named executive officers each year based on competitive annual grant data provided by management's compensation consultant and by J. Richard, the Committee's compensation consultant.

The total amount of RSU's and ISO's in the STIP pool awarded to our named executive officers was 237,300 shares, which consisted of 112,700 RSU's and 124,600 ISO's, representing 1.4% of the outstanding shares as of July 1, 2007. The specific amount of RSU's and ISO's awarded to each individually named executive officer relating to the performance objectives were based on (i) the functional areas assessed by the underlying detailed objectives of each named executive officer, (ii) the weight of each of the functions of each named executive officer and (iii) the contribution to each function by each named executive officer.

The amount and percentage of the RSU's and ISO's awarded to all the named executive officers as a whole for their contributions to each of the STIP Performance Objectives were as follows:

| STIP Performance Objective   | Percentage of STIP RSU and ISO Award Pool | Total Amount of RSU's and ISO's Awarded As a Whole to All Named Executive Officers per SPO |
|--|---|--|
| First STIP Performance Objective.<br>Contributions Relating to Cancer Target                         | 45%                                       | 126,000  |
| Second STIP Performance Objective.<br>Contributions Relating to Financing                            | 25%                                       | 45,938   |
| Third STIP Performance Objective.<br>Contributions Relating to Licensing and Support                 | 15%                                       | 32,812   |
| Fourth STIP Performance Objective.<br>Contributions Relating to Intellectual Property Administration | 4%  | 11,200   |
| Fifth STIP Performance Objective.<br>Contributions Relating to Investor Relations                    | 3%  | 5,775  |
| Sixth STIP Performance Objective.<br>Contributions Relating to Website Administration                | 1%  | 1,925  |
| Seventh STIP Performance Objective.<br>Contributions Relating to Audits and Securities Filings       | 5%  | 9,625  |
| Eighth STIP Performance Objective.<br>Contributions Relating to the American Stock Exchange Duties   | 1%  | 1,750  |
| Ninth STIP Performance Objective.<br>Contributions Relating to the Future Financing Plan             | 1%  | 2,275  |

Each named executive officer eligible to receive an award pursuant to the STIP was required to be employed by the Company upon the vesting date in November 2008, also referred to herein as the Vesting Date. If a named executive officer was no longer employed by the Vesting Date, then such named executive officer's respective RSU or ISO award tied to such STIP Performance Objective would be forfeited. All named executive officers were employed on the Vesting Date. The Committee shall have the sole discretion to reinstate any eliminated portion or segment of a STIP Performance Objective award or that portion of a STIP Performance Objective award for an award to a successor to the STIP Performance Objectives.

Subject to the preceding paragraph, the approximate individual amounts and percentages of RSU and ISO awards to the named executive officers were as follows:

| Name  | Bruce C. Galton                       | Joel P. Brooks                        | Sascha P. Fedyszyn                  | John E. Thompson                                      | Richard Dondero                            |     |
|---|---------------------------------------|---------------------------------------|-------------------------------------|---|--|-----|
| Title   | President and Chief Executive Officer | Chief Financial Officer and Treasurer | Corporate Development and Secretary | Executive Vice-President and Chief Scientific Officer | Vice-President of Research and Development |     |
| Type of Award   | RSU                                   | RSU                                   | RSU                                 | RSU   | RSU  |     |
| Percentage of 126,000 RSU's and ISO's Awarded for First SPO     | 20%                                   | 10%                                   | 10%                                 | 25%   | 35%  |     |
| Number of RSU's and ISO's Awarded for the First SPO             | 15,750                                | 7,875                                 | 7,875                               | 39,376  | 55,124                                     |     |
| Percentage of 45,938 RSU's and ISO's Awarded for the Second SPO | 45%                                   | 45%                                   | 5%                                  | 0%  | 5%   |     |
| Number of RSU's and ISO's Awarded for the Second SPO            | 19,687.5                              | 19,687.5                              | 2,188                               | 0   | 4,375                                      |     |
| Percentage of 32,812 RSU's and ISO's Awarded for the Third SPO  | 35%                                   | 5%                                    | 35%                                 | 15%   | 10%  |     |
| Number of RSU's and ISO's Awarded for the Third SPO             | 9,187.5                               | 1,312.5                               | 9,187                               | 7,875   | 5,250                                      |     |
| Percentage of 11,200 RSU's and ISO's Awarded for the Fourth SPO | 10%                                   | 0%                                    | 30%                                 | 30%   | 30%  |     |
| Number of RSU's and ISO's Awarded for the Fourth SPO            | 700                                   | 0                                     | 2,100                               | 4,200   | 4,200                                      |     |
| Percentage of 5,775 RSU's and ISO's Awarded for the Fifth SPO   | 30%                                   | 30%                                   | 30%                                 | 0%  | 10%  |     |
| Number of RSU's and ISO's Awarded for the Fifth SPO             | 1,575                                 | 1,575                                 | 1,575                               | 0   | 1,050                                      |     |
| Percentage of 1,925 RSU's and ISO's Awarded for the Sixth SPO   | 10%                                   | 10%                                   | 70%                                 | 0%  | 10%  |     |
| Number of RSU's and ISO's Awarded for the Sixth SPO             |                                       | 175                                   | 175                                 | 1,225   | 0  | 350 |
| Percentage of 9,625 RSU's and ISO's Awarded for the Seventh SPO |                                       | 20%                                   | 60%                                 | 10%   | 5%   | 5%  |
| Number of RSU's and ISO's Awarded for the Seventh SPO           |                                       | 1,750                                 | 5,250                               | 875   | 875  | 875 |
| Percentage of 1,750 RSU's and ISO's Awarded for the Eighth SPO  |                                       | 50%                                   | 50%                                 | 0%  | 0%   | 0%  |
| Number of RSU's and ISO's Awarded for the Eighth SPO            |                                       | 875                                   | 875                                 | 0   | 0  | 0   |
|   |                                       | 30%                                   | 30%                                 | 10%   | 10%  | 20% |

Percentage of 2,275 RSU's and ISO's  
Awarded for the Ninth SPO

|   |        |        |        |        |        |
|---|--------|--------|--------|--------|--------|
| Number of RSU's and ISO's Awarded for<br>the Ninth SPO        | 525    | 525    | 175    | 350    | 700    |
| Total RSU's and ISO's Awarded                                 | 50,225 | 37,275 | 25,200 | 52,676 | 71,924 |
| Percentage of 237,300 RSU's and ISO's<br>Awarded for All SPOs | 29%    | 21%    | 14%    | 15%    | 21%    |

In October 2008, the Committee determined that the executive officers had achieved the previously granted short-term performance milestones, and accordingly, determined to vest, effective two (2) trading days following the Company's filing of its quarterly report on Form 10-Q for the quarter ended September 30, 2008, the foregoing RSUs/options as follows:

- Mr. Galton received 50,255 RSUs;
- Mr. Brooks received 37,275 RSUs;
- Mr. Fedyszyn received 25,200 RSU;
- Dr. Thompson received 52,676 options; and
- Mr. Dondero received 71,924 options.

Restricted Stock Unit and Incentive Stock Option Short-Term Incentive Plan for Fiscal 2009 – Pursuant to the Company’s Restricted Stock Unit and Incentive Stock Option Short-Term Incentive Plan, or STIP, covering Fiscal 2009, equity grants to our named executive officers were in the form of restricted stock units, also referred to herein as RSU’s, and incentive stock options, also referred to herein as ISO’s. The RSU’s and options were granted effective two (2) days following the filing of our quarterly report on Form 10-Q for the quarter ended September 30, 2008. Each ISO will have an exercise price equal to the closing price on the day prior to the grant date, or \$.60. Each RSU and ISO entitles the recipient to receive one (1) share of our common stock upon vesting or upon a designated date or event following such vesting. Each named executive had the option of receiving their RSU grant in the form of RSU’s or ISO’s. If a named executive chose to receive ISO’s in lieu of RSU’s, then such named executive will be granted twice as many ISO’s. All RSU’s and ISO’s will be awarded together and will be available for distribution upon evaluation of performance objectives that have been identified further below under the heading STIP Performance Objectives, or SPO’s.

The Committee will follow a grant practice of tying equity awards to its annual year-end review of individual performance, its assessment of our performance and our financial results. Accordingly, it is expected that any equity awards to the named executive officers will be made on an annual basis promptly after the release of our financial results. The Committee has established short-term incentive grant guidelines for eligible named executive officers each year based on competitive annual grant data provided by management’s compensation consultant and by J. Richard, the Committee’s compensation consultant.

The total amount of RSU’s and ISO’s in the STIP pool awarded to our named executive officers was 264,000 shares, which consisted of 136,000 RSU’s and 128,000 ISO’s, representing 1.4% of the outstanding shares as of July 1, 2008. The specific amount of RSU’s and ISO’s awarded to each individually named executive officer relating to the performance objectives are based on (i) the functional areas assessed by the underlying detailed objectives of each named executive officer, (ii) the weight of each of the functions of each named executive officer, and (iii) the contribution to each function by each named executive officer.

The amount and percentage of the RSU’s and ISO’s awarded to all the named executive officers as a whole for their contributions to each of the STIP Performance Objectives was as follows:

| STIP Performance Objective   | Percentage of STIP RSU and ISO Award Pool | Total Amount of RSU’s and ISO’s Awarded As a Whole to All Named Executive Officers per SPO |
|--|---|--|
| First STIP Performance Objective.<br>Contributions Relating to Finance Objectives  | 15%                                       | 30,900   |
| Second STIP Performance Objective.<br>Contributions Relating to Agricultural Licensing Objectives                                    | 20%                                       | 53,600   |
| Third STIP Performance Objective.<br>Contributions Relating to Human Health Objectives   | 25%                                       | 82,000   |
| Fourth STIP Performance Objective.<br>Contributions Relating to Investor Relations, Intellectual Property and Website Administration | 25%                                       | 61,500   |
| Fifth STIP Performance Objective.<br>Contributions Relating to Organizational Objectives   | 15%                                       | 36,000   |

Each named executive officer eligible to receive an award pursuant to the STIP is required to be employed by the Company upon the vesting date in or around November 2009, also referred to herein as the STIP Vesting Date. If a named executive officer is no longer employed by the STIP Vesting Date, then such named executive officer’s

respective RSU or ISO award tied to such STIP Performance Objective will be forfeited. The Committee shall have the sole discretion to reinstate any eliminated portion or segment of a STIP Performance Objective award or that portion of a STIP Performance Objective award for an award to a successor to the STIP Performance Objectives.



The amount and percentage of RSU's and ISO's awarded to the named executive officers individually for their contributions to each of the STIP Performance Objectives may be modified, altered and redistributed by the Chief Executive Officer, subject to Committee review, to reflect (i) the actual performance of each named executive officer, (ii) the potential reassignment of duties of each named executive officer, and (iii) the unanticipated accomplishments by any of the named executive officers after the outset of the STIP that contribute significantly to stockholder value during Fiscal 2009.

Subject to the preceding paragraph, the approximate individual amounts and percentages of RSU and ISO awards to the named executive officers are as follows:

| Name  | Bruce C. Galton                           | Joel P. Brooks                        | Sascha P. Fedyszyn                      | John E. Thompson  | Richard Dondero                            |
|---|---|---------------------------------------|---|---|--|
| Title   | President and Chief Executive Officer (1) | Chief Financial Officer and Treasurer | Corporate Development and Secretary (2) | Vice-President of Executive Vice-President and Chief Scientific Officer | Vice-President of Research and Development |
| Type of Award   | RSU                                       | RSU                                   | RSU                                     | ISO   | ISO  |
| Percentage of 30,900 RSU's and ISO's Awarded for First SPO      | 41%                                       | 53%                                   | 3%                                      | 0%  | 3%   |
| Number of RSU's and ISO's Awarded for the First SPO             | 12,300                                    | 16,000                                | 800                                     | 0   | 1,800                                      |
| Percentage of 53,600 RSU's and ISO's Awarded for the Second SPO | 26%                                       | 0%                                    | 40%                                     | 15%   | 19%  |
| Number of RSU's and ISO's Awarded for the Second SPO            | 10,400                                    | 0                                     | 16,000                                  | 12,000  | 15,200                                     |
| Percentage of 82,000 RSU's and ISO's Awarded for the Third SPO  | 25%                                       | 5%                                    | 6%                                      | 23%   | 41%  |
| Number of RSU's and ISO's Awarded for the Third SPO             | 12,500                                    | 2,500                                 | 3,000                                   | 23,000  | 41,000                                     |
| Percentage of 61,500 RSU's and ISO's Awarded for the Fourth SPO | 30%                                       | 10%                                   | 37%                                     | 5%  | 18%  |
| Number of RSU's and ISO's Awarded for the Fourth SPO            | 15,000                                    | 5,000                                 | 18,500                                  | 5,000   | 18,000                                     |
| Percentage of 36,000 RSU's and ISO's Awarded for the Fifth SPO  | 53%                                       | 15%                                   | 12%                                     | 13%   | 7%   |
| Number of RSU's and ISO's Awarded for the Fifth SPO             | 15,800                                    | 4,500                                 | 3,700                                   | 8,000   | 4,000                                      |

In October 2009, after a review of each of the factors that compromise the short-term award program, the Committee determined that the executive officers had partially achieved the previously granted short-term performance milestones, and accordingly, determined to vest, effective two (2) trading days following the Company's filing of its quarterly report on Form 10-Q for the quarter ended September 30, 2009, the foregoing RSUs/options as follows:

- Mr. Galton received shares of common stock underlying his 49,500 RSUs;
- Mr. Brooks received shares of common stock underlying his 26,600 RSUs;
- Mr. Fedyszyn received shares of common stock underlying his 39,900 RSU;
- Dr. Thompson received 48,000 options; and
- Mr. Dondero received 76,000 options.

Restricted Stock Unit and Incentive Stock Option Short-Term Incentive Plan for Fiscal 2009—On February 16, 2010, the Compensation Committee determined to award options to purchase shares of common stock of the Company, par value \$0.01, to each of Joel Brooks and Mr. Richard Dondero. These option grants are intended to retain such officers and to motivate such officers in the continued performance of their respective offices.

Accordingly, effective February 19, 2010, Mr. Brooks and Mr. Dondero were each granted options to purchase 300,000 shares of the Company's common stock pursuant to the Company's 2008 Incentive Compensation Plan. Such options shall vest as follows:

- Options to purchase 60,000 shares of common stock shall immediately vest upon issuance; and
- Subject to the Compensation Committee's further evaluation, as described below, options to purchase up to 60,000 shares of common stock shall vest on each of June 30, 2010, June 30, 2011, June 30, 2012 and June 30, 2013.

Notwithstanding the foregoing, prior to each vesting date, the Compensation Committee shall evaluate Mr. Brooks' and Mr. Dondero's respective performances during the preceding fiscal year and shall have the right to unilaterally reduce their unvested options in the Committee's sole discretion. Further, the unvested options of a relevant officer shall be forfeited upon the termination of such officer's employment. The options were granted at an exercise price equal to the fair market value of the Company's common stock on February 19, 2010 or \$0.29.

#### Long-Term Incentive Equity Awards

In General – A portion of each named executive officer's compensation is provided in the form of long-term incentive equity awards as set forth in the Long-Term Incentive Plan, also referred to herein as the LTIP discussed below. It is the Committee's belief that properly structured equity awards are an effective method of aligning the long term interests of our named executive officers with those of our stockholders.

Beginning with Fiscal 2008, equity awards have been made in the form of restricted stock units. The Committee will follow a grant practice of tying equity awards upon of the completion of certain event milestones, also referred to herein as the LTIP Event Milestones, discussed below. Accordingly, it is expected that any equity awards to the named executive officers will be made promptly after the completion of each LTIP Event Milestone. The Committee has established long-term incentive grant guidelines for eligible named executive officers based on competitive annual grant data provided by management's compensation consultant and by J. Richard, the Committee's compensation consultant.

Long-Term Incentive Plan – Beginning on December 13, 2007, also referred to herein as the LTIP Effective Date, and ending on the earlier of (i) the completion of the Third LTIP Event Milestone or (ii) three (3) years from the LTIP Effective Date, LTIP equity grants to our named executive officers are in the form of RSU's and ISO's. Each RSU and ISO entitles the recipient to receive one (1) share of our common stock upon vesting or upon a designated date or event following such vesting. Each ISO was granted with an exercise price of \$0.99. Each named executive had the option of receiving their RSU grant in the form of RSU's or ISO's. If a named executive chose to receive ISO's in lieu of RSU's, then such named executive was granted twice as many ISO's, due to the \$0.99 exercise price of such ISO's.

The total RSU's and ISO's in the LTIP pool awarded to our named executive officers was 775,000 shares, which consisted of 225,000 RSU's and 550,000 ISO's, representing 3.9% of the outstanding shares as of July 1, 2009.

The amount and percentage of the RSU's awarded to all the named executive officers as a whole for the completion of each of the three LTIP Event Milestones are as follows:

| LTIP Event Milestone   | Percentage of LTIP RSU and ISO Award Pool | Total Amount of RSUs and ISO's Awarded As a Whole to All Named Executive Officers |
|--|---|---|
| First LTIP Event Milestone.<br>The Execution of a Research Agreement to Conduct Phase I/II Trials at a Research Facility                                     | 20%                                       | 155,000   |
| Second LTIP Event Milestone.<br>The Filing and Acceptance by the U.S. FDA of an investigation new drug application, or IND, by the date set by the Committee | 20%                                       | 155,000   |
| Third LTIP Event Milestone.<br>The Successful Completion of Phase I/II Trials Approved by the FDA by the date set by the Committee                           | 60%                                       | 465,000   |

Each named executive officer eligible to receive an award pursuant to the LTIP is required to be employed by the Company upon the completion of each individual LTIP Event Milestone. If a named executive officer is no longer employed by the Company before the completion of an individual LTIP Event Milestone, then such named executive officer's respective RSU or ISO award tied to such uncompleted LTIP Event Milestone will be forfeited and so will that total portion of the whole LTIP award pool. The Committee shall have the sole discretion to reinstate any eliminated portion or segment of a LTIP Event Milestone award or that portion of a LTIP Event Milestone award for a successor to the LTIP Event Milestones.

The LTIP awards for each named executive officer upon the completion of each individual LTIP Event Milestone shall be as follows:

| Name                      | Title   | Percentage of Total RSU's Awarded Upon Completion of a LTIP Event Milestone | Number of RSU's Awarded upon Completion of First LTIP Event Milestone | Number of RSU's Awarded upon Completion of Second LTIP Event Milestone | Number of RSU's Awarded upon Completion of Third LTIP Event Milestone |
|---------------------------|---|---|---|--|---|
| Bruce C. Galton(1)<br>(3) | President and Chief Executive Officer                 | 25%   | 25,000  | 25,000   | 75,000  |
| Joel P. Brooks(1)         | Chief Financial Officer and Treasurer                 | 10%   | 10,000  | 10,000   | 30,000  |
| Sascha P. Fedyszyn(1)(4)  | Vice-President of Corporate Development and Secretary | 10%   | 10,000  | 10,000   | 30,000  |
| John E. Thompson (2)      | Executive Vice-President and Chief Scientific Officer |   | 25%   | 50,000   | 50,000  |
| Richard Dondero(2)        | Vice-President of Research and Development            |   | 30%   | 60,000   | 60,000  |

(1) Represents RSU's.

(2) Represents ISO's.

(3) Mr. Galton resigned from the Company on November 16, 2009 and, thus his unvested awards were forfeited.

(4) Mr. Fedyszyn resigned from the Company on February 1, 2010. and, thus his unvested awards were forfeited.

As of the date hereof, none of the LTIP Event Milestones have been met.

It is the Committee's belief that RSU and ISO awards are essential to the retention of the named executive officers, crucial to our long-term financial successes and will help to advance the share ownership guidelines, which may be established by the Committee for the executive officers. The RSU's and ISO's have award schedules which provide a meaningful incentive for the named executive officer to remain in our service. These equity awards also serve as an important vehicle to achieve the Committee's objective of aligning management and stockholder interests. Equity awards in the form of RSU's and ISO's promote all of these objectives in a manner which is less dilutive to the stockholders than traditional option grants and provide a more direct correlation between our compensation cost that we must record for financial accounting purposes and the value delivered to the named executive officers.

Market Timing of Equity Awards. The Compensation Committee does not engage in any market timing of the equity awards made to the executive officers or other award recipients, and accordingly, there is no established practice of timing our awards in advance of the release of favorable financial results or adjusting the award date in connection with the release of unfavorable financial developments affecting our business. In addition, we will attempt, when possible, to make equity awards to our executive officers and directors promptly after the release of our financial results.

Executive Benefits and Perquisites

**In General** – The named executive officers also are provided with certain market competitive benefits. They are currently not provided with any perquisites. It is the Committee’s belief that such benefits are necessary for us to remain competitive and to attract and retain top caliber executive officers, since such benefits are typically provided by companies in the biotechnology industry and with other companies with which we compete for executive talent.

**Retirement Benefits** – The named executive officers may participate in the company-wide 401(k) plan. We do not make any contributions to the 401(k) plan and do not have any additional retirement benefits.

**Other Benefits and Perquisites** – All administrative employees, including the named executive officers, are eligible to receive standard health, disability, and life insurance. We do not provide any additional benefits and perquisites.

#### IRC Section 162(m) compliance

As a result of Section 162(m) of the Internal Revenue Code, publicly-traded companies such as us are not allowed a federal income tax deduction for compensation, paid to the Chief Executive Officer and the four other highest paid executive officers, to the extent that such compensation exceeds \$1 million per officer in any one (1) year and does not otherwise qualify as performance-based compensation. Currently, our stock option compensation packages are structured so that compensation deemed paid to an executive officer in connection with the exercise of a stock option should qualify as performance-based compensation that is not subject to the \$1 million limitation. However, other awards, like RSU's and ISO's, made under that Plan may or may not so qualify. In establishing the cash and equity incentive compensation programs for the executive officers, it is the Committee's view that the potential deductibility of the compensation payable under those programs should be only one (1) of a number of relevant factors taken into consideration, and not the sole governing factor. For that reason the Committee may deem it appropriate to continue to provide one (1) or more executive officers with the opportunity to earn incentive compensation, including cash bonus programs tied to our financial performance and restricted stock units awards, which may be in excess of the amount deductible by reason of Section 162(m) or other provisions of the Internal Revenue Code. It is the Committee's belief that cash and equity incentive compensation must be maintained at the requisite level to attract and retain the executive officers essential to our financial success, even if part of that compensation may not be deductible by reason of the Section 162(m) limitation. For Fiscal 2008, none of our executive officer's compensation reached the \$1 million limitation. The Committee will continue to evaluate such \$1 million limitation in Fiscal 2010.

#### Report of the Compensation Committee

The Compensation Committee has reviewed and discussed the Compensation, Discussion and Analysis with management, and based on this review and these discussions, the Compensation Committee recommended to the board that the Compensation, Discussion and Analysis be included in this proxy statement.

This report is submitted  
on behalf of the  
Compensation  
Committee  
David Rector,  
Chairman  
John N. Braca

## Summary Compensation Table

The following table sets forth information concerning compensation for services rendered in all capacities during the fiscal years ended June 30, 2009, June 30, 2008 and June 30, 2007 awarded to, earned by or paid to: (i) each person who served as our Chief Executive Officer; (ii) our Chief Financial Officer; and (iii) each of our three other executive officers whose total compensation for Fiscal 2009 was in excess of \$100,000 and who were serving as our executive officers at the end of Fiscal 2009, collectively referred to herein as the Named Executives. No other executive officers who would have otherwise been includable in such table on the basis of total compensation for Fiscal 2009 have been excluded by reason of their termination of employment or change in executive status during that year.

| Name<br>and Principal<br>Position<br>(a)   | Year<br>(1)<br>(b) | Salary<br>(\$)(2)<br>(c) | Bonus<br>(\$)(3)<br>(d) | Stock<br>Awards<br>(\$)(5)<br>(e) | Option<br>Awards<br>(\$)(5)<br>(f) | Incentive<br>Plan<br>Compensation<br>(\$)(g) | Change in<br>Pension Value<br>Non- and<br>Equity Nonqualified<br>All |   | Total<br>(\$)<br>(j) |
|--|--------------------|--------------------------|-------------------------|-----------------------------------|------------------------------------|--|--|---|----------------------|
|  |                    |                          |                         |                                   |                                    |  | Deferred<br>Compensation<br>(\$)(h)                                  | Other<br>Compensation<br>(\$)(4)<br>(i) |                      |
| Bruce C. Galton<br>(President and Chief<br>Executive Officer)(6)                                 | 2009               | \$ 258,348               | —                       | \$ 39,600                         | —                                  | -  | -  | -                                       | \$ 297,948           |
|  | 2008               | \$ 258,347               | —                       | \$ 173,473                        | —                                  | -  | -  | \$ 14,711                               | \$ 446,531           |
|  | 2007               | \$ 244,722               | —                       | —                                 | \$ 34,000                          | -  | -  | -                                       | \$ 278,722           |
| Joel P. Brooks<br>(Chief Financial<br>Officer and<br>Treasurer)                                  | 2009               | \$ 161,986               | —                       | \$ 16,800                         | —                                  | -  | -  | -                                       | \$ 178,786           |
|  |                    | \$ 149,885               | —                       | \$ 86,402                         | —                                  | -  | -  | -                                       | \$ 236,287           |
|  | 2008               |                          | —                       | —                                 | —                                  | -  | -  | -                                       |                      |
|  | 2007               | \$ 143,450               | —                       | —                                 | \$ 21,250                          | -  | -  | -                                       | \$ 164,700           |
| Richard Dondero<br>(Vice-President of<br>Research)   | 2009               | \$ 145,507               | —                       | —                                 | \$ 36,800                          | -  | -  | -                                       | \$ 182,307           |
|  | 2008               | \$ 130,008               | —                       | —                                 | \$ 282,662                         | -  | -  | -                                       | \$ 412,670           |
|  | 2007               | \$ 124,500               | —                       | —                                 | \$ 21,250                          | -  | -  | -                                       | \$ 145,750           |
| Sascha P. Fedyszyn<br>(Vice-President of<br>Corporate<br>Development and<br>Secretary)(7)        | 2009               | \$ 108,091               | —                       | \$ 25,200                         | —                                  | -  | -  | -                                       | \$ 133,291           |
|  | 2008               | \$ 103,634               | —                       | \$ 74,448                         | —                                  | -  | -  | \$ 3,731                                | \$ 181,813           |
|  | 2007               | \$ 95,750                | —                       | —                                 | \$ 21,250                          | -  | -  | -                                       | \$ 117,000           |
| John E. Thompson<br>Ph.D.(8)<br>(Executive<br>Vice-President<br>and Chief Scientific<br>Officer) | 2009               | \$ 65,000                | —                       | —                                 | \$ 22,080                          | -  | -  | -                                       | \$ 87,080            |
|  |                    | \$ 65,000                | —                       | —                                 | \$ 230,034                         | -  | -  | -                                       | \$ 295,034           |
|  | 2008               | \$ 63,700                | —                       | —                                 | \$ 21,250                          | -  | -  | -                                       | \$ 84,950            |
|  | 2007               |                          | —                       | —                                 | —                                  | -  | -  | -                                       |                      |

(1) Senesco's fiscal year ends on June 30.

(2) Such amount represents actual salary paid, including such amounts deferred in connection with our 401(k) plan.

(3)

There were no bonuses earned or paid during the fiscal years ended June 30, 2009, June 30, 2008 and June 30, 2007.

(4) Such amount represents unused vacation time paid during the fiscal year ended June 30, 2008.

(5) These columns show the grant date fair value of awards computed in accordance with stock-based compensation accounting rules (FASB ASC Topic 718). A discussion of assumptions used in calculating award values may be found in Note 7 to our 2009 audited financial statements in our Form 10-K/A.

(6) Mr. Galton resigned from the Company on November 16, 2009.

(7) Mr. Fedyszyn resigned from the Company on February 1, 2010.



(8) Effective November 16, 2009, Jack Van Hulst, assumed the role of President and Chief Executive Officer of the Company.

#### Executive Compensation Agreements

On July 1, 2003, Joel P. Brooks entered into an employment agreement with Senesco for a term of three (3) years. The agreement automatically renewed for successive one (1) year terms thereafter, unless written notice of termination was provided at least 120 days prior to the end of the applicable term. Notice of termination of the agreement was provided on May 18, 2009 and Mr. Brooks' employment agreement will expire on June 30, 2010. The agreement provides Mr. Brooks with an annual base salary of \$122,000 plus certain benefits, including potential bonuses, equity awards and other perquisites as determined by the board. Our board has since approved several increases in Mr. Brooks' base salary, which is currently \$160,000. The agreement also provides that Mr. Brooks is entitled to a lump sum payment of 1.0 times his annual base salary plus prior year bonus, if his employment with us is terminated by us, prior to a change of control, without cause or by him with good reason, as defined in his employment agreement. If there is a change in control within one (1) year following Mr. Brooks' termination by us without cause, he is entitled to receive the difference between the monies actually received upon termination and 1.0 times his "base amount" as defined in the employment agreement. If Mr. Brooks' employment with us is terminated on or following a change in control during the term of the employment agreement, he is entitled to receive a lump sum payment equal to 1.0 times his "base amount".

On July 19, 2004, we hired Richard Dondero as our new Vice President of Research and Development. In conjunction with Mr. Dondero's appointment, we entered into a three (3) year employment agreement with Mr. Dondero, effective July 19, 2004. The agreement automatically renewed for successive one (1) year terms thereafter, unless written notice of termination was provided at least 120 days prior to the end of the applicable term. Notice of termination of the agreement was provided on May 18, 2009 and Mr. Dondero's employment agreement will expire on July 18, 2010. The agreement provides Mr. Dondero with an annual base salary of \$110,000 plus certain benefits, including potential bonuses, equity awards and other perquisites as determined by our board. Our board has since approved several increases in Mr. Dondero's base salary, which is currently \$143,000. The agreement also provides that Mr. Dondero is entitled to a lump sum payment of 1.0 times his annual base salary plus prior year bonus, if his employment with us is terminated by us, prior to a change of control, without cause or by him with good reason, as defined in his employment agreement. If there is a change in control within one (1) year following Mr. Dondero's termination by us without cause, he is entitled to receive the difference between the monies actually received upon termination and 1.0 times his "base amount" as defined in the employment agreement. If Mr. Dondero's employment with us is terminated on or following a change in control during the term of the employment agreement, he is entitled to receive a lump sum payment equal to 1.0 times his "base amount".

## Grants of Plan-Based Awards

The following Grants of Plan Based Awards table provides additional information about stock and option awards and equity incentive plan awards granted to our named executive officers during the fiscal year ended June 30, 2009.

| Name<br>(a)            | Grant Date<br>(b) | Estimated Future Payouts Under Non-Equity Incentive Plan Awards |                    |                     | Estimated Future Payouts Under Equity Incentive Plan Awards |                   |                    | All Other Awards: Number of Shares or Units | All Other Awards: Number of Options | Exercise Price of Grant | Date | Fair Value of Equity Awards |
|------------------------|-------------------|---|--------------------|---------------------|---|-------------------|--------------------|---|-------------------------------------|-------------------------|------|-----------------------------|
|                        |                   | Threshold (\$)<br>(c)   | Target (\$)<br>(d) | Maximum (\$)<br>(e) | Threshold (#)<br>(1)<br>(f)                                 | Target (#)<br>(g) | Maximum (#)<br>(h) | Units<br>(i)                                | Options<br>(j)                      | (\$/Sh)<br>(k)          |      | (\$)                        |
| Bruce C. Galton (5)    | 11/19/2008        | -   | -                  | -                   | 66,000(3)   | -                 | -                  | -   | -                                   | -                       | -    | -                           |
| Joel P. Brooks         | 11/19/2008        | -   | -                  | -                   | 28,000(3)   | -                 | -                  | -   | -                                   | -                       | -    | -                           |
| Richard Dondero        | 11/19/2008        | -   | -                  | -                   | 80,000(4)   | -                 | -                  | -   | -                                   | -                       | -    | -                           |
| Sascha P. Fedyszyn(6)  | 11/19/2008        | -   | -                  | -                   | 42,000(3)   | -                 | -                  | -   | -                                   | -                       | -    | -                           |
| John E. Thompson Ph.D. | 11/19/2008        | -   | -                  | -                   | 48,000(4)   | -                 | -                  | -   | -                                   | -                       | -    | -                           |

(1) Senesco's fiscal year ends on June 30.

(2) The performance-based RSU's and ISO's were granted under the 1998 Stock Plan and vest upon the achievement of certain performance milestones during Fiscal 2009.

(3) Represents performance-based RSU's.

(4) Represents performance-based ISO's.

(5) Mr. Galton resigned from the Company on November 16, 2009.

(6) Mr. Fedyszyn resigned from the Company on February 1, 2010.

(7) Effective November 16, 2009, Jack Van Hulst, assumed the role of President and Chief Executive Officer of the Company.



## Outstanding Equity Awards at Fiscal Year-End

The following table summarizes the equity awards we have made to our named executive officers which are outstanding as of June 30, 2009.

| Name                  | Option Awards   |   |   |   | Stock Awards   |  |  |  |  |  |
|-----------------------|---|---|---|---|--|--|--|--|--|--|
|                       | Equity Incentive Plan Awards:                           |   |   |   | Equity Incentive Plan Awards:                                      |  |  |  |  |  |
|                       | Number of Securities Underlying Unexercised Options (#) | Number of Securities Underlying Unexercised Options (#) | Number of Securities Underlying Unexercised Options (#) | Number of Securities Underlying Unexercised Options (#) | Market Value of Shares or Units of Stock That Have Not Vested (\$) | Market Value of Shares or Units of Stock That Have Not Vested (\$) | Market Value of Shares or Units of Stock That Have Not Vested (\$) | Market Value of Shares or Units of Stock That Have Not Vested (\$) | Market Value of Shares or Units of Stock That Have Not Vested (\$) | Market Value of Shares or Units of Stock That Have Not Vested (\$) |
| (a)                   | (b)   | (c)   | (d)   | (e)   | (f)  | (g)  | (h)  | (i)  | (j)  | (k)  |
| Bruce C. Galton(7)    | 130,000(1)  | -   | -   | \$ 2.10   | 10/05/2011   | -  | -  | -  | -  | -  |
|                       | 300,000(2)  | -   | -   | \$ 2.05   | 12/01/2011   | -  | -  | -  | -  | -  |
|                       | 50,000(3)   | -   | -   | \$ 2.10   | 06/19/2013   | -  | -  | -  | -  | -  |
|                       | 30,000(3)   | -   | -   | \$ 3.15   | 12/16/2013   | -  | -  | -  | -  | -  |
|                       | 35,000(3)   | -   | -   | \$ 3.45   | 12/16/2014   | -  | -  | -  | -  | -  |
|                       | 40,000(3)   | -   | -   | \$ 1.40   | 2/14/2015  | -  | -  | -  | -  | -  |
|                       | 40,000(3)   | -   | -   | \$ 1.08   | 2/14/2016  | -  | -  | -  | -  | -  |
|                       | -   | -   | -   | -   | -  | -  | -  | 191,000(5)   | \$   | 158,530  |
| Joel P. Brooks        | 25,000(3)   | -   | -   | \$ 2.25   | 12/01/2010   | -  | -  | -  | -  | -  |
|                       | 15,000(3)   | -   | -   | \$ 2.15   | 1/01/2011  | -  | -  | -  | -  | -  |
|                       | 12,500(3)   | -   | -   | \$ 1.65   | 10/09/2012   | -  | -  | -  | -  | -  |
|                       | 20,000(3)   | -   | -   | \$ 2.10   | 06/19/2013   | -  | -  | -  | -  | -  |
|                       | 15,000(3)   | -   | -   | \$ 3.15   | 12/16/2013   | -  | -  | -  | -  | -  |
|                       | 20,000(3)   | -   | -   | \$ 3.45   | 12/16/2014   | -  | -  | -  | -  | -  |
|                       | 25,000(3)   | -   | -   | \$ 1.40   | 2/14/2015  | -  | -  | -  | -  | -  |
|                       | 25,000(3)   | -   | -   | \$ 1.08   | 2/14/2016  | -  | -  | -  | -  | -  |
|                       | -   | -   | -   | -   | -  | -  | -  | 78,000(5)  | \$   | 64,740   |
| Richard Dondero       | 10,000(3)   | -   | -   | \$ 3.45   | 12/16/2014   | -  | -  | -  | -  | -  |
|                       | 25,000(3)   | -   | -   | \$ 1.40   | 2/14/2015  | -  | -  | -  | -  | -  |
|                       | 25,000(3)   | -   | -   | \$ 1.08   | 2/14/2016  | -  | -  | -  | -  | -  |
|                       | 71,924(4)   | -   | -   | \$ 0.99   | 12/13/2017   | -  | -  | -  | -  | -  |
|                       | -   | -   | 300,000(4)  | \$ 0.99   | 12/13/2017   | -  | -  | -  | -  | -  |
|                       | -   | -   | 80,000(4)   | \$ 0.60   | 1/19/2018  | -  | -  | -  | -  | -  |
| Sascha P. Fedyszyn(8) | 35,000(3)   | -   | -   | \$ 2.25   | 12/01/2010   | -  | -  | -  | -  | -  |
|                       | 10,000(3)   | -   | -   | \$ 2.15   | 1/01/2011  | -  | -  | -  | -  | -  |
|                       | 10,000(3)   | -   | -   | \$ 1.65   | 10/09/2012   | -  | -  | -  | -  | -  |
|                       | 20,000(3)   | -   | -   | \$ 2.10   | 06/19/2013   | -  | -  | -  | -  | -  |
|                       | 15,000(3)   | -   | -   | \$ 3.15   | 12/16/2013   | -  | -  | -  | -  | -  |
|                       | 20,000(3)   | -   | -   | \$ 3.45   | 12/16/2014   | -  | -  | -  | -  | -  |

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|                               |           |   |            |         |           |   |   |           |           |
|-------------------------------|-----------|---|------------|---------|-----------|---|---|-----------|-----------|
|                               | 20,000(3) | - | -          | \$ 1.40 | 2/14/2015 | - | - | -         | -         |
|                               | 25,000(3) | - | -          | \$ 1.08 | 2/14/2016 | - | - | -         | -         |
|                               | -         | - | -          | -       | -         | - | - | 92,000(5) | \$ 76,360 |
| <b>John E. Thompson Ph.D.</b> |           |   |            |         |           |   |   |           |           |
|                               | 80,000(3) | - | -          | \$ 2.05 | 2/01/2011 | - | - | -         | -         |
|                               | 20,000(3) | - | -          | \$ 2.35 | 1/07/2013 | - | - | -         | -         |
|                               | 20,000(3) | - | -          | \$ 3.15 | 2/16/2013 | - | - | -         | -         |
|                               | 55,000(3) | - | -          | \$ 3.45 | 2/16/2014 | - | - | -         | -         |
|                               | 20,000(3) | - | -          | \$ 1.40 | 2/14/2015 | - | - | -         | -         |
|                               | 25,000(3) | - | -          | \$ 1.08 | 2/14/2016 | - | - | -         | -         |
|                               | 52,676(4) | - | -          | \$ 0.99 | 2/13/2017 | - | - | -         | -         |
|                               | -         | - | 250,000(4) | \$ 0.99 | 2/13/2017 | - | - | -         | -         |
|                               | -         | - | 80,000(4)  | \$ 0.60 | 1/19/2018 | - | - | -         | -         |

(1) 100,000 of such options vested on the date of grant and an additional 10,000 options vested on each of the one (1) month, two (2) month and three (3) month anniversary of the date of grant.

(2) 100,000 of such options vested on each of the first, second and third anniversary of the date of grant.

- (3) One-third (1/3) of such options vested on the date of grant and an additional one-third (1/3) of such options vested or will vest on each of the first and second anniversary of the date of grant.
- (4) Such amounts consist of performance based options which have vested upon the achievement of certain milestones or will vest if certain milestones are met under the Company's Short-Term and Long-Term incentive plan.
- (5) Such amounts consist of performance based RSU's which will vest if certain milestones are met under the Company's Short-Term and Long-Term incentive plan.
- (6) The amounts in this column are calculated by multiplying the number in column (i) by the closing price on June 30, 2009 of \$0.83.
- (7) Mr. Galton resigned from the Company on November 16, 2009.
- (8) Mr. Fedyszyn resigned from the Company on February 1, 2010.
- (9) Effective November 16, 2009, Jack Van Hulst, assumed the role of President and Chief Executive Officer of the Company.

Options Exercised and Stock Vested

The table below shows option exercise and stock award vesting activity for our named executive officers during the year ended June 30, 2009.

| Name<br>(a)             | Option Awards  |  | Stock Awards  |  |
|-------------------------|--|--|---|--|
|                         | Number of Shares<br>Acquired on Exercise<br>(#)<br>(b) | Value Realized on<br>Exercise<br>(\$)<br>(c) | Number of Shares<br>Acquired on Vesting<br>(#)<br>(d) | Value Realized on<br>Vesting<br>(\$)(1)<br>(e) |
|                         | Bruce C. Galton(2)                                     | —  | —   | 50,225   |
| Joel P. Brooks          | —  | —  | 37,275  | \$ 22,335                                      |
| Sascha Fedyszyn(3)      | —  | —  | 25,200  | \$ 15,120                                      |
| Richard Dondero         | —  | —  | —   | —  |
| John E. Thompson, Ph.D. | —  | —  | —   | —  |

- (1) Such amounts in this column were calculated by multiplying the number in column (d) by the closing price on the date of vesting.
- (2) Mr. Galton resigned from the Company on November 16, 2009.
- (3) Mr. Fedyszyn resigned from the Company on February 1, 2010.
- (4) Effective November 16, 2009, Jack Van Hulst, assumed the role of President and Chief Executive Officer of the Company.

## Employment Contracts, Termination of Employment, and Change-in-Control Arrangements

Executive Severance. Certain of our named executive officer's have employment agreements which contain severance provisions. The following table shows the potential incremental payments to our named executive officers in the event of their termination or termination in connection with a change of control of our company as of June 30, 2009.

| Benefit                               | Joel P. Brooks (5)      |                             | Richard Dondero (6)     |                             |
|---------------------------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|
|                                       | Without Cause<br>\$ (2) | Change in Control<br>\$ (3) | Without Cause<br>\$ (2) | Change in Control<br>\$ (3) |
| Cash Severance(4)                     | \$ 160,000              | \$ 145,142                  | \$ 143,000              | \$ 125,457                  |
| # of Months                           | 12                      | 12                          | 12                      | 12                          |
| Equity                                |                         |                             |                         |                             |
| Unvested Restricted Stock             | \$ -                    | \$ -                        | \$ -                    | \$ -                        |
| Unvested RSU's                        | \$ -                    | \$ -                        | \$ -                    | \$ -                        |
| Unvested Options                      | \$ -                    | \$ -                        | \$ -                    | \$ -                        |
| Common Stock                          | \$ -                    | \$ -                        | \$ -                    | \$ -                        |
| Other Benefits                        |                         |                             |                         |                             |
| Health, Disability and Life Insurance | \$ -                    | \$ -                        | \$ -                    | \$ -                        |
| Total                                 | \$ 160,000              | \$ 145,142                  | \$ 143,000              | \$ 125,457                  |

(1) John E. Thompson, Ph.D. is not included on this table as he does not have an employment contract or any termination or change in control arrangements.

(2) Such amounts are calculated using the named executive's base salary in effect as of April 6, 2010 multiplied by the number of months of severance the named executive is entitled to.

(3) Such amounts are calculated using the named executive's average compensation paid during the past five (5) years multiplied by the number of months of severance the named executive is entitled to.

(4) Such amounts are payable as a lump sum.

(5) Mr. Brooks' employment agreement will terminate on June 30, 2010.

(6) Mr. Dondero's employment agreement will terminate on July 19, 2010.

Appointment of Mr. Van Hulst. Effective November 16, 2009, Jack Van Hulst, a current member of our board of directors, assumed the role of President and Chief Executive Officer of Senesco. We have not and do not anticipate entering into an employment agreement with Mr. Van Hulst.

Resignation of Mr. Galton. As previously reported, Bruce C. Galton resigned from his positions as President, Chief Executive Officer and member of the Board of Directors of the Company. In connection therewith, on November 23, 2009, the Company entered into a Confidential Separation Agreement and General Release with Mr. Galton.

The material terms of the Confidential Separation Agreement and General Release are as follows:

- The Company paid Mr. Galton severance in an amount equal to four (4) months of his current annual base salary, less all applicable federal and state withholdings and deductions which are authorized or required by law, with such amount paid in accordance with the Company's normal payroll schedule;

- In the event Mr. Galton elects continuation of coverage under COBRA, the Company will pay the COBRA premiums for continuation of his group health insurance coverage for a period of four (4) months;



- All currently outstanding equity awards made to Mr. Galton during his course of employment, to the extent any of the awards are stock options, shall remain exercisable for the underlying shares of common stock until the expiration date of such options as set forth in the applicable stock option agreement. In addition, Mr. Galton shall receive 49,500 shares of common stock which represent shares underlying RSUs which were awarded to Mr. Galton under the Company's 2009 Short Term Incentive Plan. Aside from the foregoing RSUs, Mr. Galton shall not receive any additional RSUs under either the Short Term Incentive Plan or Long Term Incentive Plan; and

- The Company paid Mr. Galton for all of his accrued but unused vacation days.

Mr. Galton did not revoke his acceptance of the Agreement.

Resignation of Mr. Fedyszyn. As previously reported, on February 1, 2010, Sascha P. Fedyszyn resigned from his positions as Vice President of Corporate Development and Secretary of the Company. As a result of such resignation, effective as of February 1, 2010, Mr. Fedyszyn is no longer employed by the Company or any of its affiliated entities.

In connection with the foregoing, on February 2, 2010, the Company entered into a Confidential Separation Agreement and General Release with Mr. Fedyszyn.

The material terms of the Confidential Separation Agreement and General Release are as follows:

- The Company paid Mr. Fedyszyn severance in an amount equal to four (4) months of his current annual base salary, less all applicable federal and state withholdings and deductions which are authorized or required by law, with such amount paid in accordance with the Company's normal payroll schedule;
- In the event Mr. Fedyszyn elects continuation of coverage under COBRA, the Company will pay the COBRA premiums for continuation of his group health insurance coverage for a period of four (4) months; and
- All currently outstanding equity awards made to Mr. Fedyszyn during his course of employment, to the extent any of the awards are stock options, shall remain exercisable for the underlying shares of common stock until the expiration date of such options as set forth in the applicable stock option agreement. Mr. Fedyszyn shall not receive any additional RSUs under either the Short Term Incentive Plan or Long Term Incentive Plan.

In consideration of the foregoing, the Company and Mr. Fedyszyn executed a general release of the other party.

## Equity Compensation Plans

The following table reflects information relating to equity compensation plans as of June 30, 2009.

|  | Number of securities<br>to be issued upon<br>exercise of outstanding<br>options, warrants<br>and rights | Weighted-average<br>exercise price of<br>outstanding options,<br>warrants and rights | Number of securities remaining<br>available for future issuance<br>under equity compensation plans |
|--|---|--|--|
| Stock Option plans approved by security holders            | 4,550,472(1)  | \$ 1.70  | 5,887,472(2)   |
| Equity compensation plans not approved by security holders | —   | —  | —  |
| <b>Total</b>   | <b>4,550,472(1)</b>   | <b>\$ 1.70</b>   | <b>5,887,472(2)</b>  |

(1) Issued pursuant to our 1998 Stock Plan and 2008 Stock Plan.

(2) Available for future issuance pursuant to our 2008 Stock Plan.

## SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

Our common stock is the only class of stock entitled to vote at the Meeting. Only our stockholders of record as of the close of business on the Record Date are entitled to receive notice of and to vote at the Meeting. As of the Record Date, there were [\_\_\_] holders of record of our common stock, and we had outstanding [33,584,121] shares of our common stock and each outstanding share is entitled to one (1) vote at the Meeting. The following table sets forth certain information, as of the Record Date, with respect to holdings of our common stock by (i) each person known by us to be the beneficial owner of more than 5% of the total number of shares of our common stock outstanding as of such date; (ii) each of our directors, which includes all nominees, and our Named Executives; and (iii) all of our directors and our current executive officers as a group.

| Name and Address of Beneficial Owner (1)   | Amount and Nature of Beneficial Ownership(2) | Percent of Class(3) |
|--|--|---------------------|
| <b>(i) Certain Beneficial Owners:</b>  |  |                     |
| Partlet Holdings Ltd.<br>Jabotinsky 7, Moshe Aviv Tower,<br>POB 138, Ramat Gan, 52520, Israel      | [4,492,657](4)                               | [12.5]%             |
| Stanford International<br>c/o Ralph S. Janrey<br>5051 Westheimer<br>Houston, Texas 77056           | [1,714,287]                                  | [5.1]%              |
| <b>(ii) Directors (which includes all nominees), Named Executives and Chief Executive Officer:</b> |  |                     |
| Harlan W. Waksal   | [1,530,327](5)                               | [4.4]%              |
| John N. Braca  | [607,041](6)                                 | [1.8]%              |
| Jack Van Hulst   | [353,083](7)                                 | [1.0]%              |
| Christopher Forbes   | [11,581,406](8)                              | [27.51]             |
| Warren J. Isabelle   | [176,838](9)                                 | [*]                 |
| Thomas C. Quick  | [1,543,000](10)                              | [4.5]%              |
| David Rector   | [775,053](11)                                | [2.3]%              |
| Rudolf Stalder   | [2,457,689](12)                              | [6.9]%              |
| John E. Thompson, Ph.D..   | [892,676](13)                                | [2.6]%              |
| Joel P. Brooks   | [258,375](14)                                | [*]                 |
| Richard Dondero  | [267,924](15)                                | [*]                 |
| <b>(iii) All Directors and current executive officers as a group (11 persons)</b>                  | <b>[20,443,412](16)</b>                      | <b>[41.6]%</b>      |

\* Less than 1%

(1) Unless otherwise provided, all addresses should be care of Senesco Technologies, Inc., 303 George Street, Suite 420, New Brunswick, New Jersey 08901.

(2) Except as otherwise indicated, all shares of common stock are beneficially owned and sole investment and voting power is held by the persons named.

(3) Applicable percentage of ownership is based on [33,584,121] shares of our common stock outstanding as of the Record Date, plus any common stock equivalents and options or warrants held by such holder which are presently

or will become exercisable within sixty (60) days after the Record Date.

- (4) Includes 2,055,556 shares of common stock issuable pursuant to presently exercisable warrants and 325,991 shares of common stock issuable pursuant to the potential conversion of preferred stock and warrants issued in connection with the preferred stock.
- (5) Includes 748,340 shares of common stock issuable pursuant to presently exercisable warrants and options or options which will become exercisable within sixty (60) days after the Record Date. Also includes 631,176 shares of common stock issuable pursuant to the conversion of convertible debentures at a conversion rate of \$0.83.
- (6) Includes 476,062 shares of common stock issuable pursuant to presently exercisable warrants and options or options which will become exercisable within sixty (60) days after the Record Date. Also includes 77,840 shares of common stock issuable pursuant to the conversion of convertible debentures at a conversion rate of \$0.83.
- (7) Includes 314,904 and shares of common stock issuable pursuant to presently exercisable warrants and options or options which will become exercisable within sixty (60) days after the Record Date. Also includes 30,459 shares of common stock issuable pursuant to the conversion of convertible debentures at a conversion rate of \$0.83.
- (8) Includes 4,405,426 shares of common stock issuable pursuant to presently exercisable warrants and options or options which will become exercisable within sixty (60) days after the Record Date. Also includes 4,101,800 shares of common stock issuable pursuant to the conversion of convertible debentures at a conversion rate of \$0.83.
- (9) Includes 80,059 shares of common stock issuable pursuant to presently exercisable warrants and options or options which will become exercisable within sixty (60) days after the Record Date. Also includes 77,840 shares of common stock issuable pursuant to the conversion of convertible debentures at a conversion rate of \$0.83.
- (10) Represents 340,325 shares of common stock and 403,428 shares of common stock issuable pursuant to warrants issued to Thomas C. Quick Charitable Foundation. Also includes 314,742 shares of common stock issuable pursuant to the conversion of convertible debentures at a conversion rate of \$0.83 issued to Thomas C. Quick Charitable Foundation. Represents 139,734 shares of common stock and 344,771 shares of common stock issuable pursuant to presently exercisable options or options which will become exercisable within sixty (60) days after the Record Date issued to Thomas C. Quick.
- (11) Includes 554,445 shares of common stock issuable pursuant to presently exercisable warrants and options or options which will become exercisable within sixty (60) days after the Record Date. Also includes 159,063 shares of common stock issuable pursuant to the conversion of convertible debentures at a conversion rate of \$0.83.
- (12) Includes 1,443,931 shares of common stock issuable pursuant to presently exercisable warrants and options or options which will become exercisable within sixty (60) days after the Record Date. Also includes 631,176 shares of common stock issuable pursuant to the conversion of convertible debentures at a conversion rate of \$0.83.
- (13) Represents 572,000 shares of common stock held by 2091794 Ontario Ltd. and 320,676 shares of common stock issuable pursuant to presently exercisable options or options which will become exercisable within sixty (60) days after the Record Date issued to John E. Thompson, Ph.D. Excludes 250,000 shares of common stock underlying options which become exercisable upon the achievement of certain performance milestones.
- (14) Includes 217,500 shares of common stock issuable pursuant to presently exercisable options or options which will become exercisable within sixty (60) days after the Record Date. Excludes 240,000 shares of common stock

underlying options which become exercisable upon the achievement of certain performance milestones.

(15) Includes 267,924 shares of common stock issuable pursuant to presently exercisable options or options which will become exercisable within sixty (60) days after the Record Date. Excludes 540,000 shares of common stock underlying options which become exercisable upon the achievement of certain performance milestones.

(16)

See Notes 4 through 15.

## CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

### Contractual Relationships

#### Service Agreements

Christopher Forbes, our director, is also Vice Chairman of Forbes, Inc., which publishes Forbes Magazine. Forbes, Inc. has provided and will continue to provide us with introductions to strategic alliance partners and, from time to time, use of its office space. In recognition of these services, during the last two (2) fiscal years, we granted to Forbes, Inc., warrants to purchase shares of our common stock as follows:

| Date of Grant     | # of Warrant Shares | Exercise Price | Value of Services | Date of Grant | # of Warrant Shares Vested |
|-------------------|---------------------|----------------|-------------------|---------------|----------------------------|
| November 19, 2008 | 500                 | \$ 0.60        | \$                | 230           | 167                        |
| December 13, 2007 | 1,000               | \$ 0.99        | \$                | 740           | 666                        |

The exercise price of the warrants granted to Forbes, Inc. represented the fair market value of our common stock on the dates of grant.

Verge 180, Inc., a marketing communications firm, is 50% owned by Alan Brooks, a brother of Joel Brooks, our Chief Financial Officer and Treasurer. Verge 180, Inc. has provided and will continue to provide various services to us. We paid Verge 180, Inc. \$43,910 and \$58,273 in Fiscal 2009 and Fiscal 2008, respectively, for services in connection with the design and printing of our annual report and proxy for Fiscal 2008 and Fiscal 2007, respectively. Neither we nor Joel Brooks receives any remuneration from these services, and we believe that such services were provided on terms at least as favorable as we would have received from a third party.

#### Research and Development Agreements

Effective September 1, 1998, we entered into a three (3) year research and development agreement, which has been extended for successive periods through August 31, 2010, with John E. Thompson, Ph.D. and the University of Waterloo in Waterloo, Ontario, Canada, referred to as the University. Dr. Thompson is our director and officer and beneficially owns approximately 2.6% of our common stock. Dr. Thompson is the Associate Vice President, Research and former Dean of Science of the University. Dr. Thompson and the University will provide research and development under our direction. Research and development expenses under this agreement for the years ended June 30, 2009 and 2008 aggregated US \$653,104 and US \$730,960, respectively. Effective September 1, 2009, we, Dr. Thompson and the University extended the agreement for an additional one (1) year period through August 31, 2010 in the amount of CAN \$656,820. As of April 1, 2010, such amount represented approximately US \$650,000.

#### Consulting Agreement

Effective May 1, 1999, we entered into a three (3) year consulting agreement, which has been extended for successive periods through June 30, 2011, for research and development with Dr. Thompson. This agreement provided for monthly payments of \$3,000 through June 2004. However, effective January 1, 2003, 2006 and 2007, the agreement

was amended to increase the monthly payments from \$3,000 to \$5,000, from \$5,000 to \$5,200, and from \$5,200 to \$5,417, respectively.



## Debt / Equity Transactions

## 2006 Private Placement

In connection with a private placement in October 2006, we sold shares of our common stock and warrants to purchase our common stock to certain institutions, accredited investors and certain directors as follows:

|                                       | Amount       | # of Shares | # of Warrants |
|---------------------------------------|--------------|-------------|---------------|
| Christopher Forbes                    | \$ 1,000,000 | 883,002     | 441,501       |
| Thomas C. Quick Charitable Foundation | \$ 300,000   | 264,901     | 132,450       |
| Rudolf Stalder                        | \$ 105,841   | 93,458      | 46,729        |
| Bruce C. Galton                       | \$ 75,000    | 66,225      | 33,113        |
| John N. Braca                         | \$ 11,325    | 10,000      | 5,000         |
| David Rector                          | \$ 11,325    | 10,000      | 5,000         |

All of such warrants became exercisable six (6) months from the closing date at an exercise price equal to \$1.18 and have a term of five (5) years.

## 2009 Private Placements

## Transaction with Insiders and Affiliates

On July 29, 2009, we entered into a Securities Purchase Agreement with each of Harlan W. Waksal, M.D., Rudolf Stalder, Christopher Forbes, David Rector, John N. Braca, Jack Van Hulst, Warren Isabelle, and the Thomas C. Quick Charitable Foundation each of whom is an accredited investor, pursuant to which we issued and sold an aggregate of 144,444 shares of our common stock at \$0.90 per share and each of a Series A warrant and a Series B warrant. Each of Harlan W. Waksal, M.D., Rudolf Stalder, Christopher Forbes, David Rector, John N. Braca, Jack Van Hulst and Warren Isabelle serve on the Company's board. The Thomas C. Quick Charitable Foundation is an affiliate of our board member Thomas C. Quick.

The Series A Warrants entitle the holders to purchase in the aggregate, up to 130,000 shares of our common stock at \$0.01 per warrant share. The Series A Warrants have a term of seven (7) years and were exercisable immediately after the date of grant.

The Series B Warrants entitle the holders to purchase, in the aggregate, up to 131,807 shares of our common stock at \$0.60 per warrant share. The Series B Warrants have a term of seven (7) years and were not exercisable until after the six (6) month anniversary after the date of grant.

The following table sets forth the transaction in greater detail.

|  | Amount    | # of Shares | # of Series A Warrants(1) | # of Series B Warrants(2) |
|--|-----------|-------------|---------------------------|---------------------------|
| Christopher Forbes(3)                    | \$ 88,000 | 97,778      | 88,000                    | 177,222                   |
| Harlan W. Waksal, M.D.(3)                | \$ 13,500 | 15,000      | 13,500                    | 13,688                    |
| Rudolf Stalder(3)                        | \$ 13,500 | 15,000      | 13,500                    | 13,688                    |
| Thomas C. Quick Charitable Foundation(4) | \$ 7,000  | 7,778       | 7,000                     | 7,097                     |
| David Rector(3)                          | \$ 3,000  | 3,333       | 3,000                     | 3,042                     |
| Warren Isabelle(3)                       | \$ 2,000  | 2,222       | 2,000                     | 2,028                     |
| John N. Braca(3)                         | \$ 2,000  | 2,222       | 2,000                     | 2,028                     |
| Jack Van Hulst(3)                        | \$ 1,000  | 1,111       | 1,000                     | 1,014                     |

(1) All of such warrants were immediately exercisable at closing date at an exercise price equal to \$0.01 and have a term of seven (7) years.

(2) All of such warrants became exercisable six (6) months from the closing date at an exercise price equal to \$0.60 and have a term of seven (7) years.

(3) Such person is a director of the Company.

(4) The Thomas C. Quick Charitable foundation is an affiliate of our director, Thomas C. Quick.

#### Transaction with each of Robert and Tim Forbes

On July 29, 2009, we entered into a Securities Purchase Agreement with each of Robert Forbes and Timothy Forbes, each of whom is an accredited investor, pursuant to which we issued and sold an aggregate of 444,444 shares of common stock at \$0.90 per share and each of a Series A warrant and a Series B warrant. Each of Robert Forbes and Timothy Forbes are the brothers of Christopher Forbes who is a director of Senesco. Mr. Christopher Forbes will not be deemed to be the beneficial owner of, nor will he have a pecuniary interest in the shares or warrants issued to his brothers.

The Series A Warrants entitle the holders to purchase in the aggregate, up to 400,000 shares of our common stock at \$0.01 per warrant share. The Series A Warrants have a term of seven (7) years and were exercisable immediately after the date of grant.

The Series B Warrants entitle the holders to purchase in the aggregate, up to 405,556 shares of our common stock at \$0.60 per warrant share. The Series B Warrants have a term of seven (7) years and were not exercisable until after the six (6) month anniversary after the date of grant.

The following table sets forth the transaction in greater detail.

|                   | Amount     | # of Shares | # of Series A Warrants(1) | # of Series B Warrants(2) |
|-------------------|------------|-------------|---------------------------|---------------------------|
| Robert Forbes(3)  | \$ 300,000 | 333,333     | 300,000                   | 304,167                   |
| Timothy Forbes(3) | \$ 100,000 | 111,111     | 100,000                   | 101,389                   |

(1) All of such warrants were immediately exercisable at closing date at an exercise price equal to \$0.01 and have a term of seven (7) years.

(2) All of such warrants became exercisable six (6) months from the closing date at an exercise price equal to \$0.60 and have a term of seven (7) years.

(3) Such person is the brother of a member of our board of directors, Christopher Forbes.

#### Transaction With Stanford Entities

As previously disclosed in a Form 8-K filed on November 9, 2009, on November 6, 2009, each of Stanford Venture Capital Holdings, Inc., or SVCH, and Stanford International Bank, Ltd., or SIBL (collectively SVCH and SIBL are referred to herein as Stanford), who are the beneficial owners of a significant interest in Senesco Technologies, Inc., simultaneously entered into definitive agreements with certain members of the Company's Board of Directors to sell all of their respective interests in the Company, including shares of common stock, convertible debentures and warrants, (the "Securities") held by each of the Stanford entities to each of Harlan W. Waksal, M.D., Rudolf Stalder, Christopher Forbes, David Rector, John N. Braca, Jack Van Hulst, Warren Isabelle and the Thomas C. Quick Charitable Foundation. Each of Harlan W. Waksal, M.D., Rudolf Stalder, Christopher Forbes, David Rector, John N. Braca, Jack Van Hulst and Warren Isabelle are members of the Company's Board of Directors, also referred to herein as the Insiders. The Thomas C. Quick Charitable Foundation is an affiliate of Mr. Thomas C. Quick who is also a member of the Company's Board of Directors. Such transaction was negotiated privately between Stanford and the foregoing persons and their affiliates and was subject to certain closing conditions.

On February 19, 2010, SVCH and the Insiders closed on their definitive agreement to sell all of their Securities for an aggregate purchase price of \$890,000. As a result of the transaction, the members of the Company's Board of Directors, as a group, will beneficially own a controlling interest of approximately 40.9% of the Company's common stock. In addition, Mr. Christopher Forbes, who was the main investor in the transaction, will, individually, beneficially own approximately 27.5% of the Company's common stock. The Insiders have not closed on the agreement between them and SIBL as certain closing conditions to that agreement have not been met as of yet.

On March 4, 2010, the insiders of Senesco Technologies, Inc. who had previously purchased all of the convertible debentures, warrants and common stock of Senesco which were previously held by Stanford Venture Capital Holdings, Inc., notified the Company that they have elected, subject to stockholder approval, to convert their convertible debentures at a conversion price of \$0.83. Under the terms of the convertible debentures, such convertible debentures could have converted at a floating conversion rate equal to the lower of \$0.83, or 80 percent of the lowest daily Volume-Weighted Average Price (VWAP) for the five-day period immediately preceding the conversion date, which equated to \$0.22. The conversion of the debentures is subject to stockholder approval as further described in this proxy statement.

#### Transaction with JMP Securities

On February 17, 2010, the Company entered into a credit agreement with JMP Securities LLC, also referred to herein as the Credit Agreement. The agreement provides the Company with, subject to certain restrictions, including the existence of suitable collateral, up to a \$3.0 million line of credit upon which the Company may draw at any time, also referred to herein as the Line of Credit. Any draws upon the Line of Credit accrue at a monthly interest rate of (i) the broker rate in effect at the time of the draw (which is currently 2.0%), plus (ii) 2.75%. There are no other conditions or fees or expenses associated with the Line of Credit. The Line of Credit is not secured by any assets of the Company, but it is secured by certain assets of the Chairman of our Board of Directors, Harlan W. Waksal, M.D., which are currently held by JMP Securities.

March 2010 Transaction with Christopher Forbes and Harlan W. Waksal, M.D.

As further described below, on March 26, 2010, certain investors, including, Christopher Forbes and Harlan W. Waksal, M.D., entered into a Securities Purchase Agreement with the Company pursuant to which the Company agreed to issue to Christopher Forbes and Harlan W. Waksal, M.D., in a private placement, an aggregate of approximately 1,200 shares of the Company's 10% Series B Convertible Preferred Stock, par value \$0.01 per share initially convertible into approximately 3,750,000 shares of Common Stock, and (ii) immediately exercisable warrants to purchase up to approximately 3,750,000 shares of Common Stock for an aggregate offering price of approximately \$1,200,000. The Series B Preferred Stock will only be issued after the Company receives stockholder approval as further described in this proxy statement.

All of the foregoing transactions were approved, or have been approved, by our Audit Committee.

## PROPOSAL 2

### APPROVAL OF AN AMENDMENT TO THE SENESCO TECHNOLOGIES, INC. 2008 INCENTIVE COMPENSATION PLAN TO INCREASE THE NUMBER OF SHARES OF COMMON STOCK RESERVED FOR ISSUANCE THEREUNDER FROM 6,137,200 SHARES TO 11,137,200 SHARES

We are asking our stockholders to vote on a proposal to approve an amendment to the 2008 Incentive Compensation Plan, also referred to herein as the 2008 Plan that will increase the maximum number of shares of our common stock reserved for issuance over the term of the 2008 Plan by an additional 5,000,000 shares to a total of 11,137,200 shares. Under the amendment, the maximum number of shares of common stock which may be issued pursuant to options intended to be incentive stock options under the federal tax laws will also be increased by 5,000,000 shares.

As of April 1, 2010, 1,998,127 shares of common stock were subject to outstanding options under the 2008 Plan, no shares of common stock were subject to outstanding restricted stock units under the 2008 Plan, no shares had been issued under the 2008 Plan and 4,139,173 shares of common stock remained available for future equity awards.

Incentive compensation programs play a pivotal role in our efforts to attract and retain key personnel essential to our long-term growth and financial success. The 2008 Plan is structured to provide us with more flexibility in designing cash and equity incentive programs in an environment where a number of companies have moved from traditional option grants to other stock or stock-based awards such as restricted stock and restricted stock units and performance-based compensation. The proposed share increase will assure that a sufficient reserve of common stock is available under the 2008 Plan to allow the Company to remain competitive for executive talent and other key employees.

The 2008 Plan was originally approved by our stockholders at the 2008 Annual Meeting. On March 25, 2010, our board approved the amendment to the 2008 Plan that is the subject of this Proposal 2, subject to the approval of the stockholders at the Meeting.

#### Summary Description of 2008 Incentive Compensation Plan

The principal terms and provisions of the 2008 Plan, as amended, below. The summary, however, is not intended to be a complete description of all the terms of the 2008 Plan and is qualified in its entirety by reference to the complete text of the 2008 Plan, as amended, filed with this Proxy Statement as Appendix A. Any stockholder who wishes to obtain a copy of the actual plan documents may do so upon written request to our Corporate Secretary at our principal offices at 303 George Street, Suite 420, New Brunswick, New Jersey 08901.

**Types of Awards.** The following types of awards may be granted under the 2008 Plan: options, stock appreciation rights, stock awards, restricted stock units, cash awards, performance units and dividend equivalent rights. The principal features of each type of award are described below.

**Administration.** The Compensation Committee of our board has the exclusive authority to administer the 2008 Plan with respect to awards made to our executive officers and non-employee Board members and has the authority to make awards under the 2008 Plan to all other eligible individuals. However, our board may at any time appoint a secondary committee of one (1) or more board members to have separate but concurrent authority with the Compensation Committee to make awards under the 2008 Plan to individuals other than executive officers and non-employee board members. In addition, our board may delegate to one (1) or more executive officers the power to grant awards under the 2008 Plan to one (1) or more employees (other than executive officers) and to exercise such other powers under the 2008 Plan as the board may determine. However, either the board or the Compensation Committee will fix the terms of the awards granted by such officers and the maximum number of shares for which the

executive officers may grant such awards.

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The term “plan administrator,” as used in this summary, will mean our compensation committee, any secondary committee and any executive officers to whom administrative authority is delegated, to the extent each such entity or individual is acting within the scope of its administrative authority under the 2008 Plan.

**Eligibility.** Officers and employees, non-employee members of our board of directors (or the board of our parent or subsidiary), as well as independent consultants and contractors, in our employ or service or in the employ or service of our parent or subsidiary companies (whether now existing or subsequently established) are eligible to participate in the 2008 Plan. As of April [\_\_], 2010, approximately [11] persons (including [3] executive officers) and [8] non-employee board members were eligible to participate in the 2008 Plan.

1. **Securities Subject to 2008 Plan.** 10,137,200 shares of our common stock will initially be reserved for issuance over the term of the 2008 Plan, including the 5,000,000 share increase subject to approval under this proposal. To the extent any options or restricted stock units outstanding under the predecessor 1998 Stock Incentive Plan, also referred to herein as the 1998 Plan, on the effective date of the 2008 Plan subsequently terminate unexercised or without the issuance of shares, the number of shares of common stock subject to those terminated options and restricted stock units will be added to the share reserve available for issuance under the 2008 Plan, up to an additional 1,000,000 shares.

2. The maximum number of shares of common stock which may be issued pursuant to options intended to qualify as incentive stock options under the federal tax laws may not exceed 9,139,073 shares, increased by up to 1,000,000 shares for any increase in the share reserve by reason of the termination of awards under the 1998 Plan.

Awards made under the 2008 Plan will be subject to the following per-participant limitations in order to provide the plan administrator with the opportunity to structure one (1) or more of those awards as performance-based compensation under Section 162(m) of the Internal Revenue Code (“Section 162(m)”):

- For awards measured in terms of shares of our common stock (whether payable in our common stock, cash or a combination of both), no participant in the 2008 Plan may receive awards for more than 1,000,000 shares of our common stock in any single calendar year, subject to adjustment for subsequent stock splits, stock dividends and similar transactions. Stockholder approval of this proposal will also constitute approval of that 1,000,000-share limitation for purposes Section 162(m). Accordingly, such limitation will assure that any deductions to which we would otherwise be entitled upon the exercise of stock options or stock appreciation rights granted under the 2008 Plan will not be subject to the \$1 million limitation on the income tax deductibility of compensation paid per executive officer imposed under Section 162(m). In addition, one (1) or more shares issued under stock awards or restricted stock units may also qualify as performance-based compensation that is not subject to the Section 162(m) limitation, if the vesting of those shares is tied to the attainment of the corporate performance milestones discussed in the summary description below.
- For awards measured in terms of cash dollars at the time of grant (whether payable in cash, shares of our common stock, or both), no participant in the 2008 Plan may receive awards with an aggregate dollar value in excess of \$1,000,000 in any one (1) calendar year, with such limitation to be measured at the time the award is made. Stockholder approval of this proposal will also constitute approval of that \$1,000,000 limitation for purposes of Section 162(m). Accordingly, such limitation will assure that any deductions to which we would otherwise be entitled upon the payment of cash bonuses or the settlement of performance units will not be subject to the \$1 million limitation on the income tax deductibility of compensation paid per executive officer imposed under Section 162(m), to the extent the vesting of those awards is tied to the attainment of one (1) or more of the corporate performance milestones discussed below.



The shares of common stock issuable under the 2008 Plan may be drawn from shares of our authorized but unissued common stock or from shares of our common stock that we acquire, including shares purchased on the open market or in private transactions.

Shares subject to outstanding awards under the 2008 Plan that expire or otherwise terminate prior to the issuance of the shares subject to those awards will be available for subsequent issuance under the 2008 Plan. Any unvested shares issued under the 2008 Plan that are subsequently forfeited or that we repurchase, at a price not greater than the original issue price paid per share, pursuant to our repurchase rights under the 2008 Plan will be added back to the number of shares reserved for issuance under the 2008 Plan and will accordingly be available for subsequent issuance.

In addition, the following share counting procedures will apply in determining the number of shares of common stock available from time to time for issuance under the 2008 Plan:

- Should the exercise price of an option be paid in shares of our common stock, then the number of shares reserved for issuance under the 2008 Plan will be reduced by the net number of shares issued under the exercised option.
- Should shares of common stock otherwise issuable under the 2008 Plan be withheld by us in satisfaction of the withholding taxes incurred in connection with the issuance, exercise or settlement of an award under the plan, then the number of shares of common stock available for issuance under the 2008 Plan will be reduced by the net number of shares actually issued after any such share withholding.
- Upon the exercise of any stock appreciation right granted under the 2008 Plan, the share reserve will be reduced by the net number of shares actually issued upon such exercise.

**Awards.** The plan administrator has complete discretion to determine which eligible individuals are to receive awards, the time or times when those awards are to be granted, the number of shares or amount of payment subject to each such award, the vesting and exercise schedule (if any) to be in effect for the award, the cash consideration (if any) payable per share subject to the award and the form of payment in which the award is to be settled, the maximum term for which the award is to remain outstanding, the status of any granted option as either an incentive stock option or a non-statutory option under the federal tax laws, and with respect to performance-based awards, the amount payable at one or more levels of attained performance, the payout schedule and the form of payment.

**Stock Options.** Each granted option will have an exercise price per share determined by the plan administrator, but the exercise price will not be less than one hundred percent (100%) of the fair market value of the option shares on the grant date. No granted option will have a term in excess of ten (10) years. The shares subject to each option will generally vest in one or more installments over a specified period of service measured from the grant date or upon the achievement of pre-established performance objectives. However, one or more options may be structured so that they will be immediately exercisable for any or all of the option shares. The shares acquired under such immediately exercisable options will be subject to repurchase by us, at the lower of the exercise price paid per share or the fair market value per share, if the optionee ceases service prior to vesting in those shares.

Upon cessation of service, the optionee will have a limited period of time in which to exercise his or her outstanding options to the extent exercisable for vested shares. The plan administrator will have complete discretion to extend the period following the optionee's cessation of service during which his or her outstanding options may be exercised, provide for continued vesting during the applicable post-service exercise period and/or accelerate the exercisability or vesting of options in whole or in part. Such discretion may be exercised at any time while the options remain outstanding.

**Stock Appreciation Rights.** The 2008 Plan allows the issuance of two types of stock appreciation rights:

- Tandem stock appreciation rights granted in conjunction with options which provide the holders with the right to surrender the related option grant for an appreciation distribution from us in an amount equal to the excess of (i) the fair market value of the vested shares of our common stock subject to the surrendered option over (ii) the aggregate

exercise price payable for those shares.

- Stand-alone stock appreciation rights which allow the holders to exercise those rights as to a specific number of shares of our common stock and receive in exchange an appreciation distribution from us in an amount equal to the excess of (i) the fair market value of the shares of common stock as to which those rights are exercised over (ii) the aggregate exercise price in effect for those shares. The exercise price per share may not be less than the fair market value per share of our common stock on the date the stand-alone stock appreciation right is granted, and the right may not have a term in excess of ten (10) years.

The appreciation distribution on any exercised stock appreciation right will be paid in (i) cash, (ii) shares of our common stock or (iii) a combination of cash and shares of our common stock. Upon cessation of service with us, the holder of a stock appreciation right will have a limited period of time in which to exercise that right to the extent exercisable at that time. The plan administrator has complete discretion to extend the period following the holder's cessation of service during which his or her outstanding stock appreciation rights may be exercised, provide for continued vesting during the applicable post-service exercise period and/or accelerate the exercisability or vesting of stock appreciation rights in whole or in part. Such discretion may be exercised at any time while the stock appreciation rights remain outstanding.

**Repricing Prohibition.** The plan administrator may not implement any of the following repricing programs without obtaining stockholder approval: (i) the cancellation of outstanding options or stock appreciation rights in return for new options or stock appreciation rights with a lower exercise price per share, (ii) the cancellation of outstanding options or stock appreciation rights with exercise prices per share in excess of the then current fair market value per share of our common stock for consideration payable in our equity securities or (iii) the direct reduction of the exercise price in effect for outstanding options or stock appreciation rights.

**Stock Awards and Restricted Stock Units.** Shares of our common stock may be issued under the 2008 Plan subject to performance or service vesting requirements established by the plan administrator or as a fully-vested bonus for past services without any cash outlay required of the recipient. Shares of our common stock may also be issued under the 2008 Plan pursuant to restricted stock units which entitle the recipients to receive those shares upon the attainment of designated performance goals or the completion of a prescribed service period or upon the expiration of a designated time period following the vesting of those units, including (without limitation), a deferred distribution date following the termination of the recipient's service with us.

In order to assure that the compensation attributable to one or more stock awards or restricted stock units will qualify as performance-based compensation which will not be subject to the \$1 million limitation on the income tax deductibility of the compensation paid per executive officer which is imposed under Internal Revenue Code Section 162(m), the plan administrator will have the discretionary authority to structure one or more such awards so that the shares of common stock subject to those awards will vest only upon the achievement of certain pre-established corporate performance goals based on one or more of the following criteria: (i) pre-tax or after-tax earnings, profit or net income, (ii) revenue or revenue growth, (iii) earnings per share, (iv) return on assets, capital or stockholder equity, (v) total stockholder return, (vi) gross or net profit margin, (vii) cash flow, (viii) earnings or operating income before interest, taxes, depreciation, amortization and/or charges for stock-based compensation, (ix) market share, (x) increases in customer base, (xi) operating income, net operating income or net operating income after recorded tax expense; (xii) operating profit, net operating profit or net operating profit after recorded tax expense, (xiii) operating margin, (xiv) cost reductions or other expense control objectives, (xv) market price of our common stock, whether measured in absolute terms or in relationship to earnings or operating income, (xvi) budget objectives, (xvii) working capital, (xviii) mergers, acquisitions or divestitures or (xix) measures of customer satisfaction. Each performance criteria may be based upon the attainment of specified levels of our performance under one or more of the measures described above relative to the performance of other entities and may also be based on the performance of any of our business units or divisions or any parent or subsidiary. Each applicable performance goal may include a minimum threshold level of performance below which no award will be earned, levels of performance at which specified

portions of an award will be earned and a maximum level of performance at which an award will be fully earned. Each applicable performance goal may be structured at the time of the award to provide for appropriate adjustment for one or more of the following items: (A) asset impairments or write-downs; (B) litigation judgments or claim settlements; (C) the effect of changes in tax law, accounting principles or other such laws or provisions affecting reported results; (D) accruals for reorganization and restructuring programs; (E) any extraordinary nonrecurring items as described in Accounting Principles Board Opinion No. 30 and/or in management's discussion and analysis of financial condition and results of operations appearing in our annual report to stockholders for the applicable year; (F) the operations of any business acquired by us or any parent or subsidiary or of any joint venture in which we or any parent or subsidiary participate; (G) the divestiture of one or more business operations or the assets thereof; or (H) the costs incurred in connection with such acquisitions or divestitures.

Stockholder approval of this proposal will also constitute approval of the foregoing performance goals for purposes of establishing the vesting targets for one or more awards under the 2008 Plan that are intended to qualify as performance-based compensation under Section 162(m).

Should the participant cease to remain in service while holding one or more unvested shares or should the performance objectives not be attained with respect to one or more such unvested shares, then those shares will be immediately susceptible for cancellation. Outstanding restricted stock units will automatically terminate, and no shares of our common stock will actually be issued in satisfaction of those awards, if the performance goals or service requirements established for such awards are not attained. The plan administrator, however, will have the discretionary authority to issue shares of our common stock in satisfaction of one or more outstanding awards as to which the designated performance goals or service requirements are not attained. However, no vesting requirements tied to the attainment of performance objectives may be waived with respect to awards which were intended at the time of issuance to qualify as performance-based compensation under Section 162(m), except in the event of a change in control, as described under the heading “General Provisions – Vesting Acceleration.”

**Cash Awards.** Cash awards vest over an eligible individual’s designated service period or upon the attainment of pre-established performance goals. Cash awards which become due and payable following the attainment of the applicable performance goal and satisfaction of any service period may be paid in cash and/or shares of our common stock.

In order to assure that the compensation attributable to one or more cash awards will qualify as performance-based compensation which will not be subject to the \$1 million limitation on the income tax deductibility of the compensation paid per executive officer which is imposed under Internal Revenue Code Section 162(m), the plan administrator has the discretionary authority to structure one or more awards so that cash or shares of common stock subject to those awards will vest only upon the achievement of certain pre-established corporate performance goals based on one or more of the performance goals described above in the summary of “Stock Awards and Restricted Stock Units”.

The plan administrator has the discretionary authority at any time to accelerate the vesting of any and all cash awards. However, no vesting requirements tied to the attainment of performance objectives may be waived with respect to awards which were intended at the time of issuance to qualify as performance-based compensation under Section 162(m), except in the event of a change in control as described under the heading “General Provisions – Vesting Acceleration.”

**Performance Units.** A performance unit represents a participating interest in a special bonus pool tied to the attainment of pre-established corporate performance objectives based on one or more performance goals described above in the summary of “Stock Awards and Restricted Stock Units”. The amount of the bonus pool may vary with the level at which the applicable performance objectives are attained, and the value of each performance unit which becomes due and payable upon the attained level of performance will be determined by dividing the amount of the resulting bonus pool (if any) by the total number of performance units issued and outstanding at the completion of the applicable performance period.

Performance units may also be structured to include a service-vesting requirement which the participant must satisfy following the completion of the performance period in order to vest in the performance units awarded with respect to that performance period.

Performance units which become due and payable following the attainment of the applicable performance objectives and the satisfaction of any applicable service-vesting requirement may be paid in cash and/or shares of our common stock valued at fair market value on the payment date.



The plan administrator will have the discretionary authority at any time to accelerate the vesting of any and all performance units. However, no vesting requirements tied to the attainment of performance objectives may be waived with respect to awards which were intended at the time of issuance to qualify as performance-based compensation under Section 162(m), except in the event of a change in control as described under the heading “General Provisions – Vesting Acceleration.”

**Dividend Equivalent Rights.** Dividend equivalent rights may be issued as stand-alone awards or in tandem with other awards made under the 2008 Plan. Each dividend equivalent right award will represent the right to receive the economic equivalent of each dividend or distribution, whether in cash, securities or other property (other than shares of our common stock) which is made per issued and outstanding share of common stock during the term the dividend equivalent right remains outstanding. Payment of the amounts attributable to such dividend equivalent rights may be made either concurrently with the actual dividend or distribution made per issued and outstanding share of our common stock or may be deferred to a later date. Payment may be made in cash or shares of our common stock.

#### Stock Awards

The following table sets forth, as to our Chief Executive Officer, our Chief Financial Officer, our three other most highly compensated executive officers and the other individuals and groups indicated, the number of shares of our common stock subject to option grants made under the 2008 Plan from January 1, 2009 through April 1, 2010, together with the weighted average exercise price per share in effect for such option grants.

| Name and Position   | Number of Shares Underlying Options Granted (#) | Weighted Average Exercise Price Per Share (\$) |
|---|---|--|
| Jack Van Hulst  | 253,032   | \$ 0.44  |
| Joel Brooks   | 300,000   | \$ 0.29  |
| Richard Dondero   | 380,000   | \$ 0.36  |
| John E. Thompson  | 48,000  | \$ 0.60  |
| All current executive officers as a group (4 persons)   | 981,032   | \$ 0.37  |
| <b>Directors:</b>   |   |  |
| Harlan W. Waksal, M.D.  | 241,007   | \$ 0.38  |
| Rudolf Stalder  | 329,869   | \$ 0.46  |
| Christopher Forbes  | 248,949   | \$ 0.49  |
| Thomas Quick  | 197,271   | \$ 0.45  |
| John Braca  | 258,503   | \$ 0.44  |
| David Rector  | 241,580   | \$ 0.45  |
| Warren Isabelle   | 25,000  | \$ 0.39  |
| All current non-employee directors as a group (7 persons)                                       | 1,542,179                                       | \$ 0.45  |
| All employees, including current officers who are not executive officers, as a group (1 person) | 7,500   | \$ 0.29  |

#### New Plan Benefits

No awards have been made under the 2008 Plan on the basis of the share increase subject to stockholder approval under this proposal.

#### General Provisions



Vesting Acceleration. In the event we should experience a change in control, the following special vesting acceleration provisions is in effect for all outstanding awards under the 2008 Plan:

- (i) Each outstanding option, stock appreciation right, stock award and restricted stock unit award will automatically accelerate in full upon a change in control, if that award is not assumed, substituted, replaced with a cash retention program that preserves the intrinsic value of the award and provides for subsequent payout in accordance with the same vesting schedule applicable to the award or otherwise continued in effect by the successor corporation.
- (ii) The plan administrator has complete discretion to grant one or more awards which will vest in the event the individual's service with us or the successor entity is terminated within a designated period following a change in control transaction in which those awards are assumed or otherwise continued in effect.
- (iii) The plan administrator has the discretion to structure one or more awards so that those awards will immediately vest upon a change in control, whether or not they are to be assumed or otherwise continued in effect.
- (iv) Unless the plan administrator establishes a different definition for one or more awards, a change in control will be deemed to occur for purposes of the 2008 Plan in the event (a) we are acquired by merger or asset sale or (b) there occurs any transaction (or series of related transactions within the twelve (12)-month period ending with the most recent acquisition) pursuant to which any person or group of related persons becomes directly or indirectly the beneficial owner of securities possessing (or convertible into or exercisable for securities possessing) fifty percent (50%) or more of the total combined voting power of our outstanding securities or (c) there is a change in the majority of the Board effected through one or more contested elections for Board membership.

The plan administrator's authority above extends to any awards intended to qualify as performance-based compensation under Section 162(m), even though the accelerated vesting of those awards may result in their loss of performance-based status under Section 162(m).

**Changes in Capitalization.** In the event any change is made to the outstanding shares of our common stock by reason of any stock split, stock dividend, recapitalization, combination of shares, exchange of shares, spin-off transaction or other change in corporate structure effected without our receipt of consideration or should the value of our outstanding shares of common stock be substantially reduced by reason of a spin-off transaction or extraordinary dividend or distribution or should there occur any merger, consolidation or other reorganization, equitable adjustments will be made to: (i) the maximum number and/or class of securities issuable under the 2008 Plan; (ii) the maximum number and/or class of securities by which the share reserve may increase by reason of the expiration or termination of unexercised options or restricted stock units under the Predecessor Plan, (iii) the maximum number and/or class of securities for which incentive stock options may be granted under the 2008 Plan; (iv) the maximum number and/or class of securities for which any one (1) person may be granted common stock-denominated awards under the 2008 Plan per calendar year; (v) the number and/or class of securities and the exercise price per share in effect for outstanding options and stock appreciation rights and (v) the number and/or class of securities subject to each outstanding stock award, restricted stock unit, performance unit, dividend equivalent right and any other award denominated in shares of our common stock and the cash consideration (if any) payable per share. Such adjustments will be made in such manner as the plan administrator deems appropriate in order to preclude any dilution or enlargement of benefits under the 2008 Plan or the outstanding awards thereunder.

**Valuation.** The fair market value per share of our common stock on any relevant date under the 2008 Plan is deemed to be equal to the closing selling price per share on that date on the NYSE AMEX market. As of April [\_\_\_], 2010, the fair market value of our common stock determined on such basis was \$[\_\_\_] per share.

**Stockholder Rights and Transferability.** No optionee has any stockholder rights with respect to the option shares until such optionee has exercised the option and paid the exercise price for the purchased shares. The holder of a stock appreciation right will not have any stockholder rights with respect to the shares subject to that right unless and until

such person exercises the right and becomes the holder of record of any shares of our common stock distributed upon such exercise. Options are not assignable or transferable other than by will or the laws of inheritance following optionee's death, and during the optionee's lifetime, the option may only be exercised by the optionee. However, the plan administrator may structure one or more non-statutory options under the 2008 Plan so that those options will be transferable during optionee's lifetime to one or more members of the optionee's family or to a trust established for the optionee and/or one or more such family members or to the optionee's former spouse, to the extent such transfer is in connection with the optionee's estate plan or pursuant to a domestic relations order. Stand alone stock appreciation rights will be subject to the same transferability restrictions applicable to non-statutory options.

A participant will have full stockholder rights with respect to any shares of common stock issued to him or her under the 2008 Plan, whether or not his or her interest in those shares is vested. A participant will not have any stockholder rights with respect to the shares of common stock subject to restricted stock units until that award vests and the shares of common stock are actually issued thereunder. However, dividend-equivalent units may be paid or credited, either in cash or in actual or phantom shares of common stock, on outstanding restricted stock units, subject to such terms and conditions as the plan administrator may deem appropriate.

**Special Tax Election.** The plan administrator may provide one or more holders of awards under the 2008 Plan with the right to have us withhold a portion of the shares otherwise issuable to such individuals in satisfaction of the withholding taxes to which they become subject in connection with the issuance, exercise or settlement of those awards. Alternatively, the plan administrator may allow such individuals to deliver previously acquired shares of our common stock in payment of such withholding tax liability.

**Amendment and Termination.** Our board of directors may amend or modify the 2008 Plan at any time subject to stockholder approval to the extent required under applicable law or regulation or pursuant to the listing standards of the stock exchange on which our common stock is at the time primarily traded. Unless sooner terminated by our board of directors, the 2008 Plan will terminate on the earliest of (i) September 22, 2018, (ii) the date on which all shares available for issuance under the 2008 Plan have been issued as fully-vested shares or (iii) the termination of all outstanding awards in connection with certain changes in control or ownership.

#### Summary of Federal Income Tax Consequences

The following is a summary of the Federal income taxation treatment applicable to us and the participants who receive awards under the 2008 Plan.

**Option Grants.** Options granted under the discretionary grant program may be either incentive stock options which satisfy the requirements of Section 422 of the Internal Revenue Code or non-statutory options which are not intended to meet such requirements. The Federal income tax treatment for the two types of options differs as follows:

**Incentive Options.** No taxable income is recognized by the optionee at the time of the option grant, and no taxable income is recognized for regular tax purposes at the time the option is exercised, although taxable income may arise at that time for alternative minimum tax purposes. The optionee will recognize taxable income in the year in which the purchased shares are sold or otherwise made the subject of certain other dispositions. For Federal tax purposes, dispositions are divided into two categories: (i) qualifying, and (ii) disqualifying. A qualifying disposition occurs if the sale or other disposition is made more than two (2) years after the date the option for the shares involved in such sale or disposition is granted and more than one (1) year after the date the option is exercised for those shares. If the sale or disposition occurs before these two periods are satisfied, then a disqualifying disposition will result.

Upon a qualifying disposition, the optionee will recognize long-term capital gain in an amount equal to the excess of (i) the amount realized upon the sale or other disposition of the purchased shares over (ii) the exercise price paid for the shares. If there is a disqualifying disposition of the shares, then the excess of (i) the fair market value of those shares on the exercise date or (if less) the amount realized upon such sale or disposition over (ii) the exercise price paid for the shares will be taxable as ordinary income to the optionee. Any additional gain recognized upon the disposition will be a capital gain.

If the optionee makes a disqualifying disposition of the purchased shares, then we will be entitled to an income tax deduction, for the taxable year in which such disposition occurs, equal to the amount of ordinary income recognized by the optionee as a result of the disposition. We will not be entitled to any income tax deduction if the optionee makes a qualifying disposition of the shares.



**Non-Statutory Options.** No taxable income is recognized by an optionee upon the grant of a non-statutory option. The optionee will in general recognize ordinary income, in the year in which the option is exercised, equal to the excess of the fair market value of the purchased shares on the exercise date over the exercise price paid for the shares, and the optionee will be required to satisfy the tax withholding requirements applicable to such income. We will be entitled to an income tax deduction equal to the amount of ordinary income recognized by the optionee with respect to the exercised non-statutory option. The deduction will in general be allowed for our taxable year in which such ordinary income is recognized by the optionee.

**Stock Appreciation Rights.** No taxable income is recognized upon receipt of a stock appreciation right. The holder will recognize ordinary income in the year in which the stock appreciation right is exercised, in an amount equal to the excess of the fair market value of the underlying shares of common stock on the exercise date over the base price in effect for the exercised right, and the holder will be required to satisfy the tax withholding requirements applicable to such income. We will be entitled to an income tax deduction equal to the amount of ordinary income recognized by the holder in connection with the exercise of the stock appreciation right. The deduction will be allowed for the taxable year in which such ordinary income is recognized.

**Stock Awards.** The recipient of unvested shares of common stock issued under the 2008 Plan will not recognize any taxable income at the time those shares are issued but will have to report as ordinary income, as and when those shares subsequently vest, an amount equal to the excess of (i) the fair market value of the shares on the vesting date over (ii) the cash consideration (if any) paid for the shares. The recipient may, however, elect under Section 83(b) of the Internal Revenue Code to include as ordinary income in the year the unvested shares are issued an amount equal to the excess of (i) the fair market value of those shares on the issue date over (ii) the cash consideration (if any) paid for such shares. If the Section 83(b) election is made, the recipient will not recognize any additional income as and when the shares subsequently vest. We will be entitled to an income tax deduction equal to the amount of ordinary income recognized by the recipient with respect to the unvested shares. The deduction will in general be allowed for our taxable year in which such ordinary income is recognized by the recipient.

**Restricted Stock Units.** No taxable income is recognized upon receipt of restricted stock units. The holder will recognize ordinary income in the year in which the shares subject to the units are actually issued to the holder. The amount of that income will be equal to the fair market value of the shares on the date of issuance, and the holder will be required to satisfy the tax withholding requirements applicable to such income. We will be entitled to an income tax deduction equal to the amount of ordinary income recognized by the holder at the time the shares are issued. The deduction will be allowed for the taxable year in which such ordinary income is recognized.

**Cash Awards.** The payment of a cash award will result in the recipient's recognition of ordinary income equal to the dollar amount received. The recipient will be required to satisfy the tax withholding requirements applicable to such income. We will be entitled to an income tax deduction equal to the amount of ordinary income recognized by the holder at the time the cash award is paid. The deduction will be allowed for the taxable year in which such ordinary income is recognized.

**Performance Units.** No taxable income is recognized upon receipt of performance units. The holder will recognize ordinary income in the year in which the performance units are settled. The amount of that income will be equal to the fair market value of the shares of common stock or cash received in settlement of the performance units, and the holder will be required to satisfy the tax withholding requirements applicable to such income. We will be entitled to an income tax deduction equal to the amount of the ordinary income recognized by the holder of the performance units at the time those units are settled. That deduction will be allowed for the taxable year in which such ordinary income is recognized.

Dividend Equivalent Rights. No taxable income is recognized upon receipt of a dividend equivalent right award. The holder will recognize ordinary income in the year in which a dividend or distribution, whether in cash, securities or other property, is paid to the holder. The amount of that income will be equal to the fair market value of the cash, securities or other property received, and the holder will be required to satisfy the tax withholding requirements applicable to such income. We will be entitled to an income tax deduction equal to the amount of the ordinary income recognized by the holder of the dividend equivalent right award at the time the dividend or distribution is paid to such holder. That deduction will be allowed for the taxable year in which such ordinary income is recognized.

**Deductibility of Executive Compensation.** We anticipate that any compensation deemed paid by us in connection with the exercise of non-statutory options or stock appreciation rights will qualify as performance-based compensation for purposes of Section 162(m) and will not have to be taken into account for purposes of the \$1 million limitation per covered individual on the deductibility of the compensation paid to certain of our executive officers. Accordingly, the compensation deemed paid with respect to options and stock appreciation rights granted under the 2008 Plan will remain deductible by us without limitation under Section 162(m). However, any compensation deemed paid by us in connection with shares issued under stock awards or restricted stock units or shares or cash issued under the incentive bonus program will be subject to the \$1 million limitation, unless the issuance of the shares or cash is tied to one or more of the performance milestones described above.

**Accounting Treatment.** Pursuant to the accounting standards established by Statement of Financial Accounting Standards No. 123R, Share-Based Payment, or SFAS 123R, we will be required to expense all share-based payments, including grants of stock options, stock appreciation rights, restricted stock, restricted stock units and all other stock-based awards under the 2008 Plan. Accordingly, stock options and stock appreciation rights which are granted to our employees and non-employee Board members and payable in shares of our common stock will have to be valued at fair value as of the grant date under an appropriate valuation formula, and that value will then have to be charged as a direct compensation expense against our reported earnings over the designated vesting period of the award. For shares issuable upon the vesting of restricted stock units awarded under the 2008 Plan, we will be required to amortize over the vesting period a compensation cost equal to the fair market value of the underlying shares on the date of the award. If any other shares are unvested at the time of their direct issuance, then the fair market value of those shares at that time will be charged to our reported earnings ratably over the vesting period. Such accounting treatment for restricted stock units and direct stock issuances will be applicable whether vesting is tied to service periods or performance goals. The issuance of a fully-vested stock bonus will result in an immediate charge to our earnings equal to the fair market value of the bonus shares on the issuance date.

For performance units awarded under the 2008 Plan and payable in stock, we will be required to amortize, over the applicable performance period and any subsequent service vesting period, a compensation cost equal to the fair market value of the underlying shares on the date of the award. For performance units awarded under the 2008 Plan and payable in cash, we will amortize the potential cash expense over the applicable performance period and any subsequent service vesting period. Dividends or dividend equivalents paid on the portion of an award that vests will be charged against our retained earnings. If the award holder is not required to return the dividends or dividend equivalents if they forfeit their awards, dividends or dividend equivalents paid on instruments that do not vest will be recognized by us as additional compensation cost.

#### Required Vote and Board Recommendation

The affirmative vote of the holders of a majority of the shares present in person or represented by proxy and voting on the Proposal 2, provided that affirmative vote also represents at least a majority of the voting power required to constitute a quorum at the annual meeting, is required for approval of the amendment to the 2008 Plan. Should such approval not be obtained, then the share reserve will not be increased. However, awards will continue to be made under the 2008 Plan until the date all the shares of our common stock currently reserved for issuance under the 2008 Plan have been issued or any earlier termination of the 2008 Plan.

#### Recommendation of the Board of Directors

The Board believes that Proposal 2 is in the Company's best interests and in the best interests of our stockholders and recommends a vote "FOR" the amendment to the 2008 Incentive Compensation Plan.





### PROPOSAL 3

#### PROPOSAL TO AMEND OUR CERTIFICATE OF INCORPORATION TO INCREASE THE TOTAL NUMBER OF AUTHORIZED SHARES OF COMMON STOCK, \$0.01 PAR VALUE PER SHARE, FROM 120,000,000 TO 250,000,000

#### BACKGROUND INFORMATION

##### Background of the Transaction

As disclosed in our filings with the Securities and Exchange Commission, since consummating our last financing with certain investors in the first quarter of Fiscal 2010, we have been seeking additional sources of capital in order to fund our operations and research and development projects. While we have been utilizing funds raised in this previous financing to fund our operations, through the present time, our board and management have been focusing their efforts on ascertaining sources of financing.

Since our last financing, our board engaged in formal internal discussions as to the best course of action which would present the most opportunity for us to ascertain funding. Our board, along with our management, at that time, attempted to reach out to several of our current investors as well as engage in discussions with several investment banks in the hopes that the then current investors and/or the investment banks could provide us with funding, or at least sources through which we could raise funds.

In addition, during our first quarter of Fiscal 2010, our management and certain of our board members engaged in one-on-one discussions with investors in the hopes that such investors would be interested in getting to better know and understand our operations. The members of our board also reached out to various contacts that they had around the country in an attempt to ascertain if such contacts, or any who they knew of, had an interest in investing in us.

Further, during this time, management and the board also engaged in informal discussions on a routine basis regarding our financial position. While we remained focused on moving towards our proposed clinical trial, the board and management were well aware that such trials would not succeed, or even occur, if we were unable to secure additional funding.

At a meeting of our board, on March 23, 2009, we formally retained two investment banks to assist us in consummating a financing. Formal engagement letters were signed with each of the banks. Over the course of the next two (2) months, we worked closely with such banks, and continued to pursue additional contacts. In addition a third investment bank was retained by the board on November 16, 2009 and a fourth investment bank was retained by the board on December 15, 2009. An extensive search for potential investors was undertaken, including a significant effort on the part of the retained investment banks.

Ultimately, after reviewing all opportunities, in March 2010, we learned that certain investors were potentially interested in engaging in a financing with us so long as certain of our insiders also participated in the financing. During the days that ensued, certain members of our board as well as management discussed the structure of such a financing.

Finally, at a board meeting which was held on March 25, 2010, management presented the board with certain terms that they had negotiated with certain investors. Certain members of the board, at that time, also informed the board that they desired to participate in the financing on the terms set forth by the investors. Accordingly, on that date, management and certain members of the board approved the transactions with the investors, also referred to herein as the Non-Affiliated Investors, and Harlan W. Waksal, M.D. and Christopher Forbes, also referred to herein as the

Affiliate Investors, subject to the final negotiation and execution of definitive agreements. The terms of such financing had been previously heavily negotiated with each investor over the course of several of the preceding weeks and management and the board agreed at such meeting, that the terms of such deal, were the best that could be ascertained. In addition, the Audit Committee of the board approved any related party transaction.

## Description of the Transaction

### Purchase Agreement and Warrants

The following summary of the transaction, including the Purchase Agreements and the Warrants is qualified in its entirety by reference to, and should be read in conjunction with, the forms of Purchase Agreement (which includes forms of the Warrant, a copies of which were filed as exhibits to Current Report on Form 8-K filed on March 29, 2010 and are incorporated herein by reference.

### Summary of the Offering

On March 26, 2010, the Company entered into two Purchase Agreements, referred to herein as the Non-Affiliate Purchase Agreements, between the Company and certain non-affiliated investors who are a party thereto, referred to herein as the Non-Affiliated Investors. On March 26, 2010, the Company also entered into a third Purchase Agreement, referred to herein as the Affiliate Purchase Agreement, between the Company and certain affiliated investors who are a party thereto, referred to herein as the Affiliated Investors. Collectively the Non-Affiliate Purchase Agreements and Affiliate Purchase Agreement shall be referred to herein as the Purchase Agreements and collectively the Non-Affiliated Investors and Affiliated Investors shall be referred to herein as the Investors. The respective Purchase Agreements contain substantially similar terms. It is anticipated that the offering will bring gross proceeds to the Company in the amount of approximately \$11,497,000 and net proceeds to the Company in the amount of approximately \$10,800,000.

Pursuant to the Non-Affiliate Purchase Agreements, the Company agreed to issue to the Non-Affiliated Purchasers, in a private placement, an aggregate of approximately 10,297 shares of the Company's 10% Series A Convertible Preferred Stock, par value \$0.01 per share, referred to herein as the Series A Preferred Stock, initially convertible into approximately 32,178,125 shares of the Company's common stock, par value \$0.01 per share, referred to herein as the Common Stock, and (ii) immediately exercisable warrants to purchase up to approximately 32,178,125 shares of Common Stock for an aggregate offering price of approximately \$10,297,000.

Pursuant to the Affiliate Purchase Agreement, the Company agreed to issue to the Affiliate Purchasers, in a private placement, an aggregate of approximately 1,200 shares of the Company's 10% Series B Convertible Preferred Stock, par value \$0.01 per share, referred to herein as the Series B Preferred Stock, initially convertible into approximately 3,750,000 shares of Common Stock, and (ii) immediately exercisable warrants to purchase up to approximately 3,750,000 shares of Common Stock for an aggregate offering price of approximately \$1,200,000. The Series B Preferred Stock will only be issued after the Company receives stockholder approval. Collectively, the Series A Preferred Stock and Series B Preferred Stock shall be referred to herein as the Preferred Stock.

We expect to use the net proceeds from the transaction for general corporate purposes.

In connection with the offering, the Company has agreed to solicit shareholder approval of (i) the ability of the Investors to convert the securities into common stock, which in the aggregate exceed 20% of our currently outstanding shares of common stock and (ii) the issuance of the securities to the Affiliated Investors pursuant to the terms and conditions of the Affiliate Purchase Agreement at a stockholders' meeting to be held as soon as possible, referred to herein as the Shareholders' Meeting.

The Company closed on the offering with the Non-Affiliate Purchasers on April 1, 2010 and, further, will close the offering with the Affiliate Purchasers as soon as reasonably possible after the receipt of stockholder approval at the Shareholders' Meeting.

## Warrants

Pursuant to the Purchase Agreements, the Company agreed to deliver each of a Series A Warrant to the Non-Affiliate Investors and a Series B Warrant to the Affiliate Investors as well as certain Placement Agent Warrants, referred to herein as the Warrants. Each Warrant has an initial exercise price of \$0.35 per share of Common Stock. The Warrants are immediately exercisable and have a five (5) year term. The Series A Warrants are subject to a 19.99% blocker provision to comply with NYSE Amex Rules, which provisions will expire if the stockholders approve the Offering at the Stockholders' Meeting. The Series B Warrants do not contain a blocker, as they will be issued only after the Company receives stockholder approval to issue such warrants. The Series A Warrants also contain an provision which limits the holders beneficial ownership to a maximum of 4.99% (which percentage may be increased to 9.99% upon sixty (60) days notice to the Company). Upon the occurrence of certain dilutive events the number of shares underlying the Warrants may be increased.

### Registration Rights Agreement

The Company also entered into a Registration Rights Agreement dated as of March 26, 2010, by and among the Company and the Non-Affiliate Investors only, referred to herein as the Registration Rights Agreement. The Affiliate Investors are not a party to the Registration Rights Agreement. Pursuant to the Registration Rights Agreement, the Company has agreed to file a registration statement, also referred to herein as the Registration Statement, with the Securities and Exchange Commission within, except for certain limited exceptions, thirty (30) days of closing the offering, also referred to herein as the Filing Deadline, to register the shares of Common Stock issuable upon conversion or exercise of the shares of Series A Preferred Stock and the Warrants, as the case may be, also referred to herein as the Underlying Shares. In the event the Company does not file the Registration Statement on or before the Filing Deadline, the Company will be required to pay liquidated damages in an amount equal to 1% of the aggregate amount purchase price paid by the holder for any unregistered securities then held by such Investor up to a maximum of 3%. The Company must file additional registration statements until all of the securities may be sold pursuant to an effective registration statement or the securities become eligible for sale under Rule 144 of the Securities Act.

### Placement Agent Warrants

As partial compensation for its placement agent services related to such Non-Affiliate Purchase Agreement, the Company has issued to Ladenburg Thalmann & Co. (which acted as exclusive placement agent for a portion of this offering represented by such Non-Affiliate Purchase Agreement) a warrant initially exercisable to purchase up to approximately 929,688 shares of Common Stock at an exercise price of \$0.35 per share of Common Stock. The Company issued a warrant initially exercisable to purchase up to approximately 103,125 shares of Common Stock at an exercise price of \$0.35 per share of Common Stock to Midtown Partners & Co. LLC as part of a tail coverage fee in connection with the offering, collectively such warrants issued to each of Ladenburg and Midtown shall be referred to herein as the Placement Agent Warrants. The Placement Agent Warrants have the same terms as the Series A Warrant.

## Certificates of Designations

On March 31, 2010 the Company filed each of the Certificate of Designations designating 10% Series A Convertible Preferred Stock and the Certificate of Designations designating 10% Series B Convertible Preferred Stock, referred to herein as the Certificate of Designations, to its Amended and Restated Articles of Incorporation, as amended, referred to herein as the Articles of Incorporation, with the Secretary of State of the State of Delaware, establishing the Preferred Stock. The Preferred Stock does not have any voting rights. Each share of Preferred Stock has a stated value of \$1,000, referred to herein as the Stated Value. Each holder of shares of Preferred Stock is entitled to receive semi-annually dividends at the rate of 10% per annum of the Stated Value for each share of Preferred Stock held by such holder. Except in limited circumstances, the Company can elect to pay the dividends in cash or shares of Common Stock. Each share of Preferred Stock is entitled to a liquidation preference equal to the Stated Value plus any accrued and unpaid dividends. The shares of Preferred Stock are convertible into shares of Common Stock at an initial conversion price of \$0.32 per share, which price may be adjusted upon the occurrence of certain dilutive events, and are convertible at any time, provided that in the conversion of shares of Series A Preferred Stock into shares of Common Stock is subject to a 19.99% blocker provision, which provision will expire if the stockholders approve the offering at the Stockholders' Meeting. The Series A Preferred Stock is also subject to a provision which limits the holders' beneficial ownership to a maximum of 4.99% (which percentage may be increased to 9.99% upon sixty (60) days notice to the Company). In addition, until the earlier of (i) the earlier of (A) seventy-five (75) days after the date the Company's registration statement is declared effective or (B) nine (9) months after the closing date, or (ii) as long as less than twenty percent (20%) of the shares of Series A Preferred Stock originally issued hereunder are outstanding, unless otherwise agreed to by a certain percentage of the holders of Series A Preferred Stock, the Company may not (1) except in limited circumstances, enter into, create, incur assume, guarantee or suffer to exist any indebtedness for borrowed money, (2) except in limited circumstances, enter into, create, incur assume, guarantee or suffer to exist any liens, (3) except in connection with the issuance of the Preferred Stock, amend its charter documents in a manner that materially adversely affects the rights of any holder of Preferred Stock, (4) except in limited circumstances repay, repurchase or offer to repay, repurchase or otherwise acquire more than a de minimis number of shares of its common stock, (5) pay cash dividends or distributions on securities which are junior to the Series A Preferred Stock or (5) enter into any transaction with an affiliate of the Company which is not at an arms-length basis or approved by a disinterested majority of the board. In addition, upon the occurrence of certain events, the holders of Series A Preferred Stock may redeem all of their Series A Preferred Stock. Such events include (1) if the Company fails to deliver certificates representing issuable upon a conversion hereunder prior to the tenth business day after such shares are required to be delivered, (2) the Company fails to pay in full the amount of cash due pursuant to a buy-in or other event within ten (10) business days, (3) the Company fails to have available a sufficient number of authorized and unreserved shares of Common Stock to issue to an Investor upon a conversion of the Series A Preferred Stock, (4) the Company materially breaches a term in a document underlying the transaction which is not cured within thirty (30) days, (4) the Company redeems more than a de minimis number of securities which are junior to the Series A Preferred Stock, (5) there occurs a change in control transaction or bankruptcy event or (6) the Common Stock shall fail to be listed or quoted for trading on a stock market for more than five (5) trading days. Each holder of Preferred Stock also has the right to participate in future financings of the Company.

As described above, we have already consummated the transaction with the Non-Affiliated Investors, however, in order to consummate the remaining aspects of the transaction and to consummate the transactions with the Affiliated Investors, certain conditions must be satisfied, including the receipt of approvals from our stockholders, as described in this proxy statement;

We have already received gross proceeds of \$10,297,000 (and net proceeds of approximately \$9,600,000 after deducting estimated expenses), in connection with our sale of securities to the Non-Affiliated Investors. We expect to receive additional net proceeds of approximately \$1,200,000 if we are able to consummate the transaction with the Affiliated Investors. We expect the transaction with the Affiliated Investors to close as soon as possible after receipt of any required approvals from our stockholders. We expect to use the net proceeds for general corporate purposes.

Representations and Warranties. Except for its status as the contractual document between the parties with respect to the agreements described therein, it is not intended to provide factual information about the parties. The representations and warranties contained in the Purchase Agreements were made only for purposes of such agreement and as of specific dates, were solely for the benefit of the parties to such agreement, and are subject to limitations agreed to by the contracting parties, including being qualified by disclosures between the parties. These representations and warranties have been made for the purposes of allocating contractual risk between the parties to the agreement instead of establishing these matters as facts, and may be subject to standards of materiality applicable to the contracting parties that differ from those applicable to investors. Accordingly, they should not be relied upon by investors as statements of factual information.

Need for Additional Capital. We will need to raise substantial additional funds, to continue our operations and fund clinical studies. Our plan is to continue to finance our operations with a combination of equity issuances (including the possible closings of the transaction) and other financings. Any future issuance of convertible debt securities, preferred stock or common stock may be at a discount from the then-current trading price of our common stock. If we issue additional common or preferred stock or securities convertible into common stock, our stockholders will experience additional dilution, which may be significant. If we are unable to raise substantial additional capital through the possible additional closings of the transactions covered by Proposals 4 and 5, and otherwise, we may not be able to continue to operate as a going concern. To the extent the additional closings of the transactions covered by Proposals 4 and 5 do not occur as a result of the failure to obtain requisite approval of our stockholders, we do not know whether additional funding will be available to us on acceptable terms, or at all, to continue to operate as a going concern.



### Interest of Certain Persons in Matters to be Acted Upon

Each of Messrs. Harlan W. Waksal, M.D. and Christopher Forbes are members of our board. It is anticipated that if Proposals 3, 4 and 5 are approved, each of Harlan W. Waksal, M.D. and Christopher Forbes will participate in the offering and purchase the securities on the terms and conditions as set forth in the Affiliate Purchase Agreement. For additional information regarding the number of Preferred Stock and Warrants (and shares underlying the Warrants) to be purchased by the Affiliated Investors, assuming the transaction is consummated, please refer to the chart contained in Proposal 5.

### Overview and Reasons for Amendment

Stockholders are being asked to approve an amendment to our Amended and Restated Certificate of Incorporation, as amended to date, referred to herein as our Certificate of Incorporation, to increase the number of authorized shares of our common stock from 120,000,000 to 250,000,000. On March 25, 2010, our board adopted resolutions approving and authorizing the amendment and directing that the amendment be submitted to a vote of the stockholders at the Meeting.

The board determined that the amendment is in the best interests of Senesco and its stockholders and unanimously recommends approval by the stockholders. If the proposed amendment is approved by the stockholders, the board currently intends to file, with the Secretary of State of the State of Delaware, a Certificate of Amendment to the Certificate of Incorporation, referred to herein as the Certificate of Amendment, reflecting such amendment as soon as practicable following stockholder approval. The following summary is qualified in its entirety by reference to the Certificate of Incorporation. Attached hereto as Appendix B to this proxy statement is the proposed Certificate of Amendment.

Our board has proposed this increase in authorized shares of common stock to ensure that we have sufficient shares of common stock available for general corporate purposes including, without limitation, sufficient shares available underlying the securities issued in the financings, equity financings, acquisitions, establishing strategic relationships with corporate and other partners, providing equity incentives to employees, and payments of stock dividends, stock splits or other recapitalizations. We also need to reserve for issuance additional shares of common stock in connection with the financing described in the section entitled "Background Information" above beginning on page [\_\_] as we currently do not have enough shares authorized to meet the requirements set forth in the respective Purchase Agreements.

Our Certificate of Incorporation currently authorizes the issuance of up to 120,000,000 shares of common stock and 5,000,000 shares of preferred stock, par value \$0.01 per share, referred to herein as the preferred stock. 10,297 shares of preferred stock are currently issued and outstanding. The proposed amendment will not, if adopted, result in an increase in the number of authorized shares of preferred stock.

Of the 120,000,000 shares of common stock currently authorized, as of the close of business on the record date, there were [33,584,121] shares of common stock issued and outstanding. Furthermore, we have reserved for future issuance:

- a. [4,125,684] shares of common stock upon the exercise of outstanding options and restricted stock units granted under the 1998 Stock Plan;
- b. [6,137,200] shares of common stock upon the exercise of options and restricted stock units, of which [1,998,127] have been granted and [4,139,073] may be granted in the future, under the 2008 Incentive Compensation Plan;

- c. [19,330,793] shares of common stock upon the exercise of warrants issued and outstanding.
- d. [6,024,096] shares of common stock upon conversion of the convertible debentures issued pursuant to the previously disclosed financing which we entered into with and Stanford Venture Capital Holdings, Inc. in 2007/2008, as subsequently purchased by certain member of our board; and

e. [268,527] shares of common stock, which may be issued as interest shares pursuant to the previously disclosed financing which we entered into with Stanford Venture Capital Holdings, Inc. in 2007/2008, as subsequently sold by Stanford to certain members of our board.

If the proposed amendment is approved, then after the meeting, there will be [182,900,642] shares of common stock issued and outstanding and reserved for issuance, which includes the shares which we are obligated to reserve for issuance under the respective Purchase Agreements.

#### Reason For Request For Stockholder Approval

In accordance with Delaware law, approval and adoption of an amendment to our Certificate of Incorporation to increase the authorized shares of our common stock and preferred stock requires stockholder approval.

#### Consequences if Stockholders Approve this Proposal

**Dilution** As is the case with the current authorized but unissued shares of common stock, the additional shares of common stock authorized by this proposed amendment could be issued upon approval by our board without further vote of our stockholders except as may be required in particular cases by our Certificate of Incorporation, applicable law, regulatory agencies or the NYSE Amex rules. Under our Certificate of Incorporation, except for holders of Preferred Stock and as provided for under the outstanding convertible debenture held by certain of our insiders, stockholders do not have preemptive rights to subscribe to additional securities that may be issued by Senesco, which means that current stockholders do not have a prior right to purchase any new issue of common stock in order to maintain their proportionate ownership interest in Senesco. In addition, if we issue additional shares of common stock or securities convertible into or exercisable for common stock, such issuance would have a dilutive effect on the voting power and could have a dilutive effect on the earnings per share of Senesco's currently outstanding shares of common stock.

The following table sets forth the total number of: (1) authorized shares of our common stock, (2) outstanding shares of our common stock, (3) reserved shares of our common stock, (4) shares of our common stock available for issuance, (5) proposed shares authorized by this Proposal 3 and (6) common stock available for issuance if this Proposal 3 is approved by the stockholders.

| Currently Authorized Shares(1) | Currently Outstanding Shares | Shares Currently Reserved for Issuance | Shares Currently Available for Issuance | Proposed Authorized Shares(2) | Shares Potentially Available for Issuance(3) |
|--------------------------------|------------------------------|--|---|-------------------------------|--|
| 120,000,000                    | [33,584,121]                 | [149,316,527]                          | [0]                                     | [250,000,000]                 | [67,099,352]                                 |

(1)

As of April [ ], 2010.

(2) The number of authorized shares of our common stock, if this Proposal 3 is approved by the stockholders.

(3) The number of shares of our common stock available for issuance, if this Proposal 3 is approved by the stockholders.

**Anti-takeover Effects.** The proposed Certificate of Amendment could also, under certain circumstances, have an anti-takeover effect. The proposed increase in the number of authorized shares of common stock may discourage or make it more difficult to effect a change in control of Senesco. For example, we could issue additional shares to dilute

the voting power of, create voting impediments for, or otherwise frustrate the efforts of persons seeking to take over or gain control of Senesco, whether or not the change in control is favored by a majority of our unaffiliated stockholders. We could also privately place shares of common stock with purchasers who would side with our board in opposing a hostile takeover bid. The board is not aware of any plans for or attempt to take control of Senesco.

If approved, the amendment would amend and restate the first section of the fourth paragraph of the Certificate of Incorporation, as follows:

FOURTH: “The total number of shares of all classes of stock which the Corporation shall have authority to issue is Two Hundred Fifty Five Million (255,000,000) shares. The Corporation is authorized to issue two classes of stock designated “Common Stock” and “Preferred Stock,” respectively. The total number of shares of Common Stock authorized to be issued by the Corporation is Two Hundred Fifty Million (250,000,000), each such share of Common Stock having a \$0.01 par value. The total number of shares of Preferred Stock authorized to be issued by the Corporation is Five Million (5,000,000), each such share of Preferred Stock having a \$0.01 par value.”

The Certificate of Amendment, which contains the above amendment, is attached to this proxy statement as Appendix B. The affirmative vote of a majority of the outstanding shares of common stock is required for approval of the proposed amendment. Therefore, abstentions and broker non-votes will have the same effect as votes against this proposal.

#### Consequences if Stockholders Do Not Approve this Proposal

We have no shares available for issuance. Typically capital is raised by issuing shares in exchange for financing. If our stockholders do not approve this proposed amendment, it is possible that we will be unable to fully consummate the transactions described in the section entitled “Background Information” beginning on page [\_\_]. Accordingly, because we could not consummate the transactions described, we would fall short of the working capital necessary to complete our corporate objectives and, thus, we would be required to pursue other strategic alternatives. We may not be able to realize such alternatives on commercially reasonable terms, if at all, given the current economic climate.

We have no additional plans to issue the common stock authorized pursuant to Proposal 3 other than in connection with the transactions described in the section entitled “Background Information” beginning on page [\_\_].

#### No Appraisal Rights

Under Delaware law, stockholders are not entitled to appraisal rights with respect to the actions contemplated by Proposal 3.

#### Required Stockholder Approvals

The following table sets forth the stockholder approvals which are necessary to consummate the transactions set forth in the section entitled “Background Information” beginning on page [\_\_].

THE BOARD RECOMMENDS THAT STOCKHOLDERS VOTE “FOR” THE PROPOSAL  
TO AMEND OUR CERTIFICATE OF INCORPORATION TO INCREASE THE TOTAL NUMBER OF  
AUTHORIZED SHARES OF COMMON  
STOCK, \$0.01 PAR VALUE PER SHARE, FROM 120,000,000 TO 250,000,000

#### PROPOSAL 4

PROPOSAL TO APPROVE FOR PURPOSES OF SECTION 713 OF THE NYSE AMEX COMPANY GUIDE, THE ISSUANCE OF PREFERRED STOCK, WARRANTS AND PLACEMENT AGENT WARRANTS (AND THE SHARES OF COMMON STOCK ISSUABLE UPON EXERCISE OF THE WARRANTS, THE PLACEMENT AGENT WARRANTS AND THE CONVERSION OF THE PREFERRED STOCK AND PAYMENT OF DIVIDENDS THEREON), WHICH, WHEN CONVERTED, IN THE AGGREGATE EXCEED 20% OF OUR CURRENTLY OUTSTANDING SHARES OF COMMON STOCK PURSUANT TO THE TERMS AND CONDITIONS OF THE SECURITIES PURCHASE AGREEMENTS, DATED AS OF MARCH 26, 2010, BETWEEN CERTAIN INVESTORS WHO ARE A PARTY THERETO AND US.

#### Proposal

We are seeking approval of the issuance of the securities in connection with the transactions contemplated pursuant to the terms and conditions of the Securities Purchase Agreements, dated as of March 26, 2010, between certain investors and us. For information regarding our proposed issuance of the securities and the terms of the Purchase Agreement and Warrants, see “Background Information” beginning on page [\_\_].

#### Reason For Request For Stockholder Approval

As of April [\_\_], 2010, the record date for the Special Meeting, we had 120,000,000 authorized shares of common stock and approximately [\_\_\_] shares of common stock outstanding. If successfully completed, the transaction, in the aggregate, will result in the potential issuance of more than 20% of our currently outstanding shares of common stock pre-transaction. Section 713 of the NYSE Amex Company Guide requires stockholder approval prior to the issuance of common stock, or securities convertible into or exercisable for common stock, in any transaction or series of transactions if (i) the sale, issuance, or potential issuance by the issuer of common stock (or securities convertible into common stock) at a price less than the greater of book or market value which together with sales by officers, directors or principal stockholders of the issuer equals 20% or more of presently outstanding common stock; or (ii) the sale, issuance, or potential issuance by the issuer of common stock (or securities convertible into common stock) equal to 20% or more of presently outstanding stock for less than the greater of book or market value of the stock.

Our issuance of the Preferred Stock (and payment of potential dividends thereon) and the Warrants issuable under the Purchase Agreements as well as the Placement Agent Warrants will result in the potential issuance of common stock, or securities convertible into common stock, equal to 20% or more of our common stock outstanding immediately before we entered into the Purchase Agreements. The per share market price of our common stock (which was greater than book value) was less than the consolidated closing bid price of \$0.40 on March 26, 2010 and immediately preceding entering into the Purchase Agreements, which occurred after the close of market on that date. Accordingly, we are seeking stockholder approval of this proposal in order to ensure compliance with Section 713(a) of the NYSE Amex Company Guide.

We have already received gross proceeds of \$10,297,000 (and net proceeds of approximately \$9,600,000 after deducting estimated expenses), in connection with our sale of securities to the Non-Affiliated Investors. We expect to receive additional net proceeds of approximately \$1,200,000 if we are able to consummate the transaction with the Affiliated Investors. We expect the transaction with the Affiliated Investors to close as soon as practicable after receipt of any required approvals from our stockholders. We expect to use the net proceeds for general corporate purposes.

#### Consequences if Stockholders Approve this Proposal 4

Ability to Complete the Transaction. Should stockholders not approve this Proposal 4 then we are obligated to continue to see stockholder approval until the earlier of (i) such time as the Preferred Stock is no longer outstanding or (ii) stockholder approval is obtained.

Dilution. The issuance of our shares of common stock in connection with the Non-Affiliate Purchase Agreements as well as the transaction with the Affiliated Investors would have a dilutive effect on our earnings per share and on each stockholder's percentage voting power. In addition, such issuance could, under certain circumstances, have the effect of delaying or preventing a change in control by increasing the number of outstanding shares entitled to vote and by increasing the number of votes required to approve a change in control or remove incumbent directors from office. Moreover, any dividends paid per common share could be lower, as the funds available to pay dividends would be spread among a greater number of shares upon completion of the transaction with the Non-Affiliated Investors as well as the transaction with the Affiliated Investors.

The following table summarizes (1) the total number of shares which will be issued and outstanding pursuant to the Purchase Agreements (not including the Warrants) and assuming the Preferred Stock is converted and the payment of dividends thereon, (2) the number of shares each investor will be issued pursuant to the transaction with the Non-Affiliated Purchasers as well as the transaction with the Affiliated Investors assuming the Warrants are fully exercised at the current applicable exercise price and the Placement Agent Warrants are exercised at the current applicable exercise price and (3) the percentage of outstanding shares that the investors could potentially own after all securities anticipated by the Non-Affiliated Purchase Agreement as well as the transaction with the Affiliated Purchasers are issued and converted.

| Investor                 | Total Number of Shares of Common Stock to be issued under the Purchase Agreements Assuming the Preferred Stock is Converted(1) | Total Number of Shares Underlying Warrants(2) | Underlying Shares as a Percent of Outstanding Shares Post Transaction(3) |
|--------------------------|--|---|--|
| Non-Affiliated Investors | 41,831,562   | 32,178,125                                    | 66.4%  |
| Harlan W. Waksal, M.D.   | 812,500  | 625,000                                       | 2.5%   |
| Christopher Forbes       | 4,062,500  | 3,125,000                                     | 14.8%  |
| Placement Agent Warrants | -  | 1,032,813                                     | 0.7%   |

(1) Represents the total number of shares outstanding assuming all shares are issued under the terms of the Purchase Agreements (not including the Warrants) assuming the Preferred Stock is converted and the payment of dividends thereon.

(2) Represents the total number of shares which will be issued and upon the full exercise of the Warrants at the current applicable exercise price.

(3) Represents the percentage of outstanding shares that the Investors could potentially own, calculated on a post-transaction basis, after all securities anticipated by the Purchase Agreements are issued and converted.

#### Consequences if Stockholders Fail to Approve this Proposal 4

Should stockholders not approve this Proposal 4 then we are obligated to continue to see stockholder approval until the earlier of (i) such time as the Preferred Stock is no longer outstanding or (ii) stockholder approval is obtained.

Financial and other information concerning our company is incorporated herein by reference and contained in our Annual Report for the year ended June 30, 2009 and our Quarterly Report on Form 10-Q for the quarter ended December 31, 2009 which are being mailed with this proxy statement.



No Appraisal Rights

Under Delaware law, stockholders are not entitled to appraisal rights with respect to the actions contemplated by Proposal 4.

Required Stockholder Approvals

The NYSE Amex Company Guide requires that this proposal be approved by our stockholders representing a majority of the votes cast on the proposal (provided that a quorum is present).

THE BOARD RECOMMENDS THAT STOCKHOLDERS VOTE “FOR” THE PROPOSAL TO APPROVE FOR PURPOSES OF SECTION 713 OF THE NYSE AMEX COMPANY GUIDE, THE ISSUANCE OF PREFERRED STOCK, WARRANTS AND PLACEMENT AGENT WARRANTS (AND THE SHARES OF COMMON STOCK ISSUABLE UPON EXERCISE OF THE WARRANTS, THE PLACEMENT AGENT WARRANTS AND THE CONVERSION OF THE PREFERRED STOCK AND PAYMENT OF DIVIDENDS THEREON), WHICH, WHEN CONVERTED, IN THE AGGREGATE EXCEED 20% OF OUR CURRENTLY OUTSTANDING SHARES OF COMMON STOCK PURSUANT TO THE TERMS AND CONDITIONS OF THE SECURITIES PURCHASE AGREEMENTS, DATED AS OF MARCH 26, 2010, BETWEEN CERTAIN INVESTORS WHO ARE A PARTY THERETO AND US.

## PROPOSAL 5

PROPOSAL TO APPROVE, FOR PURPOSES OF SECTION 711 OF THE NYSE AMEX COMPANY GUIDE, THE ISSUANCE OF OUR SHARES OF PREFERRED STOCK AND WARRANTS (AND THE SHARES OF COMMON STOCK ISSUABLE UPON THE EXERCISE OF THE WARRANTS AND THE CONVERSION OF THE PREFERRED STOCK AND PAYMENT OF DIVIDENDS THEREON) PURSUANT TO THE TERMS AND CONDITIONS OF THE SECURITIES PURCHASE AGREEMENT, DATED AS OF MARCH 26, 2010, BETWEEN EACH OF HARLAN W. WAKSAL, M.D. AND CHRISTOPHER FORBES AND US.

### Proposal

We are seeking approval of the issuance of the Securities to the Affiliated Investors. For information regarding our proposed issuance of the Preferred Stock and the terms of the Affiliates Purchase Agreement and Warrant, see “Background Information” beginning on page [\_\_].

### Reason For Request For Stockholder Approval

Pursuant to Section 711 of the NYSE Amex Company Guide, we are required to obtain stockholder approval when an equity compensation arrangement is made, pursuant to which stock may be acquired by officers, directors, employees, or consultants. NYSE Amex guidance indicates that the issuance of common stock or securities convertible into or exercisable for common stock by a company to affiliated entities of the company’s officers, directors, employees or consultants other than in a public offering at a price less than the greater of the book or market value of the common stock may be deemed to be equity compensation requiring stockholder approval under Section 711. The per share market price of our common stock (which was greater than book value) was less than the consolidated closing bid price of \$0.40 on March 26, 2010 and immediately preceding entering into the Affiliate Purchase Agreement, which occurred after the close of market on that date. Because each of Harlan W. Waksal, M.D. and Christopher Forbes serve as directors of Senesco, we need to seek approval of this proposal in order to ensure compliance with Section 711 of the NYSE Amex Company Guide.

### Consequences to Stockholders Under this Proposal

**Ability to Complete the Transaction.** Should stockholders not approve this Proposal 5 then we are obligated to continue to see stockholder approval until the earlier of (i) such time as the Preferred Stock is no longer outstanding or (ii) stockholder approval is obtained.

**Dilution.** The issuance of our shares of common stock assuming the preferred stock is converted into shares of common stock in connection with the transaction with the Affiliated Investors would have a dilutive effect on our earnings per share and on each stockholder’s percentage voting power. In addition, such issuance could, under certain circumstances, have the effect of delaying or preventing a change in control by increasing the number of outstanding shares entitled to vote and by increasing the number of votes required to approve a change in control or remove incumbent directors from office. Moreover, any dividends paid per common share could be lower, as the funds available to pay dividends would be spread among a greater number of shares upon completion of the transaction with the Affiliated Investors.

The following table summarizes (1) the total number of shares which will be issued and outstanding pursuant to the Purchase Agreement (not including the Warrants) assuming the preferred stock is converted and the payment of dividends thereon, (2) the number of shares each Affiliated Investor will be issued pursuant to the transaction with the Affiliated Investors assuming the Warrants are fully exercised at the current applicable exercise price and (3) the percentage of outstanding shares that the Affiliated Investors could potentially own after all securities anticipated by the transaction with the Affiliated Investors are issued and converted.

| Investor               | Total Number of Shares of Common Stock to be issued under the Purchase Agreement Assuming the Preferred Stock is Converted (1) | Total Number of Shares Underlying Warrants(2) | Underlying Shares as a Percent of Outstanding Shares (3) |
|------------------------|--|---|--|
| Harlan W. Waksal, M.D. | 812,500  | 625,000                                       | 2.5%   |
| Christopher Forbes     | 4,062,500  | 3,125,000                                     | 14.8%  |

(1) Represents the total number of shares outstanding assuming all shares are issued under the terms of the Purchase Agreements (not including the Warrants) assuming the Preferred Stock is converted and payment of dividends thereon.

(2) Represents the total number of shares which will be issued and upon the full exercise of the Warrants at the current applicable exercise price.

(3) Represents the percentage of outstanding shares, calculated on a post-transaction basis, that the Affiliated Investors could potentially own after all securities anticipated by the Purchase Agreements with the Affiliated Investors and Non-Affiliate Investors are issued and converted.

#### Consequences if Stockholders Fail to Approve this Proposal 5

If our stockholders do not approve the issuance of our shares of preferred stock and warrants (including the shares of common stock issuable upon exercise of the Warrants and conversion of the preferred stock) pursuant to the Purchase Agreement with the Affiliated Investors, then we are obligated to continue to seek stockholder approval until the earlier of (i) such time as the Preferred Stock is no longer outstanding or (ii) stockholder approval is obtained. Because stockholder approval is needed to consummate the transaction with the Affiliated Investors in its entirety, the Company, pursuant to the terms of the Purchase Agreement with the Affiliated Investors would not be able to close on the sale of any of securities and we would not be able to close on the remaining \$1,200,000 in gross proceeds. Accordingly, because we could not consummate the transaction with the Affiliated Investors in its entirety, we would fall short of the working capital necessary to further our immediate corporate objectives and, thus, we may be required to pursue other strategic alternatives. We may not be able to realize such alternatives on commercially reasonable terms, if at all, given the current economic climate.

We have already received gross proceeds of \$10,297,000 (and net proceeds of approximately \$9,600,000 after deducting estimated expenses), in connection with our sale of Securities to the Non-Affiliated Investors. We expect to receive additional net proceeds of approximately \$1,200,000 if we are able to consummate the transaction with the Affiliated Investors. We expect the transaction with the Affiliated Investors to close within five (5) business days after receipt of any required approvals from our stockholders. We expect to use the net proceeds for general corporate purposes.

Financial and other information concerning our company is incorporated herein by reference and contained in our Annual Report for the fiscal year ended June 30, 2009 and our Quarterly Report for the quarter ended December 31, 2009.

No Appraisal Rights

Under Delaware law, stockholders are not entitled to appraisal rights with respect to the actions contemplated by Proposal 5.

Required Stockholder Approvals.

The NYSE Amex Company Guide requires that this proposal be approved by our stockholders representing a majority of the votes cast on the proposal (provided that a quorum is present).

THE BOARD RECOMMENDS THAT STOCKHOLDERS VOTE “FOR” THE PROPOSAL TO APPROVE FOR PURPOSES OF SECTION 711 OF THE NYSE AMEX COMPANY GUIDE, THE ISSUANCE OF OUR SHARES OF PREFERRED STOCK AND WARRANTS (AND THE SHARES OF COMMON STOCK ISSUABLE UPON THE EXERCISE OF THE WARRANTS AND THE CONVERSION OF THE PREFERRED STOCK AND PAYMENT OF DIVIDENDS THEREON) PURSUANT TO THE TERMS AND CONDITIONS OF THE SECURITIES PURCHASE AGREEMENT, DATED AS OF MARCH 26, 2010, BETWEEN EACH OF HARLAN W. WAKSAL, M.D. AND CHRISTOPHER FORBES AND US.

## PROPOSAL 6

### PROPOSAL TO APPROVE, FOR PURPOSES OF SECTION 711 OF THE NYSE AMEX COMPANY GUIDE, THE ISSUANCE OF COMMON STOCK UPON THE CONVERSION OF CERTAIN CONVERTIBLE DEBENTURES HELD BY CHRISTOPHER FORBES, RUDOLF STALDER, HARLAN W. WAKSAL, M.D., DAVID RECTOR, JOHN N. BRACA, JACK VAN HULST, WARREN ISABELLE AND THE THOMAS C. QUICK CHARITABLE FOUNDATION.

#### Background

Certain of our insiders, namely Christopher Forbes, Rudolf Stalder, Harlan W. Waksal, M.D., David Rector, John Braca, Jack Van Hulst, Warren Isabelle and the Thomas Quick Charitable Foundation which is an affiliated entity of Thomas C. Quick, previously purchased our convertible debentures, warrants and common stock held by Stanford Venture Capital Holdings, Inc., pursuant to that certain Purchase and Sale Agreement, dated November 6, 2009. This transaction was disclosed in our report on Form 8-K, filed November 11, 2009. On March 4, 2010, such insiders notified us that they had elected, subject to stockholder approval, to convert their convertible debentures at a conversion price of \$0.83. Under the terms of the convertible debentures, such convertible debentures could have converted at a floating conversion rate equal to the lower of \$0.83, or 80 percent of the lowest daily Volume-Weighted Average Price (VWAP) for the five-day period immediately preceding the conversion date, which equated to \$0.22. Immediately following such conversion, the convertible debentures will be cancelled and we will have no further obligations with respect to the convertible debentures.

We are seeking stockholder approval of the issuance of common stock upon the conversion of the convertible debentures pursuant to the foregoing terms.

#### Reason For Request For Stockholder Approval

Pursuant to Section 711 of the NYSE Amex Company Guide, we are required to obtain stockholder approval when an equity compensation arrangement is made, pursuant to which stock may be acquired by officers, directors, employees, or consultants. NYSE Amex guidance indicates that the issuance of common stock or securities convertible into or exercisable for common stock by a company to affiliated entities of the company's officers, directors, employees or consultants other than in a public offering at a price less than the greater of the book or market value of the common stock may be deemed to be equity compensation requiring stockholder approval under Section 711.

Because each of Christopher Forbes, Rudolf Stalder, Harlan W. Waksal, M.D., David Rector, John Braca, Jack Van Hulst, Warren Isabelle and Thomas C. Quick serve as directors of Senesco, we are seeking approval of this proposal in order to ensure compliance with Section 711 of the NYSE Amex Company Guide.

#### Consequences if Stockholders Approve this Proposal 6

**Dilution.** The issuance of our shares of common stock upon the conversion of the convertible debentures would have a dilutive effect on our earnings per share and on each stockholder's percentage voting power. In addition, such issuance could, under certain circumstances, have the effect of delaying or preventing a change in control by increasing the number of outstanding shares entitled to vote and by increasing the number of votes required to approve a change in control or remove incumbent directors from office. Moreover, any dividends paid per common share could be lower, as the funds available to pay dividends would be spread among a greater number of shares upon the conversion of the convertible debentures.





The following table summarizes the total number of shares which will be issued to each applicable insider upon the conversion of the convertible debentures:

| Investor                              | Total Number of Shares<br>of<br>Common Stock to be<br>issued<br>upon Conversion of<br>Convertible Debentures | Total Beneficial<br>Ownership<br>assuming the<br>Convertible<br>Debentures are<br>Converted(1) |
|---------------------------------------|--|--|
| Harlan W. Waksal, M.D.                | 631,176  | 2.5%   |
| Rudolf Stalder                        | 631,176  | 2.0%   |
| Christopher Forbes                    | 4,101,800  | 14.7%  |
| David Rector                          | 159,063  | 0.6%   |
| John N. Braca                         | 77,840   | 0.5%   |
| Jack Van Hulst                        | 30,459   | 0.3%   |
| Warren Isabelle                       | 77,840   | 0.1%   |
| Thomas C. Quick Charitable Foundation | 314,742  | 1.3%   |

(1) Assumes the proposals set forth in this proxy statement are approved.

Excluding the transactions contemplated by this proxy statement, Christopher Forbes is deemed to be the beneficial owner of 27.5% of our outstanding shares. In the event that stockholders approve the transactions contemplated by this proxy statement, including this Proposal 6, Christopher Forbes will be deemed the beneficial owner of 14.7% of our outstanding shares.

#### Consequences if Stockholders Fail to Approve this Proposal 6

If our stockholders do not approve the issuance of common stock upon the conversion of the convertible debentures the insiders could potentially convert the debentures at the contractual lower rate which would be even more dilutive to our stockholders. Further, if we fail to satisfy one of our obligations contained in the convertible debentures, we may be in breach of such convertible debentures.

Financial and other information concerning our company is incorporated herein by reference and contained in our Annual Report for the fiscal year ended June 30, 2009 and our Quarterly Report for the quarter ended December 31, 2009.

#### No Appraisal Rights

Under Delaware law, stockholders are not entitled to appraisal rights with respect to the actions contemplated by Proposal 6.

#### Required Stockholder Approvals

The NYSE Amex Company Guide requires that this proposal be approved by our stockholders representing a majority of the votes cast on the proposal (provided that a quorum is present).

THE BOARD RECOMMENDS THAT STOCKHOLDERS VOTE "FOR" THE PROPOSAL TO APPROVE, FOR PURPOSES OF SECTION 711 OF THE NYSE AMEX COMPANY GUIDE, THE ISSUANCE OF COMMON

STOCK UPON THE CONVERSION OF CERTAIN CONVERTIBLE DEBENTURES HELD BY CHRISTOPHER FORBES, RUDOLF STALDER, HARLAN W. WAKSAL, M.D., DAVID RECTOR, JOHN N. BRACA, JACK VAN HULST, WARREN ISABELLE AND THE THOMAS C. QUICK CHARITABLE FOUNDATION.

PROPOSAL 7

RATIFICATION OF APPOINTMENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The audit committee of our board of directors intends to, subject to stockholder ratification, retain McGladrey & Pullen, LLP as our independent registered public accounting firm for the fiscal year ending June 30, 2010. Neither the firm nor any of its directors has any direct or indirect financial interest in or any connection with us in any capacity other than as auditors.

Although stockholder ratification of the selection of McGladrey & Pullen, LLP, is not required by law, our board of directors believes that it is desirable to give our stockholders the opportunity to ratify this selection. If this proposal is not approved at the Meeting, our board of directors will reconsider the selection of McGladrey & Pullen, LLP.

OUR BOARD OF DIRECTORS RECOMMENDS A VOTE “FOR” THE RATIFICATION OF THE APPOINTMENT OF MCGLADREY & PULLEN, LLP AS OUR INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR THE FISCAL YEAR ENDING JUNE 30, 2010.

## Principal Accountant Fees and Services

As we have previously disclosed, in October 2007, certain partners of Goldstein Golub Kessler LLP, or GGK, became partners of McGladrey & Pullen, LLP, or M&P. As a consequence, GGK resigned as our auditors October 22, 2007 and M&P was appointed as our new independent registered public accounting firm for the year ending June 30, 2008.

GGK had a continuing relationship with RSM McGladrey, Inc., or RSM', from which it leased auditing staff who were full time, permanent employees of RSM and through which its partners provided non-audit services. GGK has no full time employees and, therefore, none of the audit services performed were provided by permanent full-time employees of GGK. GGK manages and supervises the audit and audit staff, and is exclusively responsible for the opinion rendered in connection with its examination.

The aggregate fees billed by M&P, RSM and GGK for services performed for the years ended June 30, 2009 and 2008 are as follows:

|  | 2009       | 2008       |
|--|------------|------------|
| Audit Fees – McGladrey & Pullen, LLP             | \$ 105,000 | \$ 90,015  |
| Audit Fees – Goldstein Golub Kessler LLP         | -          | 16,374     |
| Audit Related Fees – McGladrey & Pullen, LLP     | 8,000      | 4,926      |
| Audit Related Fees – Goldstein Golub Kessler LLP | -          | 24,566     |
| Tax Fees – RSM McGladrey, Inc.                   | 5,815      | 6,418      |
| All Other Fees                                   | 1,715      | -          |
| Total Fees                                       | \$ 120,530 | \$ 142,299 |

## AUDIT FEES

The aggregate audit fees for the years ended June 30, 2009 and 2008 were primarily related to the audit of the our annual financial statements and review of those financial statements included in our quarterly reports on Form 10-Q and fees for professional services rendered in connection with documents filed with the Securities and Exchange Commission.

## AUDIT RELATED FEES

Audit related fees for the years ended June 30, 2009 and 2008 were primarily incurred in connection with our equity offerings, fees in connection with correspondence with the SEC and the AMEX, fees in connection with the implementation of SOX 404, and fees in connection with attending the annual shareholders meeting.

## TAX FEES

Tax fees for the years ended June 30, 2009 and 2008 related to the review of our tax returns provided by RSM.

## ALL OTHER FEES

We did not engage M&P, GGK or RSM to provide any other services during the last three fiscal years other than reported above.

## Pre-Approval Policies and Procedures

In accordance with its charter, the Audit Committee is required to approve all audit and non-audit services provided by the independent auditors and shall not engage the independent auditors to perform the specific non-audit services prescribed by law or regulation.

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The Audit Committee has adopted policies and procedures relating to the pre-approval of all audit and non-audit services that are to be performed by our independent registered public accounting firm. This policy generally provides that we will not engage our independent registered public accounting firm to render audit or non-audit services unless the service is specifically approved in advance by the Audit Committee or the engagement is entered into pursuant to one of the pre-approval procedures described below.

From time to time, the Audit Committee may pre-approve specified types of services that are expected to be provided to us by our independent registered public accounting firm during the next twelve (12) months. Any such pre-approval is detailed as to the particular service or type of services to be provided and is also generally subject to a maximum dollar amount.

The Audit Committee has also delegated to the chairman of the Audit Committee the authority to approve any audit or non-audit services to be provided to us by our independent registered public accounting firm. Any approval of services by a member of the Audit Committee pursuant to this delegated authority is reported on at the next meeting of the Audit Committee.

A representative of McGladrey & Pullen, LLP is expected to be present at the annual meeting. The representative will have an opportunity to make a statement and will be available to respond to appropriate questions.

#### Audit Committee Report

The Audit Committee oversees our financial reporting process on behalf of the board. The Audit Committee consists of three members of the board who meet the independence and experience requirements of the AMEX.

On June 27, 2008, we amended and restated our Audit Committee Charter, which was originally adopted on July 26, 1999.

The Audit Committee held four (4) meetings during Fiscal 2009.

Management is responsible for our financial reporting process including its system of internal controls and for the preparation of consolidated financial statements in accordance with generally accepted accounting principles. Our independent registered public accounting firm is responsible for auditing those financial statements. The Audit Committee's responsibility is to monitor and review these processes. As appropriate, the Audit Committee reviews and evaluates, and discusses with our management and our independent registered public accounting firm, the following:

- the plan for, and the independent registered public accounting firm's report on, each audit of our financial statements;
- the independent registered public accounting firm's review of our unaudited interim financial statements;
- our financial disclosure documents, including all financial statements and reports filed with the Securities and Exchange Commission or sent to stockholders;
- our management's selection, application and disclosure of critical accounting policies;
  - changes in our accounting practices, principles, controls or methodologies;
- significant developments or changes in accounting rules applicable to us; and

- the adequacy of our internal controls and accounting and financial personnel.

The Audit Committee reviewed and discussed with our management our audited financial statements for the year ended June 30, 2009. The Audit Committee also reviewed and discussed the audited financial statements and the matters required by Statement on Auditing Standards No. 61, titled Communication with Audit Committees, with our independent registered public accounting firm. These standards require our independent registered public accounting firm to discuss with our Audit Committee, among other things, the following:

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- methods used to account for significant unusual transactions;
- the effect of significant accounting policies in controversial or emerging areas for which there is a lack of authoritative guidance or consensus;
- the process used by management in formulating particularly sensitive accounting estimates and the basis for the auditors' conclusions regarding the reasonableness of those estimates; and
- disagreements with management over the application of accounting principles, the basis for management's accounting estimates and the disclosures in the financial statements.

The Audit Committee has received the written disclosures from the independent registered public accounting firm required by the applicable requirements of the Public Company Accounting Oversight Board regarding the independent accountants' communications with the audit committee concerning independence, as currently in effect, and has considered whether the provision of non-audit services by the independent registered public accounting firm to us is compatible with maintaining the auditor's independence and has discussed with the auditors the auditors' independence.

Based on our discussions with management and our independent registered public accounting firm, and our review of the representations and information provided by our management and our independent registered public accounting firm, the Audit Committee recommended to our board that the audited financial statements be included in our annual report on Form 10-K/A for the year ended June 30, 2009.

By the Audit Committee of the Board of Directors of  
Senesco Technologies, Inc.

John N. Braca, Chairman  
Jack Van Hulst  
David Rector

The above Audit Committee report is not deemed to be "soliciting material," is not "filed" with the SEC and is not incorporated by reference in any filings including Form S-3 that we file with the SEC.



## STOCKHOLDERS' PROPOSALS

Stockholders may submit proposals on matters appropriate for stockholder action at annual meetings in accordance with the rules and regulations adopted by the Securities and Exchange Commission. Any proposal that an eligible stockholder wishes to submit for inclusion in our proxy statement must advise our Secretary of such proposals in writing by [\_\_\_\_], 2010 (120 calendar days prior to the anniversary of the mailing date of this Proxy Statement). Such proposal will be included if it complies with Securities and Exchange Commission rules regarding inclusion of proposals in proxy statements.

If we do not receive notice of a stockholder proposal within this timeframe, our management will use its discretionary authority to vote the shares they represent, as our board of directors may recommend. We reserve the right to reject, rule out of order, or take other appropriate action with respect to any proposal that does not comply with these requirements.

## FINANCIAL INFORMATION

Financial and other information concerning our company is contained in our Annual Report for the fiscal year ended June 30, 2009 and our Quarterly Report for the quarter ended December 31, 2009 which have been mailed to you along with this proxy statement. This proxy statement, our June 30, 2009 Annual Report and our December 31, 2009 Quarterly Report are also available on our website at [www.senesco.com](http://www.senesco.com).

## HOUSEHOLDING OF ANNUAL MEETING MATERIALS

Some banks, brokers and other nominee record holders may be participating in the practice of "householding" proxy statements and annual reports. This means that only one (1) copy of our proxy statement or annual report may have been sent to multiple stockholders in your household. We will promptly deliver a separate copy of either document to you if you call or write us at the following address or phone number: Senesco Technologies, Inc., 303 George Street, Suite 420, New Brunswick, New Jersey 08901, (732) 296-8400. If you want to receive separate copies of the annual report and proxy statement in the future or if you are receiving multiple copies and would like to receive only one (1) copy for your household, you should contact your bank, broker, or other nominee record holders, or you may contact us at the above address and phone number.

## OTHER MATTERS

Our board is not aware of any matter to be presented for action at the Meeting other than the matters referred to above and does not intend to bring any other matters before the Meeting. However, if other matters should come before the Meeting, it is intended that holders of the proxies will vote thereon in their discretion.

## GENERAL

The accompanying proxy is solicited by and on behalf of our board, whose notice of meeting is attached to this proxy statement, and the entire cost of such solicitation will be borne by us. Our officers and selected employees may solicit proxies from stockholders.

In addition to the use of the mails, proxies may be solicited by personal interview, telephone and telegram by our directors, officers and other employees who will not be specially compensated for these services. We will also request that brokers, nominees, custodians and other fiduciaries forward soliciting materials to the beneficial owners of shares held of record by such brokers, nominees, custodians and other fiduciaries. We will reimburse such persons for their reasonable expenses in connection therewith.

Certain information contained in this proxy statement relating to the occupations and security holdings of our directors and officers is based upon information received from the individual directors and officers.

WE WILL FURNISH, WITHOUT CHARGE, A COPY OF OUR REPORT ON FORM 10-K/A FOR THE YEAR ENDED JUNE 30, 2009, INCLUDING FINANCIAL STATEMENTS AND SCHEDULES THERETO, BUT NOT INCLUDING EXHIBITS, AND A COPY OF OUR REPORT ON FORM 10-Q FOR THE CALENDAR QUARTER ENDED DECEMBER 31, 2009, INCLUDING FINANCIAL STATEMENTS AND SCHEDULES THERETO, BUT NOT INCLUDING EXHIBITS, TO EACH OF OUR STOCKHOLDERS OF RECORD ON APRIL [\_\_\_\_], 2010 AND TO EACH BENEFICIAL STOCKHOLDER ON THAT DATE UPON WRITTEN REQUEST MADE TO OUR SECRETARY. A REASONABLE FEE WILL BE CHARGED FOR COPIES OF REQUESTED EXHIBITS.

PLEASE DATE, SIGN AND RETURN THE PROXY CARD AT YOUR EARLIEST CONVENIENCE IN THE ENCLOSED RETURN ENVELOPE. A PROMPT RETURN OF YOUR PROXY CARD WILL BE APPRECIATED AS IT WILL SAVE THE EXPENSE OF FURTHER MAILINGS.

By Order of the Board of Directors

/s/ Jack Van Hulst

Jack Van Hulst  
Secretary

New Brunswick, New Jersey  
April [\_\_\_\_], 2010

APPENDIX A

SENESCO TECHNOLOGIES, INC.

2008 INCENTIVE COMPENSATION PLAN

(As Amended and Restated April \_\_, 2010)

ARTICLE ONE

GENERAL PROVISIONS

I. PURPOSE OF THE PLAN

This 2008 Incentive Compensation Plan (the “Plan”) is intended to promote the interests of Senesco Technologies, Inc., a Delaware corporation, by providing eligible persons in the Corporation’s service with the opportunity to participate in one or more cash or equity incentive compensation programs designed to encourage them to continue their service relationship with the Corporation.

The Plan serves as the successor to the Corporation’s 1998 Stock Incentive Plan (the “Predecessor Plan”), and no further awards shall be granted under the Predecessor Plan after the Plan Effective Date. All awards outstanding under the Predecessor Plan on the Plan Effective Date shall continue to be governed solely by the terms of the documents evidencing such award, and no provision of the Plan shall be deemed to affect or otherwise modify the rights or obligations of the holders of such transferred awards.

Capitalized terms shall have the meanings assigned to such terms in the attached Appendix.

II. TYPES OF AWARDS

Awards may be made under the Plan in the form of (i) options, (ii) stock appreciation rights, (iii) stock awards, (iv) restricted stock units, (v) cash awards, (vi) performance units, and (vii) dividend equivalent rights.

III. ADMINISTRATION OF THE PLAN

A. The Compensation Committee shall have sole and exclusive authority to administer the Plan with respect to Section 16 Insiders. Administration of the Plan with respect to all other persons eligible to participate in the Plan may, at the Board’s discretion, be vested in the Compensation Committee or a Secondary Board Committee, or the Board may retain the power to administer those programs with respect to such persons.

B. Members of the Compensation Committee or any Secondary Board Committee shall serve for such period of time as the Board may determine and may be removed by the Board at any time. The Board may also at any time terminate the functions of any Secondary Board Committee and reassume all powers and authority previously delegated to such committee.

C. To the extent permitted by and consistent with applicable law, the Board may delegate to one or more executive officers the power to grant awards to employees other than Section 16 Insiders.

D. Each Plan Administrator shall, within the scope of its administrative functions under the Plan, have full power and authority (subject to the provisions of the Plan) to establish such rules and regulations as it may deem

appropriate for proper administration of the Plan and to make such determinations under, and issue such interpretations of, the provisions of the Plan and any outstanding Awards thereunder as it may deem necessary or advisable. Decisions of the Plan Administrator within the scope of its administrative functions under the Plan shall be final and binding on all parties who have an interest in the Plan under its jurisdiction or any Award thereunder.

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E. Service as a Plan Administrator by the members of the Compensation Committee or the Secondary Board Committee shall constitute service as Board members, and the members of each such committee shall accordingly be entitled to full indemnification and reimbursement as Board members for their service on such committee. No member of the Compensation Committee or the Secondary Board Committee shall be liable for any act or omission made in good faith with respect to the Plan or any Award thereunder.

#### IV. ELIGIBILITY

A. The persons eligible to participate in the Plan are as follows:

- (i) Employees,
- (ii) non-employee members of the Board or the board of directors of any Parent or Subsidiary, and
- (iii) consultants and other independent advisors who provide services to the Corporation (or any Parent or Subsidiary).

B. The Plan Administrator shall have full authority to determine which eligible persons are to receive Awards under the Plan, the time or times when those Awards are to be made, the number of shares to be covered by each such Award, the time or times when the Award is to become exercisable, the status of an option for federal tax purposes, the maximum term for which an option or stock appreciation right is to remain outstanding, the vesting and issuance schedules applicable to the shares which are the subject of the Award, the cash consideration (if any) payable for those shares and the form (cash or shares of Common Stock) in which the Award is to be settled and, with respect to performance-based Awards, the performance objectives for each such Award, the amounts payable at designated levels of attained performance, any applicable service vesting requirements, and the payout schedule for each such Award.

#### V. STOCK SUBJECT TO THE PLAN

A. The stock issuable under the Plan shall be shares of authorized but unissued or reacquired Common Stock, including shares repurchased by the Corporation on the open market. The number of shares of Common Stock initially reserved for issuance over the term of the Plan shall be limited to Eleven Million One Hundred and Thirty Seven Thousand Two Hundred (11,137,200) shares. Such reserve shall consist of (i) the number of shares of Common Stock estimated to remain available for issuance, as of the Plan Effective Date, under the Predecessor Plan as last approved by the Corporation's stockholders (excluding shares subject to outstanding awards under the Predecessor Plan), plus (ii) an additional increase of four million (4,000,000) shares plus (iii) an additional increase of five million (5,000,000) shares approved by the Board on March 25, 2010, subject to stockholder approval at the 2010 Annual Meeting. To the extent any options or restricted stock units outstanding under the Predecessor Plan on the Plan Effective Date expire or terminate unexercised or without the issuance of shares thereunder, the number of shares of Common Stock subject to those expired or terminated options and restricted stock units at the time of expiration or termination shall be added to the share reserve under this Plan and shall accordingly be available for issuance hereunder, up to a maximum of an additional one million (1,000,000) shares.

B. The maximum number of shares of Common Stock which may be issued pursuant to Incentive Options granted under the Plan shall not exceed nine million one hundred and thirty nine thousand seventy three (9,139,073) shares increased by up to one million (1,000,000) shares for any increase in the share reserve by reason of the termination of awards under the Predecessor Plan.

C. Each person participating in the Plan shall be subject the following limitations:

(i) for Awards denominated in shares of Common Stock (whether payable in Common Stock, cash or a combination of both), the maximum number of shares of Common Stock for which such Awards may be made to such person in any calendar year shall not exceed one million (1,000,000) shares of Common Stock in the aggregate, and

(ii) for Awards denominated in dollars (whether payable in cash, Common Stock or a combination of both), the maximum dollar amount for which such Awards may be made in the aggregate to such person shall not exceed one million Dollars (\$1,000,000) per calendar year within the applicable service or performance measurement period.

D. Shares of Common Stock subject to outstanding Awards made under the Plan (including Awards transferred to this Plan from the Predecessor Plan) shall be available for subsequent issuance under the Plan to the extent those Awards expire or terminate for any reason prior to the issuance of the shares of Common Stock subject to those Awards. Unvested shares issued under the Plan and subsequently forfeited or repurchased by the Corporation, at a price per share not greater than the original issue price paid per share, pursuant to the Corporation's repurchase rights under the Plan shall be added back to the number of shares of Common Stock reserved for issuance under the Plan and shall accordingly be available for subsequent reissuance. Should the exercise price of an option under the Plan be paid with shares of Common Stock, then the authorized reserve of Common Stock under the Plan shall be reduced only by the net number of shares issued under the exercised stock option and not by the gross number of shares for which that option is exercised. Upon the exercise of any stock appreciation right under the Plan, the share reserve shall be reduced only by the net number of shares actually issued by the Corporation upon such exercise and not by the gross number of shares as to which such right is exercised. If shares of Common Stock otherwise issuable under the Plan are withheld by the Corporation in satisfaction of the withholding taxes incurred in connection with the exercise, vesting or settlement of an Award, then the number of shares of Common Stock available for issuance under the Plan shall be reduced by the net number of shares issued after such share withholding.

E. Should any change be made to the Common Stock by reason of any stock split, stock dividend, recapitalization, combination of shares, exchange of shares, spin-off transaction or other change affecting the outstanding Common Stock as a class without the Corporation's receipt of consideration, or should the value of outstanding shares of Common Stock be substantially reduced as a result of a spin-off transaction or an extraordinary dividend or distribution, or should there occur any merger, consolidation or other reorganization, then equitable adjustments shall be made by the Plan Administrator to (i) the maximum number and/or class of securities issuable under the Plan, (ii) the maximum number and/or class of securities by which the share reserve under the Plan may increase by reason of the expiration or termination of options or restricted stock units under the Predecessor Plan, (iii) the maximum number and/or class of securities that may be issued under the Plan pursuant to Incentive Options, (iv) the maximum number and/or class of securities for which any one person may be granted Common Stock-denominated Awards under the Plan per calendar year, (v) the number and/or class of securities and the exercise or base price per share in effect under each outstanding award under the Plan and the cash consideration (if any) payable per share, and (vi) the number and/or class of securities subject to the Corporation's outstanding repurchase rights under the Plan and the repurchase price payable per share. The adjustments shall be made in such manner as the Plan Administrator deems appropriate in order to prevent the dilution or enlargement of benefits under the Plan and the outstanding Awards thereunder, and such adjustments shall be final, binding and conclusive. In the event of a Change in Control, however, the adjustments (if any) shall be made solely in accordance with the applicable provisions of the Plan governing Change in Control transactions.

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F. Outstanding Awards granted pursuant to the Plan shall in no way affect the right of the Corporation to adjust, reclassify, reorganize or otherwise change its capital or business structure or to merge, consolidate, dissolve, liquidate or sell or transfer all or any part of its business or assets.

## ARTICLE TWO

### AWARDS

#### I. OPTIONS

A. Authority. The Plan Administrator shall have full power and authority, exercisable in its sole discretion, to grant Incentive Options and Nonstatutory Options evidenced by one or more Award Agreements in the form approved by the Plan Administrator; provided, however, that each such agreement shall comply with the terms specified below. Each agreement evidencing an Incentive Option shall, in addition, be subject to the provisions of Section H below.

B. Exercise Price.

(i) The exercise price per share shall be fixed by the Plan Administrator; provided, however, that such exercise price shall not be less than one hundred percent (100%) of the Fair Market Value per share of Common Stock on the grant date.

(ii) The exercise price shall become immediately due upon exercise of the option and shall, subject to the provisions of the documents evidencing the option, be payable in one or more of the forms specified below:

(1) cash or check made payable to the Corporation,

(2) shares of Common Stock (whether delivered in the form of actual stock certificates or through attestation of ownership) held for the requisite period (if any) necessary to avoid any resulting charge to the Corporation's earnings for financial reporting purposes and valued at Fair Market Value on the Exercise Date, or

(3) to the extent the option is exercised for vested shares of Common Stock, through a special sale and remittance procedure pursuant to which the Participant shall concurrently provide instructions to (a) a brokerage firm (reasonably satisfactory to the Corporation for purposes of administering such procedure in compliance with the Corporation's pre-clearance/pre-notification policies) to effect the immediate sale of the purchased shares and remit to the Corporation, out of the sale proceeds available on the settlement date, sufficient funds to cover the aggregate exercise price payable for the purchased shares plus all applicable income and employment taxes required to be withheld by the Corporation by reason of such exercise and (b) the Corporation to deliver the certificates for the purchased shares directly to such brokerage firm on such settlement date in order to complete the sale.

Except to the extent such sale and remittance procedure is utilized, payment of the exercise price for the purchased shares must be made on the Exercise Date.

C. Exercise and Term of Options. Each option shall be exercisable at such time or times, during such period and for such number of shares as shall be determined by the Plan Administrator and set forth in the Award Agreements evidencing the option. However, no option shall have a term in excess of ten (10) years measured from the option grant date.



D. Effect of Termination of Service.

(i) The following provisions shall govern the exercise of any options that are outstanding at the time of the Participant's cessation of Service or death:

(1) Any option outstanding at the time of the Participant's cessation of Service for any reason shall remain exercisable for such period of time thereafter as shall be determined by the Plan Administrator and set forth in the documents evidencing the option, but no such option shall be exercisable after the expiration of the option term.

(2) Any option held by the Participant at the time of the Participant's death and exercisable in whole or in part at that time may be subsequently exercised by the personal representative of the Participant's estate or by the person or persons to whom the option is transferred pursuant to the Participant's will or the laws of inheritance or by the Participant's designated beneficiary or beneficiaries of that option.

(3) Should the Participant's Service be terminated for Misconduct or should the Participant otherwise engage in Misconduct while holding one or more outstanding options granted under this Article Two, then all of those options shall terminate immediately and cease to be outstanding.

(4) During the applicable post-Service exercise period, the option may not be exercised for more than the number of vested shares for which the option is at the time exercisable; provided, however, that one or more options may be structured so that those options continue to vest in whole or part during the applicable post-Service exercise period. Upon the expiration of the applicable exercise period or (if earlier) upon the expiration of the option term, the option shall terminate and cease to be outstanding for any shares for which the option has not been exercised.

(ii) The Plan Administrator shall have complete discretion, exercisable either at the time an option is granted or at any time while the option remains outstanding, to:

(1) extend the period of time for which the option is to remain exercisable following the Participant's cessation of Service from the limited exercise period otherwise in effect for that option to such greater period of time as the Plan Administrator shall deem appropriate, but in no event beyond the expiration of the option term;

(2) include an automatic extension provision whereby the specified post-Service exercise period in effect for any option shall automatically be extended by an additional period of time equal in duration to any interval within the specified post-Service exercise period during which the exercise of that option or the immediate sale of the shares acquired under such option could not be effected in compliance with applicable federal and state securities laws, but in no event shall such an extension result in the continuation of such option beyond the expiration date of the term of that option; and/or

(3) permit the option to be exercised, during the applicable post-Service exercise period, not only with respect to the number of vested shares of Common Stock for which such option is exercisable at the time of the Participant's cessation of Service but also with respect to one or more additional installments in which the Participant would have vested had the Participant continued in Service.

E. Stockholder Rights. The holder of an option shall have no stockholder rights with respect to the shares subject to the option until such person shall have exercised the option, paid the exercise price and become a holder of record of the purchased shares.

F. Repurchase Rights. The Plan Administrator shall have the discretion to grant options which are exercisable for unvested shares of Common Stock. Should the Participant cease Service while such shares are unvested, the

Corporation shall have the right to repurchase any or all of those unvested shares at a price per share equal to the lower of (i) the exercise price paid per share or (ii) the Fair Market Value per share of Common Stock at the time of repurchase. The terms upon which such repurchase right shall be exercisable (including the period and procedure for exercise and the appropriate vesting schedule for the purchased shares) shall be established by the Plan Administrator and set forth in the document evidencing such repurchase right.

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G. Transferability of Options. The transferability of options granted under the Plan shall be governed by the following provisions:

(i) Incentive Options: During the lifetime of the Participant, Incentive Options shall be exercisable only by the Participant and shall not be assignable or transferable other than by will or the laws of inheritance following the Participant's death.

(ii) Non-Statutory Options. Non-Statutory Options shall be subject to the same limitation on transfer as Incentive Options, except that the Plan Administrator may structure one or more Non-Statutory Options so that the option may be assigned in whole or in part during the Participant's lifetime. The assigned portion may only be exercised by the person or persons who acquire a proprietary interest in the option pursuant to the assignment. The terms applicable to the assigned portion shall be the same as those in effect for the option immediately prior to such assignment and shall be set forth in such documents issued to the assignee as the Plan Administrator may deem appropriate.

(iii) Beneficiary Designation. Notwithstanding the foregoing, the Participant may designate one or more persons as the beneficiary or beneficiaries of his or her outstanding options, and those options shall, in accordance with such designation, automatically be transferred to such beneficiary or beneficiaries upon the Participant's death while holding those options. Such beneficiary or beneficiaries shall take the transferred options subject to all the terms and conditions of the applicable agreement evidencing each such transferred option, including (without limitation) the limited time period during which the option may be exercised following the Participant's death.

H. Incentive Options. The terms specified below shall be applicable to all Incentive Options.

(i) Eligibility. Incentive Options may only be granted to Employees.

(ii) Dollar Limitation. The aggregate Fair Market Value of the shares of Common Stock (determined as of the respective date or dates of grant) for which one or more options granted to any Employee under the Plan (or any other option plan of the Corporation or any Parent or Subsidiary) may for the first time become exercisable as Incentive Options during any one calendar year shall not exceed the sum of One Hundred Thousand Dollars (\$100,000).

To the extent the Employee holds two (2) or more such options which become exercisable for the first time in the same calendar year, then for purposes of the foregoing limitations on the exercisability of those options as Incentive Options, such options shall be deemed to become first exercisable in that calendar year on the basis of the chronological order in which they were granted, except to the extent otherwise provided under applicable law or regulation.

(iii) 10% Stockholder. If any Employee to whom an Incentive Option is granted is a 10% Stockholder, then the exercise price per share shall not be less than one hundred ten percent (110%) of the Fair Market Value per share of Common Stock on the option grant date, and the option term shall not exceed five (5) years measured from the option grant date.

I. Prohibition on Repricing Programs. The Plan Administrator shall not (i) implement any cancellation/regrant program pursuant to which outstanding options or stock appreciation rights under the Plan are cancelled and new options or stock appreciation rights are granted in replacement with a lower exercise price per share, (ii) cancel outstanding options or stock appreciation rights under the Plan with exercise or base prices per share in excess of the then current Fair Market Value per share of Common Stock for consideration payable in equity securities of the Corporation, or (iii) otherwise directly reduce the exercise price in effect for outstanding options or stock appreciation rights under the Plan, without in each such instance obtaining stockholder approval.

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## II. STOCK APPRECIATION RIGHTS

A. Authority. The Plan Administrator shall have full power and authority, exercisable in its sole discretion, to grant stock appreciation rights evidenced by one or more Award Agreements in the form approved by the Plan Administrator which complies with the terms specified below.

B. Types. Two types of stock appreciation rights shall be authorized for issuance under this Section II: (i) tandem stock appreciation rights (“Tandem Rights”) and (ii) stand-alone stock appreciation rights (“Stand-alone Rights”).

C. Tandem Rights. The following terms and conditions shall govern the grant and exercise of Tandem Rights.

(i) One or more Participants may be granted a Tandem Right, exercisable upon such terms and conditions as the Plan Administrator may establish, to elect between the exercise of the underlying option for shares of Common Stock or the surrender of that option in exchange for a distribution from the Corporation in an amount equal to the excess of (i) the Fair Market Value (on the option surrender date) of the number of shares in which the Participant is at the time vested under the surrendered option (or surrendered portion thereof) over (ii) the aggregate exercise price payable for such vested shares.

(ii) Any distribution to which the Participant becomes entitled upon the exercise of a Tandem Right may be made in (i) shares of Common Stock valued at Fair Market Value on the option surrender date, (ii) cash or (iii) a combination of cash and shares of Common Stock, as specified in the applicable Award agreement.

D. Stand-Alone Rights. The following terms and conditions shall govern the grant and exercise of Stand-alone Rights:

(i) One or more Participants may be granted a Stand-alone Right not tied to any underlying option. The Stand-alone Right shall relate to a specified number of shares of Common Stock and shall be exercisable upon such terms and conditions as the Plan Administrator may establish. In no event, however, may the Stand-alone Right have a maximum term in excess of ten (10) years measured from the grant date.

(ii) Upon exercise of the Stand-alone Right, the holder shall be entitled to receive a distribution from the Corporation in an amount equal to the excess of (i) the aggregate Fair Market Value (on the exercise date) of the shares of Common Stock underlying the exercised right over (ii) the aggregate base price in effect for those shares.

(iii) The number of shares of Common Stock underlying each Stand-alone Right and the base price in effect for those shares shall be determined by the Plan Administrator in its sole discretion at the time the Stand-alone Right is granted. In no event, however, may the base price per share be less than the Fair Market Value per underlying share of Common Stock on the grant date.

(iv) Stand-alone Rights shall be subject to the same transferability restrictions applicable to Non-Statutory Options and may not be transferred during the holder’s lifetime, except to the extent otherwise provided in the applicable Award Agreement. In addition, one or more beneficiaries may be designated for an outstanding Stand-alone Right in accordance with substantially the same terms and provisions as set forth in Section I.F of this Article Two.

(v) The distribution with respect to an exercised Stand-alone Right may be made in (i) shares of Common Stock valued at Fair Market Value on the exercise date, (ii) cash or (iii) a combination of cash and shares of Common Stock, as specified in the applicable Award agreement.

(vi) The holder of a Stand-alone Right shall have no stockholder rights with respect to the shares subject to the Stand-alone Right unless and until such person shall have exercised the Stand-alone Right and become a holder of record of the shares of Common Stock issued upon the exercise of such Stand-alone Right.

E. Post-Service Exercise. The provisions governing the exercise of Tandem and Stand-alone Rights following the cessation of the Participant's Service shall be substantially the same as those set forth in Section I.C. of this Article Two for the options granted under the Plan, and the Plan Administrator's discretionary authority under Section I.C.(ii) of this Article Two shall also extend to any outstanding Tandem or Stand-alone Appreciation Rights.

### III. STOCK AWARDS

A. Authority. The Plan Administrator shall have full power and authority, exercisable in its sole discretion, to grant stock awards either as vested or unvested shares of Common Stock, through direct and immediate issuances. Each stock award shall be evidenced by one or more Award Agreements in the form approved by the Plan Administrator; provided, however, that each such agreement shall comply with the terms specified below.

B. Issue Price/Consideration.

(i) Shares of Common Stock may be issued under a stock award for a price per share fixed by the Plan Administrator at the time of the Award, but in no event shall such issue price be less than one hundred percent (100%) of the Fair Market Value per share of Common Stock on the Award date.

(ii) Shares of Common Stock may be issued under a stock award for any of the following items of consideration which the Plan Administrator may deem appropriate in each individual instance:

- (1) cash;
- (2) past services rendered or to be rendered the Corporation (or any Parent or Subsidiary); or
- (3) any other valid consideration under the State in which the Corporation is at the time incorporated.

C. Vesting Provisions.

(i) Stock awards may, in the discretion of the Plan Administrator, be fully and immediately vested upon issuance as a bonus for Service rendered or may vest in one or more installments over the Participant's period of Service and/or upon the attainment of specified performance objectives. The elements of the vesting schedule applicable to any stock award shall be determined by the Plan Administrator and incorporated into the Award Agreement.

(ii) The Plan Administrator shall also have the discretionary authority, consistent with Code Section 162(m), to structure one or more stock awards so that the shares of Common Stock subject to those Awards shall vest upon the achievement of pre-established performance objectives based on one or more Performance Goals and measured over the performance period specified by the Plan Administrator at the time of the grant of the Award.





(iii) Should the Participant cease to remain in Service while holding one or more unvested shares of Common Stock issued under a stock award or should the performance objectives not be attained with respect to one or more such unvested shares of Common Stock, then those shares shall be immediately surrendered to the Corporation for cancellation, and the Participant shall have no further stockholder rights with respect to those shares. To the extent the surrendered shares were previously issued to the Participant for consideration paid in cash or cash equivalent, the Corporation shall repay to the Participant the lower of (i) the cash consideration paid for the surrendered shares or (ii) the Fair Market Value of those shares at the time of cancellation.

(iv) The Plan Administrator may in its discretion waive the surrender and cancellation of one or more unvested shares of Common Stock which would otherwise occur upon the cessation of the Participant's Service or the non-attainment of the performance objectives applicable to those shares. Any such waiver shall result in the immediate vesting of the Participant's interest in the shares of Common Stock as to which the waiver applies. Such waiver may be effected at any time, whether before or after the Participant's cessation of Service or the attainment or non-attainment of the applicable performance objectives. However, no vesting requirements tied to the attainment of performance objectives may be waived with respect to shares which were intended at the time of issuance to qualify as performance-based compensation under Code Section 162(m), except in the event of the Participant's Involuntary Termination with respect to Awards made prior to January 1, 2009 or as otherwise provided in Section VIII of this Article Two.

(v) Any new, substituted or additional securities or other property (including money paid other than as a regular cash dividend) which the Participant may have the right to receive with respect to the Participant's unvested shares of Common Stock by reason of any stock dividend, stock split, recapitalization, combination of shares, exchange of shares, spin-off transaction, extraordinary dividend or distribution or other change affecting the outstanding Common Stock as a class without the Corporation's receipt of consideration shall be issued subject to (i) the same vesting requirements applicable to the Participant's unvested shares of Common Stock and (ii) such escrow arrangements as the Plan Administrator shall deem appropriate, unless and to the extent the Plan Administrator determines at the time to vest and distribute such securities or other property. Equitable adjustments to reflect each such transaction shall also be made by the Plan Administrator to the repurchase price payable per share by the Corporation for any unvested securities subject to its existing repurchase rights under the Plan; provided the aggregate repurchase price shall in each instance remain the same.

D. Stockholder Rights. The Participant shall have full stockholder rights with respect to any shares of Common Stock issued to the Participant under a stock award, whether or not the Participant's interest in those shares is vested. Accordingly, the Participant shall have the right to vote such shares and to receive any dividends paid on such shares, subject to any applicable vesting requirements.

#### IV. RESTRICTED STOCK UNITS

A. Authority. The Plan Administrator shall have the full power and authority, exercisable in its sole discretion, to grant restricted stock units which entitle the Participants to receive the shares underlying those Awards upon vesting or upon the expiration of a designated time period following the vesting of those Awards. Each award of restricted stock units shall be evidenced by one or more Award Agreements in the form approved by the Plan Administrator; provided, however, that each such agreement shall comply with the terms specified below.

B. Vesting Provisions.

(i) Restricted stock units may, in the discretion of the Plan Administrator, vest in one or more installments over the Participant's period of Service or upon the attainment of specified performance objectives.

(ii) The Plan Administrator shall also have the discretionary authority, consistent with Code Section 162(m), to structure one or more restricted stock unit awards so that the shares of Common Stock subject to those Awards shall vest (or vest and become issuable) upon the achievement of pre-established performance objectives based on one or more Performance Goals and measured over the performance period specified by the Plan Administrator at the time of the grant of the Award.

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(iii) Outstanding restricted stock units shall automatically terminate, and no shares of Common Stock shall actually be issued in satisfaction of those Awards, if the performance goals or Service requirements established for those Awards are not attained or satisfied. The Plan Administrator, however, shall have the discretionary authority to issue vested shares of Common Stock under one or more outstanding Awards of restricted stock units as to which the designated performance goals or Service requirements have not been attained or satisfied. However, no vesting requirements tied to the attainment of performance goals may be waived with respect to Awards which were intended, at the time those Awards were granted, to qualify as performance-based compensation under Code Section 162(m), except in the event of the Participant's Involuntary Termination with respect to Awards made prior to January 1, 2009 or as otherwise provided in Section VIII of this Article Two.

C. Stockholder Rights. The Participant shall not have any stockholder rights with respect to the shares of Common Stock subject to a restricted stock unit award until that award vests and the shares of Common Stock are actually issued thereunder. However, dividend-equivalent units may be paid or credited, either in cash or in actual or phantom shares of Common Stock, on outstanding restricted stock unit awards, subject to such terms and conditions as the Plan Administrator may deem appropriate.

## V. CASH AWARDS

A. Authority. The Plan Administrator shall have the full power and authority, exercisable in its sole discretion, to make cash incentive awards which are to vest in one or more installments over the Participant's continued Service with the Corporation or upon the attainment of specified performance goals. Each such cash award shall be evidenced by one or more Award Agreements in the form approved by the Plan Administrator; provided however, that each such agreement shall comply with the terms specified below.

B. Vesting Provisions.

(i) The elements of the vesting schedule applicable to each cash award shall be determined by the Plan Administrator and incorporated into the Award Agreement.

(ii) The Plan Administrator shall also have the discretionary authority, consistent with Code Section 162(m), to structure one or more cash awards so that those Awards shall vest upon the achievement of pre-established corporate performance objectives based upon one or more Performance Goals and measured over the performance period specified by the Plan Administrator at the time of grant of the Award.

(iii) Outstanding cash awards shall automatically terminate, and no cash payment or other consideration shall be due the holders of those Awards, if the performance goals or Service requirements established for the Awards are not attained or satisfied. The Plan Administrator may, however, in its discretion waive the termination of one or more unvested cash awards which would otherwise occur upon the cessation of the Participant's Service or the non-attainment of the performance objectives applicable to those Awards. Any such waiver shall result in the immediate vesting of the Participant's interest in the cash award as to which the waiver applies. Such waiver may be effected at any time, whether before or after the Participant's cessation of Service or the attainment or non-attainment of the applicable performance objectives. However, no vesting requirements tied to the attainment of performance goals may be waived with respect to awards which were intended, at the time those awards were granted, to qualify as performance-based compensation under Code Section 162(m), except in the event of the Participant's Involuntary Termination with respect to Awards made prior to January 1, 2009 or as otherwise provided in Section VIII of this Article Two.

C. Payment. Cash awards which become due and payable following the attainment of the applicable performance goals or satisfaction of the applicable Service requirement (or the waiver of such goals or Service

requirement) may be paid in (i) cash, (ii) shares of Common Stock valued at Fair Market Value on the payment date or (iii) a combination of cash and shares of Common Stock as the Plan Administrator shall determine.

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## VI. PERFORMANCE UNIT AWARDS

A. Authority. The Plan Administrator shall have full power and authority, exercisable in its sole discretion, to grant performance unit awards in accordance with the terms of this Section VI. Each performance unit award shall be evidenced by one or more Award Agreements in the form approved by the Plan Administrator; provided however, that each such agreement shall comply with the terms specified below.

B. Bonus Pool. A performance unit shall represent a participating interest in a special bonus pool tied to the attainment of pre-established performance objectives based on one or more Performance Goals. The amount of the bonus pool may vary with the level at which the applicable performance objectives are attained, and the value of each Performance Unit which becomes due and payable upon the attained level of performance shall be determined by dividing the amount of the resulting bonus pool (if any) by the total number of Performance Units issued and outstanding at the completion of the applicable performance period.

C. Service Requirement. Performance units may also be structured to include a Service requirement which the Participant must satisfy following the completion of the performance period in order to vest in the performance units awarded with respect to that performance period.

D. Payment. Performance units which become due and payable following the attainment of the applicable performance objectives and the satisfaction of any applicable Service requirement may be paid in (i) cash, (ii) shares of Common Stock valued at Fair Market Value on the payment date or (iii) a combination of cash and shares of Common Stock, as determined by the Plan Administrator in its sole discretion and set forth in the Award Agreement.

## VII. DIVIDEND EQUIVALENT RIGHTS

A. Authority. The Plan Administrator shall have the discretionary authority to grant dividend equivalent rights in accordance with the terms of this Section VII. Each such Award shall be evidenced by one or more Award Agreements in the form approved by the Plan Administrator; provided however, that each such agreement shall comply with the terms specified below.

B. Terms. The dividend equivalent rights may be granted as stand-alone awards or in tandem with other Awards made under the Plan. The term of each dividend equivalent right award shall be established by the Plan Administrator at the time of grant, but no such Award shall have a term in excess of ten (10) years.

C. Entitlement. Each dividend equivalent right shall represent the right to receive the economic equivalent of each dividend or distribution, whether in cash, securities or other property (other than shares of Common Stock), which is made per issued and outstanding share of Common Stock during the term the dividend equivalent right remains outstanding. A special account on the books of the Corporation shall be maintained for each Participant to whom a dividend equivalent right is granted, and that account shall be credited per dividend equivalent right with each such dividend or distribution made per issued and outstanding share of Common Stock during the term of that dividend equivalent right remains outstanding.

D. Timing of Payment. Payment of the amounts credited to such book account may be made to the Participant either concurrently with the actual dividend or distribution made per issued and outstanding share of Common Stock or may be deferred for a period specified by the Plan Administrator at the time the dividend equivalent right is initially granted or (to the extent permitted by the Plan Administrator) designated by the Participant pursuant to a timely deferral election made in accordance with the requirements of Code Section 409A.

E. Form of Payment. Payment of the amounts due with respect to dividend equivalent rights may be made in (i) cash, (ii) shares of Common Stock or (iii) a combination of cash and shares of Common Stock, as determined by the Plan Administrator in its sole discretion and set forth in the Award Agreement. If payment is to be made in the form of Common Stock, the number of shares of Common Stock into which the cash dividend or distribution amounts are to be converted for purposes of the Participant's book account may be based on the Fair Market Value per share of Common Stock on the date of conversion, a prior date or an average of the Fair Market Value per share of Common Stock over a designated period, as determined by the Plan Administrator in its sole discretion.

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VIII. EFFECT OF CHANGE IN CONTROL

A. In the event of an actual Change in Control transaction, each option, stock appreciation right and restricted stock unit award outstanding at that time under the Plan but not otherwise fully vested shall automatically accelerate, immediately prior to the effective date of that Change in Control, as to all the shares of Common Stock at the time subject to such Award, unless (i) such Award is to be assumed or substituted with an equivalent award by the successor corporation (or parent thereof) or is otherwise to continue in full force and effect pursuant to the terms of the Change in Control transaction or (ii) such Award is replaced with a cash retention program of the successor corporation that preserves the spread existing at the time of the Change in Control on the shares of Common Stock as to which the Award is not otherwise at that time vested and exercisable and provides for the subsequent vesting and payout of that spread in accordance with the same exercise/vesting schedule applicable to those shares but only if such replacement cash program does not result in the treatment of the Award as an item of deferred compensation subject to Code Section 409A, or (iii) the acceleration of such Award is subject to other limitations imposed by the Plan Administrator.

B. All outstanding repurchase rights shall automatically terminate, and the shares of Common Stock subject to those terminated rights shall vest in full, immediately prior to the effective date of an actual Change in Control transaction, except to the extent (i) those repurchase rights are to be assigned to the successor corporation (or parent thereof) or are otherwise to continue in full force and effect pursuant to the terms of the Change in Control transaction or (ii) such accelerated vesting is precluded by other limitations imposed by the Plan Administrator.

C. Immediately following the consummation of the Change in Control, all outstanding options, stock appreciation rights and restricted stock unit awards shall terminate and cease to be outstanding, except to the extent assumed by the successor corporation (or parent thereof) or otherwise continued in full force and effect pursuant to the terms of the Change in Control transaction.

D. Each Award denominated in shares of Common Stock which is assumed in connection with a Change in Control or otherwise continued in effect shall be appropriately adjusted, immediately after such Change in Control, to apply to the number and class of securities into which the shares of Common Stock subject to that Award would have been converted in consummation of such Change in Control had those shares actually been outstanding at that time. Appropriate adjustments to reflect such Change in Control shall also be made to (i) the exercise or base price or cash consideration payable per share in effect under each outstanding Award, provided the aggregate exercise or base price or cash consideration in effect for such securities shall remain the same, (ii) the maximum number and/or class of securities available for issuance over the remaining term of the Plan, (iii) the maximum number and/or class of securities for which any one person may be granted Common Stock-denominated Awards under the Plan per calendar year and (iv) the number and/or class of securities subject to the Corporation's outstanding repurchase rights under the Plan and the repurchase price payable per share. To the extent the actual holders of the Corporation's outstanding Common Stock receive cash consideration for their Common Stock in consummation of the Change in Control, the successor corporation may, in connection with the assumption or continuation of the outstanding Awards under the Plan and subject to the Plan Administrator's approval, substitute, for the securities underlying those assumed Awards, one or more shares of its own common stock with a fair market value equivalent to the cash consideration paid per share of Common Stock in such Change in Control transaction, provided such common stock is readily traded on an established U.S. securities exchange or market.

E. The Plan Administrator shall have the discretionary authority to structure one or more outstanding Awards so that those Awards shall, immediately prior to the effective date of an actual Change in Control transaction, vest as to all the shares of Common Stock at the time subject to those Awards, whether or not those Awards are to be assumed in the Change in Control transaction or otherwise continued in effect. In addition, the Plan Administrator shall have the discretionary authority to structure one or more of the Corporation's repurchase rights so that those rights shall



terminate immediately prior to the effective date of an actual Change in Control transaction, and the shares subject to those terminated rights shall thereupon vest in full.

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F. The Plan Administrator shall have full power and authority to structure one or more outstanding Awards so that those Awards shall vest as to all the shares of Common Stock at the time subject to those Awards in the event the Participant's Service is subsequently terminated by reason of an Involuntary Termination within a designated period following the effective date of any Change in Control transaction in which those Awards do not otherwise vest on an accelerated basis. In addition, the Plan Administrator may structure one or more of the Corporation's repurchase rights so that those rights shall immediately terminate with respect to any shares held by the Participant at the time of such Involuntary Termination, and the shares subject to those terminated repurchase rights shall accordingly vest in full at that time.

G. The portion of any Incentive Option accelerated in connection with a Change in Control shall remain exercisable as an Incentive Option only to the extent the applicable One Hundred Thousand Dollar (\$100,000) limitation is not exceeded. To the extent such dollar limitation is exceeded, the accelerated portion of such option shall be exercisable as a Non-statutory Option under the Federal tax laws.

H. The Plan Administrator shall have the discretionary authority to structure one or more cash, performance unit and dividend equivalent right awards so that such Awards shall automatically vest in whole or in part immediately prior to the effective date of an actual Change in Control transaction or upon the subsequent termination of the Participant's Service by reason of an Involuntary Termination within a designated period following the effective date of such Change in Control.

I. The Plan Administrator's authority under Paragraphs E, F and H of this Section VIII shall also extend to any Awards intended to qualify as performance-based compensation under Code Section 162(m), even though the automatic vesting of those Awards pursuant to Paragraphs E, F and H of this Section VIII may result in their loss of performance-based status under Code Section 162(m).

### ARTICLE THREE

#### MISCELLANEOUS

##### I. DEFERRED COMPENSATION

A. The Plan Administrator may, in its sole discretion, structure one or more Awards (other than options and stock appreciation rights) so that the Participants may be provided with an election to defer the compensation associated with those Awards for federal income tax purposes. Any such deferral opportunity shall comply with all applicable requirements of Code Section 409A.

B. To the extent the Corporation maintains one or more separate non-qualified deferred compensation arrangements which allow the participants the opportunity to make notional investments of their deferred account balances in shares of Common Stock, the Plan Administrator may authorize the share reserve under the Plan to serve as the source of any shares of Common Stock that become payable under those deferred compensation arrangements. In such event, the share reserve under the Plan shall be reduced on a share-for-one share basis for each share of Common Stock issued under the Plan in settlement of the deferred compensation owed under those separate arrangements.

##### II. TAX WITHHOLDING

A. The Corporation's obligation to deliver shares of Common Stock upon the exercise, issuance or vesting of an Award under the Plan shall be subject to the satisfaction of all applicable income and employment tax withholding requirements.

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B. The Plan Administrator may, in its discretion, provide Participants to whom Awards are made under the Plan with the right to use shares of Common Stock in satisfaction of all or part of the Withholding Taxes to which such holders may become subject in connection with the exercise, issuance or vesting of those Awards or the issuance of shares of Common Stock thereunder. Such right may be provided to any such holder in either or both of the following formats:

(i) **Stock Withholding:** The election to have the Corporation withhold, from the shares of Common Stock otherwise issuable upon the issuance, exercise or vesting of such Award or the issuance of shares of Common Stock thereunder, a portion of those shares with an aggregate Fair Market Value equal to the percentage of the Withholding Taxes (not to exceed one hundred percent (100%)) designated by such individual. The shares of Common Stock so withheld shall not reduce the number of shares of Common Stock authorized for issuance under the Plan.

(ii) **Stock Delivery:** The election to deliver to the Corporation, at the time of the issuance, exercise or vesting of such Award or the issuance of shares of Common Stock thereunder, one or more shares of Common Stock previously acquired by such individual (other than in connection with the exercise, share issuance or share vesting triggering the Withholding Taxes) with an aggregate Fair Market Value equal to the percentage of the Withholding Taxes (not to exceed one hundred percent (100%)) designated by the individual. The shares of Common Stock so delivered shall neither reduce the number of shares of Common Stock authorized for issuance under the Plan nor be added to the number of shares of Common Stock authorized for issuance under the Plan.

### III. SHARE ESCROW/LEGENDS

Unvested shares may, in the Plan Administrator's discretion, be held in escrow by the Corporation until the Participant's interest in such shares vests or may be issued directly to the Participant with restrictive legends on the certificates evidencing those unvested shares.

### IV. EFFECTIVE DATE AND TERM OF THE PLAN

A. The Plan shall become effective on the Plan Effective Date.

B. The Plan shall terminate upon the earliest to occur of (i) September 22, 2018, (ii) the date on which all shares available for issuance under the Plan shall have been issued as fully vested shares or (iii) the termination of all outstanding Awards in connection with a Change in Control. Should the Plan terminate on September 22, 2018, then all Awards outstanding at that time shall continue to have force and effect in accordance with the provisions of the documents evidencing those Awards.

### V. AMENDMENT OF THE PLAN

A. The Board shall have complete and exclusive power and authority to amend or modify the Plan in any or all respects, subject to stockholder approval to the extent required under applicable law or regulation or pursuant to the listing standards of the Stock Exchange on which the Common Stock is at the time primarily traded. However, no such amendment or modification shall adversely affect the rights and obligations with respect to Awards at the time outstanding under the Plan unless the Participant consents to such amendment or modification.

B. The Compensation Committee shall have the discretionary authority to adopt and implement from time to time such addenda or subplans to the Plan as it may deem necessary in order to bring the Plan into compliance with applicable laws and regulations of any foreign jurisdictions in which Awards are to be made under the Plan and/or to obtain favorable tax treatment in those foreign jurisdictions for the individuals to whom the Awards are made.

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C. Awards may be made under the Plan that involve shares of Common Stock in excess of the number of shares then available for issuance under the Plan, provided no shares shall actually be issued pursuant to those Awards until the number of shares of Common Stock available for issuance under the Plan is sufficiently increased by stockholder approval of an amendment of the Plan authorizing such increase. If such stockholder approval is not obtained within twelve (12) months after the date the first excess Award is made, then all Awards granted on the basis of such excess shares shall terminate and cease to be outstanding.

#### VI. USE OF PROCEEDS

Any cash proceeds received by the Corporation from the sale of shares of Common Stock under the Plan shall be used for general corporate purposes.

#### VII. REGULATORY APPROVALS

A. The implementation of the Plan, the granting of any Award under the Plan and the issuance of any shares of Common Stock in connection with the issuance, exercise or vesting of any Award under the Plan shall be subject to the Corporation's procurement of all approvals and permits required by regulatory authorities having jurisdiction over the Plan, the Awards made under the Plan and the shares of Common Stock issuable pursuant to those Awards.

B. No shares of Common Stock or other assets shall be issued or delivered under the Plan unless and until there shall have been compliance with all applicable requirements of applicable securities laws, including the filing and effectiveness of the Form S-8 registration statement for the shares of Common Stock issuable under the Plan, and all applicable listing requirements of any Stock Exchange on which Common Stock is then listed for trading.

#### VIII. NO EMPLOYMENT/SERVICE RIGHTS

Nothing in the Plan shall confer upon the Participant any right to continue in Service for any period of specific duration or interfere with or otherwise restrict in any way the rights of the Corporation (or any Parent or Subsidiary employing or retaining such person) or of the Participant, which rights are hereby expressly reserved by each, to terminate such person's Service at any time for any reason, with or without cause.

APPENDIX

The following definitions shall be in effect under the Plan:

A. Award shall mean any of the following awards authorized for issuance or grant under the Plan: options, stock appreciation rights, stock awards, restricted stock units, performance units, dividend equivalent rights and cash incentive awards.

B. Award Agreement shall mean the written agreement(s) between the Corporation and the Participant evidencing a particular Award made to that individual under the Plan, as such agreement(s) may be in effect from time to time.

C. Board shall mean the Corporation's Board of Directors.

D. Change in Control shall, with respect to each Award made under the Plan, be defined in accordance with the following provisions:

(i) Change in Control shall have the meaning assigned to such term in the Award Agreement for the particular Award or in any other agreement incorporated by reference into the Award Agreement for purposes of defining such term.

(ii) In the absence of any other Change in Control definition in the Award Agreement (or in any other agreement incorporated by reference into the Award Agreement), Change in Control shall mean a change in ownership or control of the Corporation effected through any of the following transactions:

a. a merger, consolidation or other reorganization approved by the Corporation's stockholders, unless securities representing more than fifty percent (50%) of the total combined voting power of the voting securities of the successor corporation are immediately thereafter beneficially owned, directly or indirectly and in substantially the same proportion, by the persons who beneficially owned the Corporation's outstanding voting securities immediately prior to such transaction,

b. a sale, transfer or other disposition of all or substantially all of the Corporation's assets, or

c. the closing of any transaction or series of related transactions pursuant to which any person or any group of persons comprising a "group" within the meaning of Rule 13d-5(b)(1) of the 1934 Act (other than the Corporation or a person that, prior to such transaction or series of related transactions, directly or indirectly controls, is controlled by or is under common control with, the Corporation) becomes directly or indirectly (whether as a result of a single acquisition or by reason of one or more acquisitions within the twelve (12)-month period ending with the most recent acquisition) the beneficial owner (within the meaning of Rule 13d-3 of the 1934 Act) of securities possessing (or convertible into or exercisable for securities possessing) fifty percent (50%) or more of the total combined voting power of the Corporation's securities (as measured in terms of the power to vote with respect to the election of Board members) outstanding immediately after the consummation of such transaction or series of related transactions, whether such transaction involves a direct issuance from the Corporation or the acquisition of outstanding securities held by one or more of the Corporation's existing stockholders.

d. a change in the composition of the Board over a period of twelve (12) consecutive months or less such that a majority of the Board members ceases, by reason of one or more contested elections for Board membership, to be comprised of individuals who either (A) have been Board members continuously since the beginning of such period or (B) have been elected or nominated for election as Board members during such period by at least a majority of the

Board members described in clause (A) who were still in office at the time the Board approved such election or nomination.

E. Code shall mean the Internal Revenue Code of 1986, as amended.

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- F. Common Stock shall mean the Corporation's Common Stock.
- G. Compensation Committee shall mean the Compensation Committee of the Board comprised of two (2) or more non-employee Board members.
- H. Corporation shall mean Senesco Technologies, Inc., a Delaware corporation, and any corporate successor to all or substantially all of the assets or voting stock of Senesco Technologies, Inc. which has by appropriate action assumed the Plan.
- I. Employee shall mean an individual who is in the employ of the Corporation (or any Parent or Subsidiary, whether now existing or subsequently established), subject to the control and direction of the employer entity as to both the work to be performed and the manner and method of performance.
- J. Exercise Date shall mean the date on which the Corporation shall have received written notice of the option exercise.
- K. Fair Market Value per share of Common Stock on any relevant date shall be the closing selling price per share of Common Stock at the close of regular hours trading (i.e., before after-hours trading begins) on date on question on the Stock Exchange serving as the primary market for the Common Stock, as such price is reported by the National Association of Securities Dealers (if primarily traded on the Nasdaq Global or Global Select Market) or as officially quoted in the composite tape of transactions on any other Stock Exchange on which the Common Stock is then primarily traded. If there is no closing selling price for the Common Stock on the date in question, then the Fair Market Value shall be the closing selling price on the last preceding date for which such quotation exists.
- L. Good Reason shall, with respect to each Award made under the Plan, be defined in accordance with the following provisions:
- (i) Good Reason shall have the meaning assigned to such term in the Award Agreement for the particular Award or in any other agreement incorporated by reference into the Award Agreement for purposes of defining such term.
- (ii) In the absence of any other Good Reason definition in the Award Agreement (or in any other agreement incorporated by reference into the Award Agreement), Good Reason shall mean an individual's voluntary resignation following (A) a change in his or her position with the Corporation (or any Parent or Subsidiary) which materially reduces his or her duties, responsibilities or authority, (B) a material diminution in the duties, responsibilities or authority of the person to whom such individual reports, (C) a material reduction in such individual's level of base compensation, with a reduction of more than fifteen percent (15%) to be deemed material for such purpose, or (D) a material relocation of such individual's place of employment, with a relocation of more than fifty (50) miles to be deemed material for such purpose, provided, however, that a resignation for Good Reason may be effected only after (i) the individual provides written notice to the Corporation of the event or transaction constituting grounds for such resignation within sixty (60) days after the occurrence of that event or transaction and (ii) the Corporation fails to take the requisite remedial action with respect to such event or transaction within thirty (30) days after receipt of such notice.
- M. Incentive Option shall mean an option which satisfies the requirements of Code Section 422.
- N. Involuntary Termination shall, with respect to each Award made under the Plan, be defined in accordance with the following provisions:

(i) Involuntary Termination shall have the meaning assigned to such term in the Award Agreement for the particular Award or in any other agreement incorporated by reference into the Award Agreement for purposes of defining such term.

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(ii) In the absence of any other Involuntary Termination definition in the Award Agreement (or in any other agreement incorporated by reference into the Award Agreement), Involuntary Termination shall mean such individual's involuntary dismissal or discharge by the Corporation (or any Parent or Subsidiary) for reasons other than Misconduct, or such individual's voluntary resignation for Good Reason.

O. Misconduct shall, with respect to each Award made under the Plan, be defined in accordance with the following provisions:

(i) Misconduct shall have the meaning assigned to such term in the Award Agreement for the particular Award or in any other agreement incorporated by reference into the Award Agreement for purposes of defining such term.

(ii) In the absence of any other Misconduct definition in the Award Agreement for a particular Award (or in any other agreement incorporated by reference into the Award Agreement), Misconduct shall mean the commission of any act of fraud, embezzlement or dishonesty by the Participant, any unauthorized use or disclosure by such person of confidential information or trade secrets of the Corporation (or any Parent or Subsidiary), or any other intentional misconduct by such person adversely affecting the business or affairs of the Corporation (or any Parent or Subsidiary) in a material manner. The foregoing definition shall not in any way preclude or restrict the right of the Corporation (or any Parent or Subsidiary) to discharge or dismiss any Participant or other person in the Service of the Corporation (or any Parent or Subsidiary) for any other acts or omissions, but such other acts or omissions shall not be deemed, for purposes of the Plan, to constitute grounds for termination for Misconduct.

P. 1934 Act shall mean the Securities Exchange Act of 1934, as amended.

Q. Non-Statutory Option shall mean an option not intended to satisfy the requirements of Code Section 422.

R. Parent shall mean any corporation (other than the Corporation) in an unbroken chain of corporations ending with the Corporation, provided each corporation in the unbroken chain (other than the Corporation) owns, at the time of the determination, stock possessing fifty percent (50%) or more of the total combined voting power of all classes of stock in one of the other corporations in such chain.

S. Participant shall mean any person who is granted an Award under the Plan.

T. Performance Goals shall mean any of the following performance criteria upon which the vesting of one or more Awards under the Plan may be based: (i) pre-tax or after-tax earnings, profit or net income, (ii) revenue or revenue growth, (iii) earnings per share, (iv) return on assets, capital or stockholder equity, (v) total stockholder return, (vi) gross or net profit margin, (vii) cash flow, (viii) earnings or operating income before interest, taxes, depreciation, amortization and/or charges for stock-based compensation, (ix) market share, (x) increases in customer base, (xi) operating income, net operating income or net operating income after recorded tax expense; (xii) operating profit, net operating profit or net operating profit after recorded tax expense, (xiii) operating margin, (xiv) cost reductions or other expense control objectives, (xv) market price of the Common Stock, whether measured in absolute terms or in relationship to earnings or operating income, (xvi) budget objectives and research and development milestones, (xvii) working capital, (xviii) mergers, acquisitions or divestitures or (xix) measures of customer satisfaction. Each performance criteria may be based upon the attainment of specified levels of the Corporation's performance under one or more of the measures described above relative to the performance of other entities and may also be based on the performance of any of the Corporation's business units or divisions or any Parent or Subsidiary. Each applicable Performance Goal may include a minimum threshold level of performance below which no Award will be earned, levels of performance at which specified portions of an Award will be earned and a maximum level of performance at which an Award will be fully earned. Each applicable Performance Goal may be structured at the time of the Award to provide for appropriate adjustment for one or more of the following items: (A) asset impairments or

write-downs; (B) litigation judgments or claim settlements; (C) the effect of changes in tax law, accounting principles or other such laws or provisions affecting reported results; (D) accruals for reorganization and restructuring programs; (E) any extraordinary nonrecurring items as described in Accounting Principles Board Opinion No. 30 and/or in management's discussion and analysis of financial condition and results of operations appearing in the Corporation's annual report to shareholders for the applicable year; (F) the operations of any business acquired by the Corporation or any Parent or Subsidiary or of any joint venture in which the Corporation or any Parent or Subsidiary participates; (G) the divestiture of one or more business operations or the assets thereof; or (H) the costs incurred in connection with such acquisitions or divestitures.

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U. Permanent Disability or Permanently Disabled shall, with respect to each Award made under the Plan, be defined in accordance with the following provisions:

(i) Permanent Disability or Permanently Disabled shall have the meaning assigned to such term in the Award Agreement for the particular Award or in any other agreement incorporated by reference into the Award Agreement for purposes of defining such term.

(ii) In the absence of any other definition of Permanent Disability or Permanently Disabled in the Award Agreement for a particular Award (or in any other agreement incorporated by reference into the Award Agreement), Permanent Disability or Permanently Disabled shall mean the inability of the Participant to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment expected to result in death or to be of continuous duration of twelve (12) months or more.

V. Plan shall mean the Corporation's 2008 Incentive Compensation Plan, as set forth in this document.

W. Plan Administrator shall mean the particular entity or individual, whether the Compensation Committee (or subcommittee thereof), the Board, the Secondary Board Committee or executive officer authorized to administer the Plan with respect to one or more classes of eligible persons, to the extent such entity or individual is carrying out its administrative functions under the Plan with respect to the persons under the jurisdiction of such entity or individual.

X. Plan Effective Date shall mean the date upon which the Plan shall be approved by the Corporation's stockholders.

Y. Predecessor Plan shall mean the Corporation's 1998 Stock Incentive Plan in effect immediately prior to the Plan Effective Date hereunder.

Z. Secondary Board Committee shall mean a committee of one or more Board members appointed by the Board to administer the Plan with respect to eligible persons other than Section 16 Insiders.

AA. Section 16 Insider shall mean an officer or director of the Corporation subject to the short-swing profit liabilities of Section 16 of the 1934 Act.

BB. Service shall, with respect to each Award made under the Plan, be defined in accordance with the following provisions:

(i) Service shall have the meaning assigned to such term in the Award Agreement for the particular Award or in any other agreement incorporated by reference into the Award Agreement for purposes of defining such term.

(ii) In the absence of any other definition of Service in the Award Agreement for a particular Award (or in any other agreement incorporated by reference into the Award Agreement), Service shall mean the performance of services for the Corporation (or any Parent or Subsidiary, whether now existing or subsequently established) by a person in the capacity of an Employee, a non-employee member of the board of directors or a consultant or independent advisor, except to the extent otherwise specifically provided in the documents evidencing the option grant or stock issuance. For purposes of this particular definition of Service, a Participant shall be deemed to cease Service immediately upon the occurrence of either of the following events: (i) the Participant no longer performs services in any of the foregoing capacities for the Corporation or any Parent or Subsidiary or (ii) the entity for which the Participant is performing such services ceases to remain a Parent or Subsidiary of the Corporation, even though the Participant may subsequently continue to perform services for that entity.



(iii) Service shall not be deemed to cease during a period of military leave, sick leave or other personal leave approved by the Corporation; provided, however, that should such leave of absence exceed three (3) months, then for purposes of determining the period within which an Incentive Option may be exercised as such under the federal tax laws, the Participant's Service shall be deemed to cease on the first day immediately following the expiration of such three (3)-month period, unless Participant is provided with the right to return to Service following such leave either by statute or by written contract. Except to the extent otherwise required by law or expressly authorized by the Plan Administrator or by the Corporation's written policy on leaves of absence, no Service credit shall be given for vesting purposes for any period the Participant is on a leave of absence.

CC. Stock Exchange shall mean the American Stock Exchange, the Nasdaq Global or Global Select Market or the New York Stock Exchange.

DD. Subsidiary shall mean any corporation (other than the Corporation) in an unbroken chain of corporations beginning with the Corporation, provided each corporation (other than the last corporation) in the unbroken chain owns, at the time of the determination, stock possessing fifty percent (50%) or more of the total combined voting power of all classes of stock in one of the other corporations in such chain.

EE. 10% Stockholder shall mean the owner of stock (as determined under Code Section 424(d)) possessing more than ten percent (10%) of the total combined voting power of all classes of stock of the Corporation (or any Parent or Subsidiary).

FF. Withholding Taxes shall mean the applicable federal, state and foreign income and employment withholding taxes and other payments to which the holder of an Award under the Plan may become subject in connection with the issuance, exercise or vesting of that Award or the issuance of shares of Common Stock thereunder.

Appendix B

CERTIFICATE OF AMENDMENT  
OF THE  
AMENDED AND RESTATED  
CERTIFICATE OF INCORPORATION  
OF  
SENESCO TECHNOLOGIES, INC.

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Pursuant to Sections 228 and 242  
of the  
Delaware General Corporation Law

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Senesco Technologies, Inc. (the “Corporation”), a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the “DGCL”);

DOES HEREBY CERTIFY THAT:

FIRST: The name of the corporation (hereinafter, the “Corporation”) is:

Senesco Technologies, Inc.

SECOND: The Amended and Restated Certificate of Incorporation of the Corporation was filed with the office of the Secretary of State of Delaware on January 22, 2007 (the “Restated Certificate”), a Certificate of Amendment of the Restated Certificate was filed with the office of the Secretary of State of Delaware on each of December 13, 2007 and September 22, 2009 and two Certificates of Designations were filed with the office of the Secretary of State of Delaware on March 31, 2010 (the “Amendment” together with the Restated Certificate, the “Charter”).

THIRD: The Charter is hereby amended as follows:

(a) The first section of Article FOURTH of the Charter is hereby deleted in its entirety and replaced by the following new paragraph:

“The total number of shares of all classes of stock which the Corporation shall have authority to issue is Two Hundred Fifty Five Million (255,000,000) shares. The Corporation is authorized to issue two classes of stock designated “Common Stock” and “Preferred Stock,” respectively. The total number of shares of Common Stock authorized to be issued by the Corporation is Two Hundred Fifty Million (250,000,000), each such share of Common Stock having a \$0.01 par value. The total number of shares of Preferred Stock authorized to be issued by the Corporation is Five Million (5,000,000), each such share of Preferred Stock having a \$0.01 par value.”

FOURTH: That the foregoing amendments have been duly adopted in accordance with the provisions of Sections 228 and 242 of the DGCL.

FIFTH: This Certificate of Amendment shall be deemed effective upon its filing with the Secretary of State of the State of Delaware.



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IN WITNESS WHEREOF, this Certificate of Amendment of the Certificate of Incorporation has been duly executed by the undersigned officer of the Corporation this \_\_\_ day of \_\_\_\_\_, 2010.

SENESCO TECHNOLOGIES, INC.

By:

Name: Jack Van Hulst

Title: President and Chief Executive Officer

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ANNUAL MEETING OF STOCKHOLDERS OF

SENESCO TECHNOLOGIES, INC.

PROXY SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS  
OF THE CORPORATION FOR THE ANNUAL MEETING OF STOCKHOLDERS

The undersigned hereby constitutes and appoints Jack Van Hulst and Joel Brooks, and each of them, his or her true and lawful agent and proxy with full power of substitution in each, to represent and to vote on behalf of the undersigned all of the shares of Senesco Technologies, Inc. (the "Company") which the undersigned is entitled to vote at the Annual Meeting of Stockholders of the Company to be held at the New York offices of Morgan, Lewis & Bockius LLP at 101 Park Avenue, New York, NY 10178 on May [\_\_\_], 2010, at 10:00 A.M, and at any adjournment or adjournments thereof, upon the following proposals more fully described in the Notice of Annual Meeting of Stockholders and Proxy Statement for the Meeting (receipt of which is hereby acknowledged).

This proxy when properly executed will be voted in the manner directed herein by the undersigned stockholder. If no direction is made, this proxy will be voted FOR proposals 1, 2, 3, 4, 5, 6, and 7.

(Continued and to be signed on the reverse side)

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ANNUAL MEETING OF STOCKHOLDERS OF

SENESCO TECHNOLOGIES, INC.

May [\_\_], 2010

Please date, sign and mail  
your proxy card in the  
envelope provided as soon  
as possible.

Please detach along perforated line and mail in  
the envelope provided.

PLEASE SIGN, DATE AND RETURN PROMPTLY IN THE ENCLOSED ENVELOPE. PLEASE MARK YOUR  
VOTE IN BLUE OR BLACK INK AS SHOWN HERE x

1. Election for Directors:

- FOR ALL NOMINEES
- WITHHOLD AUTHORITY  
FOR ALL NOMINEES
- FOR ALL EXCEPT  
(see instructions below)

NOMINEES:

- Harlan W. Waksal, M.D.
- John N. Braca
- Jack Van Hulst
- Christopher Forbes
- Warren J. Isabelle
- Thomas C. Quick
- David Rector
- Rudolf Stalder
- John E. Thompson

INSTRUCTION: To withhold authority to vote for any  
individual nominee(s), mark "FOR  
ALL EXCEPT" and fill in the circle  
next to each nominee you wish to  
withhold, as shown here:

|   | FOR                   | AGAINST               | ABSTAIN               |
|---|-----------------------|-----------------------|-----------------------|
| 2. To approve an amendment to the Senesco Technologies, Inc. 2008 Incentive Compensation Plan to increase the number of shares of common stock reserved for issuance thereunder from 6,137,200 shares to 11,137,200 shares. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3. To approve an amendment to our Certificate of Incorporation to increase the total number of authorized shares of common stock, \$0.01 par value per share, from 120,000,000 to 250,000,000.                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 4. To approve, for purposes of section 713 of the NYSE Amex Company guide, the issuance of Preferred Stock, Warrants and Placement Agent Warrants (and  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

the shares of common stock issuable upon exercise of the Warrants, the Placement Agent Warrants and the conversion of the Preferred Stock and payment of dividends thereon) which, when converted, in the aggregate exceed 20% of our currently outstanding shares of common stock pursuant to the terms and conditions of the Securities Purchase Agreements, dated as of March 26, 2010, between certain investors who are a party thereto and us.

- |    |  |   |   |   |
|----|--|---|---|---|
| 5. | To approve, for purposes of section 711 of the NYSE Amex Company Guide, the issuance of our shares of Preferred Stock and Warrants (and the shares of common stock issuable upon the exercise of the Warrants and the conversion of the Preferred Stock and the payment of dividends thereon) pursuant to the terms and conditions of the Securities Purchase Agreement, dated as of March 26, 2010, between each of Harlan W. Waksal, M.D. and Christopher Forbes and us. | o | o | o |
| 6. | To approve, for purposes of section 711 of the NYSE Amex Company Guide, the issuance of common stock upon the conversion of certain convertible debentures held by Christopher Forbes, Rudolf Stalder, Harlan W. Waksal, M.D., David Rector, John N. Braca, Jack Van Hulst, Warren Isabelle and the Thomas C. Quick Charitable Foundation.   | o | o | o |
| 7. | To ratify the appointment of McGladrey & Pullen, LLP as the Company's independent registered public accounting firm for the fiscal year ending June 30, 2010.  | o | o | o |
| 8. | In his discretion, the proxy is authorized to vote upon other matters as may properly come before the Meeting.   |   |   |   |

MARK "X" HERE IF YOU PLAN TO ATTEND THE MEETING o

To change the address on your account, please check the box at right and indicate your new address in the address space above. Please note that changes to the registered name(s) on the account may not be submitted via this method. o

Signature of  
Stockholder

Date:

Signature of  
Stockholder

Date:

Note: Please sign exactly as your name or names appear on this Proxy. When shares are held jointly, each holder should sign. When signing as executor, administrator, attorney, trustee or guardian, please give full title as such. If the signer is a corporation, please sign full corporate name by duly authorized officer, giving full title as such. If signer is a partnership, please sign in partnership name by authorized person.