SENESCO TECHNOLOGIES INC
Form S-1/A
November 27, 2013

As filed with the Securities and Exchange Commission on November 27, 2013
Registration No. 333-191785

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Amendment No. 1

To

FORM S-1

REGISTRATION STATEMENT

UNDER

THE SECURITIES ACT OF 1933

SENESCO TECHNOLOGIES, INC.

(Exact name of registrant as specified in its charter)

Delaware	2834	**84-1368850**
(State or other jurisdiction of incorporation or organization)	*(Primary Standard Industrial Classification Code Number)*	*(I.R.S. Employer Identification Number)*

721 Route 202/206, Suite 130

Bridgewater, NJ 08807

(908) 864-4444

(Address, including zip code and telephone number, including area code, of registrant's principal executive offices)

Leslie J. Browne, Ph.D.

Chief Executive Officer

Senesco Technologies, Inc.

721 Route 202/206, Suite 130

Bridgewater, NJ 08807

(908) 864-4444

(Name, address, including zip code and telephone number, including area code, of agent for service)

Copies to:

Joel Brooks

Chief Financial Officer

Senesco Technologies, Inc.

721 Route 202/206, Suite 130

Bridgewater, NJ 08807

(908) 864-4444

Emilio Ragosa

Morgan, Lewis & Bockius LLP

502 Carnegie Center

Princeton, NJ 08540

(609) 919-6633

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this Registration Statement.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. ¨

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ¨

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ¨

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ¨

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ¨	Accelerated filer ¨	Non-accelerated filer ¨ (Do not check if a smaller reporting company)	Smaller reporting company x

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the registration statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is declared effective. This prospectus is not an offer to sell these securities and we are not soliciting offers to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to Completion, dated November 27, 2013

Prospectus

SENESCO TECHNOLOGIES, INC.

Units, Each Consisting of

Shares of Common Stock

We are offering units, each unit consisting of shares of our common stock. Each unit will be sold at a negotiated offering price of per unit, resulting in aggregate gross proceeds to the company of $10,000,000, before estimated expenses. The units will separate immediately and the common stock will be issued and will trade separately. Our common stock currently trades on the OTCQB Marketplace, operated by the OTC Markets Group, under the symbol “SNTI.” The last reported sale price of our common stock on the OTCQB Marketplace on November 26, 2013 was $4.80 per share.

Investing in our securities involves a high degree of risk. See “Risk Factors” beginning on page 5.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

We expect to deliver the shares of common stock on or about , 2013.

The date of this prospectus is , 2013.

TABLE OF CONTENTS

	Page
PROSPECTUS SUMMARY	1
RISK FACTORS	5
CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS	17
USE OF PROCEEDS	18
DIVIDEND POLICY	19
COMMON SHARE PRICE RANGE	19
CAPITALIZATION	21
DILUTION	22
MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS	23
BUSINESS	36
MANAGEMENT	44
EXECUTIVE COMPENSATION	48
CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS	66
PRINCIPAL STOCKHOLDERS	68
DESCRIPTION OF COMMON STOCK	71
PLAN OF DISTRIBUTION	72
LEGAL MATTERS	72
EXPERTS	73
WHERE YOU CAN FIND MORE INFORMATION	73
INDEX TO FINANCIAL STATEMENTS	F-1

We have not authorized anyone to provide you with information different from, or in addition to, that contained in this prospectus. If anyone provides you with different or inconsistent information, you should not rely on it. We are not making an offer to sell or seeking offers to buy these securities in any jurisdiction where, or to any person to whom, the offer or sale is not permitted. The information in this prospectus is accurate only as of its date regardless of the time of delivery of this prospectus or of any sale of our common shares. Our business, financial condition, results of operations and future growth prospects may have changed since those dates.

For investors outside the United States, we have not done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. You are required to inform yourselves about and to observe any restrictions relating to this offering and the distribution of this prospectus outside of the United States.

This prospectus includes estimates, statistics and other industry and market data that we obtained from industry publications, research, surveys and studies conducted by third parties and publicly available information. Such data involves a number of assumptions and limitations and contains projections and estimates of the future performance of the industries in which we operate that are subject to a high degree of uncertainty. This prospectus also includes data based on our own internal estimates. We caution you not to give undue weight to such projections, assumptions and estimates.

PROSPECTUS SUMMARY

This summary highlights information contained in other parts of this prospectus. Because it is only a summary, it does not contain all of the information that you should consider before investing in our securities and it is qualified in its entirety by, and should be read in conjunction with, the more detailed information appearing elsewhere in this prospectus. You should read the entire prospectus carefully, especially the section entitled “Risk Factors” and our consolidated financial statements and related notes, before deciding to buy our securities. Unless otherwise stated, all references to “us,” “our,” “we,” “Senesco,” the “Company” and similar designations refer to Senesco Technologies, Inc. and its subsidiary Senesco, Inc.

Company Overview

Senesco Technologies, Inc., a Delaware corporation, is a development stage company. We do not expect to generate significant revenues for several years, during which time we will engage in significant research and development efforts. Our human therapeutic research program, which has consisted of clinical, pre-clinical in-vitro and in-vivo experiments designed to assess the role and method of action of the Factor 5A genes in human diseases, is performed by approximately seven third party researchers at our direction, at the University of Waterloo and other commercial research facilities. We have developed a therapeutic candidate, SNS01-T, for the potential treatment of multiple myeloma. We have also been granted orphan drug status for SNS01-T by the FDA for the potential treatment of multiple myeloma, diffuse large B-cell lymphoma, or DLBCL, and mantle cell lymphoma, or MCL. We initiated a Phase 1b/2a clinical study with SNS01-T for treatment of multiple myeloma in September 2011 and have expanded it to include treatment for DLBCL and MCL. We are currently sponsoring the study at Mayo Clinic in Rochester, MN, the University of Arkansas for Medical Sciences in Little Rock, the Mary Babb Randolph Cancer Center in Morgantown, WV, the John Theurer Cancer Center at Hackensack University Medical Center in Hackensack, NJ and the Seattle Cancer Care Alliance in Seattle, WA. We may consider other human diseases in order to determine the role of eIF5A and SNS01-T.

Additionally, we have six active agricultural license agreements to develop and commercialize our technology in banana plants, corn, soy, trees, alfalfa, and turf grass. The licenses provide for upfront payments, milestone payments and royalty payments to us upon commercial introduction.

Consistent with our commercialization strategy, we may license our technology for human health applications or for additional crops, as the opportunities may arise, that may result in additional license fees, revenues from contract research and other related revenues. Successful future operations will depend on our and our partners’ ability to transform our research and development activities into a commercially feasible technology.

Risk Factors

Our business is subject to a number of risks of which you should be aware before making an investment decision. These risks are described in more detail in the "Risk Factors" section of this prospectus immediately following this prospectus summary. These risks include the following:

- We have not experienced positive cash flow from our operations, and the ability to achieve positive cash flow from operations will depend on increasing sales of our products, which may not be achievable.

- Our business is subject to continuing regulatory compliance by the FDA and other authorities, which is costly and could result in negative effects on our business.

- Failure to protect our intellectual property rights could result in costly and time consuming litigation and our loss of any potential competitive advantage.

- The price of our common shares could be highly volatile due to a number of factors, which could lead to losses by investors and costly securities litigation.

Corporate Information

We were incorporated under the laws of Delaware in 1999. Our principal executive offices are located at 721 Route 202/206, Suite 130, Bridgewater, NJ 08807 and our telephone number is (908) 864-4444. Our website address is www.senesco.com. We have included our website address in this prospectus solely as an inactive textual reference. The information contained on, or that can be accessed through, our website is not part of this prospectus.

On October 21, 2013, we effected a 1-for-100 reverse stock split on our common stock. All references in this prospectus to number of shares, warrants or options, price per share, shares outstanding and similar information have been adjusted to reflect the reverse stock split on a retroactive basis, unless otherwise noted.

The Offering

Common shares offered by us	shares
Common shares outstanding after this offering	shares
Use of proceeds	We estimate that the net proceeds to us from the sale of common shares in this offering will be approximately , assuming a public offering price of per common share and after deducting estimated offering expenses payable by us. We intend to use the net proceeds from this offering to continue our product commercialization and marketing efforts, development of product pipeline, including product line extension, and for general working capital purposes. See "Use of Proceeds."
Current trading on OTCQB Marketplace	Our common shares currently trade on the OTCQB Marketplace under the symbol "SNTI."
Risk factors	You should read the "Risk Factors" section of this prospectus for a discussion of factors to consider carefully before deciding to invest in our common shares.

(1) The number of our common shares outstanding after this offering is based on 3,157,275 common shares outstanding as of November 26, 2013, and excludes:

- 278,040 common shares issuable upon the exercise of options outstanding as of November 26, 2013 at a weighted average exercise price of $29.30 per share;
- 282,866 common shares issuable upon the exercise of warrants outstanding as of November 26, 2013 at a weighted average exercise price of $36.00 per share;
- 232,000 common shares issuable upon the conversion of 580 shares of Series A Convertible Preferred Stock; and
- 1 additional common share available for future issuance as of November 26, 2013 under our Senesco Technologies, Inc. 2008 Stock Incentive Plan.

Unless otherwise indicated, all information in this prospectus assumes no exercise of the outstanding options and warrants or conversion of the outstanding Series A Convertible Preferred Stock described above.

Summary Consolidated Financial Data

The summary financial data below as of and for the years ended June 30, 2013, 2012 and 2011 have been derived from our audited consolidated financial statements. Our audited consolidated financial statements as of June 30, 2013 and 2012 and for the fiscal years ended June 30, 2013, 2012 and 2011 are included elsewhere in this prospectus. Our audited consolidated financial statements as of June 30, 2011 are not included in this prospectus. The summary financial data as of September 30, 2013 and 2012 and for the three months ended September 30, 2013 and 2012 have been derived from our consolidated financial statements included elsewhere in this prospectus. You should read the summary financial data together with "Capitalization," "Management's Discussion and Analysis of Financial Condition" and "Results of Operations" and our financial statements and the related notes included elsewhere in this prospectus. Our historical results for any prior period are not necessarily indicative of results to be expected in any future period.

	Three months ended September 30,		**Fiscal Years ended June 30,**		
Statement of operations data:	2013	2012	2013	2012	2011
	(in thousands, except share and per share data)				
Licensing Revenue	$ 100	$ -	$ -	$ 200	$ -
Operating expenses:					
Research and development	727	513	2,086	2,566	3,720
General and administrative	941	733	2,500	2,724	2,611
Write-off of patents abandoned	185	-	65	321	1,588
Total Operating Expenses	1,853	1,246	4,650	5,611	7,919
Loss from operations	(1,753)	(1,246)	(4,650)	(5,411)	(7,919)
Total other non-operating income (expense)	(31)	(839)	(1,472)	345	650
Net Loss	(1,784)	(2,085)	(6,122)	(5,066)	(7,269)
Net loss applicable to common shares	$ (1,806)	$ (2,710)	$ (6,685)	$ (6,692)	$ (9,907)
Basic and diluted weighted average common shares outstanding	2,307.926	1,074,493	1,366,384	857,033	693,324
Loss Per Common Share – basic and diluted	$ (0.78)	$ (2.52)	$ (4,89)	$ (7,81)	$ (14,29)

3

Balance sheets data:	As of September 30, (Unaudited) 2013	2012	As of June 30, 2013	2012	2011
	(in thousands)				
Cash and Cash equivalents	$ 789	$ 1,312	$ 1,602	$ 2,001	$ 3,610
Total assets	$ 5,815	$ 6,260	$ 7,098	$ 6,955	$ 8,597
Total liabilities	$ 3,697	$ 3,436	$ 3,312	$ 3,502	$ 4,080
Total stockholders' equity	$ 2,117	$ 2,629	$ 3,786	$ 3,453	$ 4,517

Statements of cash flows data:	Three months ended September 30, (Unaudited) 2013	2012	Fiscal Years ended June 30, 2013	2012	2011
	(in thousands)				
Net cash used for operating activities	$ (670)	$ (636)	$ (3,902)	$ (4,386)	$ (5,391)
Net cash used for investing activities	(143)	(147)	(529)	(450)	(686
Net cash provided by financing activities	$ -	$ 94	$ 4,033	$ 3,228	$ 1,661

RISK FACTORS

Investing in our common shares involves a high degree of risk. Before you decide to invest in our securities, you should consider carefully the risks described below, as well as the other information contained in this prospectus. The risks described below are not the only ones facing us. Additional risks not presently known to us or that we currently deemed immaterial may also impair our business operations.

If any of the following risks actually occurs, our business, financial condition, results of operations and future growth prospects would likely be materially and adversely affected. In these circumstances, the market price of our common shares could decline, and you may lose all or part of your investment.

Risk Related To Company

Recurring losses and negative cash flows from operations raise substantial doubt about our ability to continue as a going concern and we may not be able to continue as a going concern.

Our recurring losses from operations and negative cash flows from operations raise substantial doubt about our ability to continue as a going concern and as a result, our independent registered public accounting firm included an explanatory paragraph in its report on our consolidated financial statements for the fiscal year ended June 30, 2013 with respect to this uncertainty. Substantial doubt about our ability to continue as a going concern may create negative reactions to the price of the common shares of our stock and we may have a more difficult time obtaining financing.

We have prepared our financial statements on a going concern basis, which contemplates the realization of assets and the satisfaction of liabilities and commitments in the normal course of business. The financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or amounts of liabilities that might be necessary should we be unable to continue in existence.

We have a limited operating history and have incurred substantial losses and expect to incur future losses.

We are a development stage biotechnology company with a limited operating history and limited assets and capital. We have incurred losses each year since inception and had an accumulated deficit of $76,231,791 at September 30, 2013. We have generated minimal revenues by licensing our technology for certain crops to companies willing to

share in our development costs. In addition, our technology may not be ready for commercialization for several years. We expect to continue to incur losses for the next several years because we anticipate that our expenditures on research and development and administrative activities will significantly exceed our revenues during that period. We cannot predict when, if ever, we will become profitable.

We will need additional capital to fund our operations until we are able to generate a profit.

Our operations to date have required significant cash expenditures. Our future capital requirements will depend on the results of our research and development activities, preclinical and clinical studies, and competitive and technological advances.

We will need to obtain more funding in the future through collaborations or other arrangements with research institutions and corporate partners, or public and private offerings of our securities, including debt or equity financing. We may not be able to obtain adequate funds for our operations from these sources when needed or on acceptable terms. Future collaborations or similar arrangements may require us to license valuable intellectual property to, or to share substantial economic benefits with, our collaborators. If we raise additional capital by issuing additional equity or securities convertible into equity, our stockholders may experience dilution and our share price may decline. Any debt financing may result in restrictions on our spending.

If we are unable to raise additional funds, we will need to do one or more of the following:

- delay, scale-back or eliminate some or all of our research and product development programs;
- provide licenses to third parties to develop and commercialize products or technologies that we would otherwise seek to develop and commercialize ourselves;
- seek strategic alliances or business combinations;
- attempt to sell our company;
- cease operations; or
- declare bankruptcy.

We believe that at the projected rate of spending we should have sufficient cash to maintain our present operations through March 2014. After giving effect to the net proceeds from this offering, we should have sufficient cash to maintain our present operations through [ ].

We may be adversely affected by the current economic environment.

Our ability to obtain financing, invest in and grow our business, and meet our financial obligations depends on our operating and financial performance, which in turn is subject to numerous factors. In addition to factors specific to our business, prevailing economic conditions and financial, business and other factors beyond our control can also affect our business and ability to raise capital. We cannot anticipate all of the ways in which the current economic climate and financial market conditions could adversely impact our business.

Materials necessary to manufacture some of our compounds currently under development may not be available on commercially reasonable terms, or at all, which may delay our development and commercialization of these compounds.

Some of the materials necessary for the manufacture of our compounds under development may, from time to time, be available either in limited quantities, or from a limited number of manufacturers, or both. Our contract manufacturers need to obtain these materials for our clinical trials and, potentially, for commercial distribution when and if we obtain marketing approval for these compounds. Suppliers may not sell us these materials at the time we need them or on commercially reasonable terms. If we are unable to obtain the materials needed to conduct our clinical trials, product testing and potential regulatory approval could be delayed, adversely affecting our ability to develop the product candidates. Similarly, if we are unable to obtain critical manufacturing materials after regulatory approval has been obtained for a product candidate, the commercial launch of that product candidate could be delayed or there could be a shortage in supply, which could materially affect our ability to generate revenues from that product candidate. If suppliers increase the price of manufacturing materials, the price for one or more of our products may increase, which may make our products less competitive in the marketplace. If it becomes necessary to change suppliers for any of these materials or if any of our suppliers experience a shutdown or disruption at the facilities used to produce these materials, due to technical, regulatory or other reasons, it could harm our ability to manufacture our products.

We depend on a single principal technology and, if our technology is not commercially successful, we will have no alternative source of revenue.

Our primary business is the development and licensing of technology to identify, isolate, characterize and promote or silence genes which control the death of cells in humans and plants. Our future revenue and profitability critically depend upon our ability, or our licensees' ability, to successfully develop apoptosis and senescence gene technology

and later license or market such technology. We have conducted experiments on certain crops with favorable results and have conducted certain preliminary cell-line and animal experiments, which have provided us with data upon which we have designed additional research programs. However, we cannot give any assurance that our technology will be commercially successful or economically viable for any crops or human therapeutic applications.

In addition, no assurance can be given that adverse consequences might not result from the use of our technology such as the development of negative effects on humans or plants or reduced benefits in terms of crop yield or protection. Our failure to obtain market acceptance of our technology or the failure of our current or potential licensees to successfully commercialize such technology would have a material adverse effect on our business.

We outsource all of our research and development activities and, if we are unsuccessful in maintaining our alliances with these third parties, our research and development efforts may be delayed or curtailed.

We rely on third parties to perform all of our research and development activities. Our research and development efforts take place at the University of Waterloo in Ontario, Canada, where our technology was discovered, at other commercial research facilities and with our commercial partners. At this time, we do not have the internal capabilities to perform our own research and development activities. Accordingly, the failure of third party research partners to perform under agreements entered into with us, or our failure to renew important research agreements with these third parties, may delay or curtail our research and development efforts.

We have significant future capital needs and may be unable to raise capital when needed, which could force us to delay or reduce our research and development efforts.

As of September 30, 2013, we had a cash balance of $789,176 and a working capital deficit of $(1,241,994). In October 2013, we received net proceeds of approximately $1,505,000 from the placement of our common stock. Using our available reserves as of September 30, 2013 and the net proceeds from the placement of common stock in October 2013, we believe that we can operate according to our current business plan through March 2014. After giving effect to the net proceeds from this offering, we should have sufficient cash to maintain our present operations through [ ].

To date, we have generated minimal revenues and anticipate that our operating costs will exceed any revenues generated over the next several years. Therefore, we will be required to raise additional capital in the future in order to operate in accordance with our current business plan, and this funding may not be available on favorable terms, if at all. If we are unable to raise additional funds, we will need to do one or more of the following:

- delay, scale back or eliminate some or all of our research and development programs;
- provide a license to third parties to develop and commercialize our technology that we would otherwise seek to develop and commercialize ourselves;
- seek strategic alliances or business combinations;
- attempt to sell our company;
- cease operations; or
- declare bankruptcy.

In addition, in connection with any funding, if we need to issue more equity securities than our certificate of incorporation currently authorizes we will need stockholder approval. If stockholder approval is not obtained or if adequate funds are not available, we may be required to curtail operations significantly or to obtain funds through arrangements with collaborative partners or others that may require us to relinquish rights to certain of our technologies, product candidates, products or potential markets. Investors may experience dilution in their investment from future offerings of our common stock. For example, if we raise additional capital by issuing equity securities, such an issuance would reduce the percentage ownership of existing stockholders. In addition, assuming the exercise of all options and warrants outstanding and the conversion of the preferred stock into common stock, as of September 30, 2013, we had 170,780,383 shares of common stock authorized but unissued and unreserved, which may be issued from time to time by our board of directors. As of October 31, 2013, after giving effect to shares of common stock issued during October 2013 and the effect of the 1:100 reverse stock split effective October 21, 2013, we had 496,704,804 shares of common stock authorized but unissued and unreserved, which may be issued from time to time by our board of directors. Furthermore, we may need to issue securities that have rights, preferences and privileges senior to our common stock. Failure to obtain financing on acceptable terms would have a material adverse effect on our liquidity.

Since our inception, we have financed all of our operations through equity and debt financings. Our future capital requirements depend on numerous factors, including:

- the scope of our research and development;
- our ability to attract business partners willing to share in our development costs;
- our ability to successfully commercialize our technology;
- competing technological and market developments;
- our ability to enter into collaborative arrangements for the development, regulatory approval and commercialization of other products; and
- the cost of filing, prosecuting, defending and enforcing patent claims and other intellectual property rights.

Our business depends upon our patents and proprietary rights and the enforcement of these rights. Our failure to obtain and maintain patent protection may increase competition and reduce demand for our technology.

As a result of the substantial length of time and expense associated with developing products and bringing them to the marketplace in the biotechnology and agricultural industries, obtaining and maintaining patent and trade secret protection for technologies, products and processes is of vital importance. Our success will depend in part on several factors, including, without limitation:

- our ability to obtain patent protection for our technologies and processes;
- our ability to preserve our trade secrets; and
- our ability to operate without infringing the proprietary rights of other parties both in the United States and in foreign countries.

As of September 30, 2013, we have been issued twenty-nine (29) patents by the PTO and seventy-three (73) patents from foreign countries. We have also filed numerous patent applications for our technology in the United States and in several foreign countries, which technology is vital to our primary business, as well as several continuations in part on these patent applications. Our success depends in part upon the grant of patents from our pending patent applications.

Although we believe that our technology is unique and that it will not violate or infringe upon the proprietary rights of any third party, we cannot assure you that these claims will not be made or if made, could be successfully defended against. If we do not obtain and maintain patent protection, we may face increased competition in the United States and internationally, which would have a material adverse effect on our business.

Since patent applications in the United States are maintained in secrecy until patents are issued, and since publication of discoveries in the scientific and patent literature tend to lag behind actual discoveries by several months, we cannot be certain that we were the first creator of the inventions covered by our pending patent applications or that we were the first to file patent applications for these inventions.

In addition, among other things, we cannot assure you that:

- our patent applications will result in the issuance of patents;
- any patents issued or licensed to us will be free from challenge and if challenged, would be held to be valid;
- any patents issued or licensed to us will provide commercially significant protection for our technology, products and processes;
- other companies will not independently develop substantially equivalent proprietary information which is not covered by our patent rights;
- other companies will not obtain access to our know-how;
- other companies will not be granted patents that may prevent the commercialization of our technology; or
- we will not incur licensing fees and the payment of significant other fees or royalties to third parties for the use of their intellectual property in order to enable us to conduct our business.

Our competitors may allege that we are infringing upon their intellectual property rights, forcing us to incur substantial costs and expenses in resulting litigation, the outcome of which would be uncertain.

Patent law is still evolving relative to the scope and enforceability of claims in the fields in which we operate. We are like most biotechnology companies in that our patent protection is highly uncertain and involves complex legal and technical questions for which legal principles are not yet firmly established. In addition, if issued, our patents may not contain claims sufficiently broad to protect us against third parties with similar technologies or products, or provide us with any competitive advantage.

The PTO and the courts have not established a consistent policy regarding the breadth of claims allowed in biotechnology patents. The allowance of broader claims may increase the incidence and cost of patent interference proceedings and the risk of infringement litigation. On the other hand, the allowance of narrower claims may limit the scope and value of our proprietary rights.

The laws of some foreign countries do not protect proprietary rights to the same extent as the laws of the United States, and many companies have encountered significant problems and costs in protecting their proprietary rights in these foreign countries.

We could become involved in infringement actions to enforce and/or protect our patents. Regardless of the outcome, patent litigation is expensive and time consuming and would distract our management from other activities. Some of our competitors may be able to sustain the costs of complex patent litigation more effectively than we could because they have substantially greater resources. Uncertainties resulting from the initiation and continuation of any patent litigation could limit our ability to continue our operations.

If our technology infringes the intellectual property of our competitors or other third parties, we may be required to pay license fees or damages.

The current patent landscape surrounding siRNA technology is unclear due to the recent proliferation of siRNA-related patent litigation and grants of third-party patents encompassing this technology. If any relevant claims of third party patents that are adverse to us are upheld as valid and enforceable, we could be prevented from commercializing our technology or could be required to obtain licenses from the owners of such patents. We cannot assure you that such licenses would be available or, if available, would be on acceptable terms. Some licenses may be non-exclusive and, therefore, our competitors may have access to the same technology licensed to us. In addition, if any parties successfully claim that the creation or use of our technology infringes upon their intellectual property rights, we may be forced to pay damages, including treble damages.

Our security measures may not adequately protect our unpatented technology and, if we are unable to protect the confidentiality of our proprietary information and know-how, the value of our technology may be adversely affected.

Our success depends upon know-how, unpatentable trade secrets, and the skills, knowledge and experience of our scientific and technical personnel. As a result, all employees agreed to a confidentiality provision in their employment agreement that prohibited the disclosure of confidential information to anyone outside of our company, during the term of employment and for five (5) years thereafter. The employment agreements have since been terminated, but the period of confidentiality is still in effect. We also require all employees to disclose and assign to us the rights to their ideas, developments, discoveries and inventions. We also attempt to enter into similar agreements with our consultants, advisors and research collaborators. We cannot assure you that adequate protection for our trade secrets, know-how or other proprietary information against unauthorized use or disclosure will be available.

We occasionally provide information to research collaborators in academic institutions and request that the collaborators conduct certain tests. We cannot assure you that the academic institutions will not assert intellectual property rights in the results of the tests conducted by the research collaborators, or that the academic institutions will grant licenses under such intellectual property rights to us on acceptable terms, if at all. If the assertion of intellectual property rights by an academic institution is substantiated, and the academic institution does not grant intellectual property rights to us, these events could limit our ability to commercialize our technology.

As we evolve from a company primarily involved in the research and development of our technology into one that is also involved in the commercialization of our technology, we may have difficulty managing our growth and expanding our operations.

As our business grows, we may need to add employees and enhance our management, systems and procedures. We may need to successfully integrate our internal operations with the operations of our marketing partners, manufacturers, distributors and suppliers to produce and market commercially viable products. We may also need to manage additional relationships with various collaborative partners, suppliers and other organizations. Although we do not presently conduct research and development activities in-house, we may undertake those activities in the future. Expanding our business may place a significant burden on our management and operations. We may not be able to implement improvements to our management information and control systems in an efficient and timely manner and we may discover deficiencies in our existing systems and controls. Our failure to effectively respond to such changes may make it difficult for us to manage our growth and expand our operations.

We have no marketing or sales history and depend on third party marketing partners. Any failure of these parties to perform would delay or limit our commercialization efforts.

We have no history of marketing, distributing or selling biotechnology products, and we are relying on our ability to successfully establish marketing partners or other arrangements with third parties to market, distribute and sell a commercially viable product both here and abroad. Our business plan envisions creating strategic alliances to access needed commercialization and marketing expertise. We may not be able to attract qualified sub-licensees, distributors or marketing partners, and even if qualified, these marketing partners may not be able to successfully market agricultural products or human therapeutic applications developed with our technology. If our current or potential future marketing partners fail to provide adequate levels of sales, our commercialization efforts will be delayed or limited and we may not be able to generate revenue.

We will depend on joint ventures and strategic alliances to develop and market our technology and, if these arrangements are not successful, our technology may not be developed and the expenses to commercialize our technology will increase.

In its current state of development, our technology is not ready to be marketed to consumers. We intend to follow a multi-faceted commercialization strategy that involves the licensing of our technology to business partners for the purpose of further technological development, marketing and distribution. We have and are seeking business partners who will share the burden of our development costs while our technology is still being developed, and who will pay us royalties when they market and distribute products incorporating our technology upon commercialization. The establishment of joint ventures and strategic alliances may create future competitors, especially in certain regions abroad where we do not pursue patent protection. If we fail to establish beneficial business partners and strategic alliances, our growth will suffer and the continued development of our technology may be harmed.

Competition in the human therapeutic and agricultural biotechnology industries is intense and technology is changing rapidly. If our competitors market their technology faster than we do, we may not be able to generate revenues from the commercialization of our technology.

Many human therapeutic and agricultural biotechnology companies are engaged in research and development activities relating to apoptosis and senescence. The market for plant protection and yield enhancement products is intensely competitive, rapidly changing and undergoing consolidation. We may be unable to compete successfully against our current and future competitors, which may result in price reductions, reduced margins and the inability to achieve market acceptance for products containing our technology. Our competitors in the field of plant senescence gene technology are companies that develop and produce transgenic plants and include major international agricultural companies, specialized biotechnology companies, research and academic institutions and, potentially, our joint venture and strategic alliance partners. These companies include: Mendel Biotechnology, Inc.; Ceres, Inc., Archer Daniels Midland and Syngenta International AG; among others. Some of our competitors that are involved in apoptosis research include: Celgene Corporation; Takeda/Millennium; ONYX Pharmaceuticals, Inc.; Amgen Inc.; Janssen Biotech, Inc.; Novartis AG; and Pharmacyclics, Inc. Many of these competitors have substantially greater financial, marketing, sales, distribution and technical resources than us and have more experience in research and development, clinical trials, regulatory matters, manufacturing and marketing. We anticipate increased competition in the future as new companies enter the market and new technologies become available. Our technology may be rendered obsolete or uneconomical by technological advances or entirely different approaches developed by one or more of our competitors, which will prevent or limit our ability to generate revenues from the commercialization of our technology.

Our business is subject to various government regulations and, if we or our licensees are unable to obtain regulatory approval, we may not be able to continue our operations.

At present, the U.S. federal government regulation of biotechnology is divided among three agencies:

- the United States Department of Agriculture, or USDA, regulates the import, field testing and interstate movement of specific types of genetic engineering that may be used in the creation of transgenic plants;
- the United States Environmental Protection Agency, or EPA, regulates activity related to the invention of plant pesticides and herbicides, which may include certain kinds of transgenic plants; and
- the FDA regulates foods derived from new plant varieties.

The FDA requires that transgenic plants meet the same standards for safety that are required for all other plants and foods in general. Except in the case of additives that significantly alter a food's structure, the FDA does not require any additional standards or specific approval for genetically engineered foods, but expects transgenic plant developers to consult the FDA before introducing a new food into the marketplace.

Use of our technology, if developed for human therapeutic applications, is also subject to FDA regulation. The FDA must approve any drug or biologic product before it can be marketed in the United States. In addition, prior to being sold outside of the United States, any products resulting from the application of our human therapeutic technology must be approved by the regulatory agencies of foreign governments. Prior to filing a new drug application or biologics license application with the FDA, we would have to perform extensive clinical trials, and prior to beginning any clinical trial, we would need to perform extensive preclinical testing which could take several years and may require substantial expenditures.

We believe that our current agricultural activities, which to date have been confined to research and development efforts, do not require licensing or approval by any governmental regulatory agency. However, we are performing clinical trials in connection with our human therapeutic applications, which is subject to FDA approval. Additionally, federal, state and foreign regulations relating to crop protection products and human therapeutic applications developed through biotechnology are subject to public concerns and political circumstances, and, as a result, regulations have changed and may change substantially in the future. Accordingly, we may become subject to governmental regulations or approvals or become subject to licensing requirements in connection with our research and development efforts. We may also be required to obtain such licensing or approval from the governmental regulatory agencies described above, or from state agencies, prior to the commercialization of our genetically transformed plants and human therapeutic technology. In addition, our marketing partners who utilize our technology or sell products grown with our technology may be subject to government regulations. If unfavorable governmental regulations are imposed on our technology or if we fail to obtain licenses or approvals in a timely manner, we may not be able to continue our operations.

Preclinical studies of our human therapeutic applications may be unsuccessful, which could delay or prevent regulatory approval.

Preclinical studies may reveal that our human therapeutic technology is ineffective or harmful, and/or may be unsuccessful in demonstrating efficacy and safety of our human therapeutic technology, which would significantly limit the possibility of obtaining regulatory approval for any drug or biologic product manufactured with our technology. The FDA requires submission of extensive preclinical, clinical and manufacturing data to assess the efficacy and safety of potential products. Any delay in receiving approval for any applicable IND from the FDA would result in a delay in the commencement of the related clinical trial. Additionally, we could be required to perform additional preclinical studies prior to the FDA approving any applicable IND. Furthermore, the success of preliminary studies does not ensure commercial success, and later-stage clinical trials may fail to confirm the results of the preliminary studies.

Our success will depend on the success of our clinical trials of our human therapeutic applications.

It may take several years to complete the clinical trials of a product, and failure of one or more of our clinical trials can occur at any stage of testing. We believe that the development of our product candidate involves significant risks at each stage of testing. If clinical trial difficulties and failures arise, our product candidate may never be approved for sale or become commercially viable.

There are a number of difficulties and risks associated with clinical trials. These difficulties and risks may result in the failure to receive regulatory approval to sell our product candidate or the inability to commercialize our product candidate. The possibility exists that:

- we may discover that the product candidate does not exhibit the expected therapeutic results in humans, may cause harmful side effects or have other unexpected characteristics that may delay or preclude regulatory approval or limit commercial use if approved;
- the results from early clinical trials may not be statistically significant or predictive of results that will be obtained from expanded advanced clinical trials;
- institutional review boards or regulators, including the FDA, may hold, suspend or terminate our clinical research or the clinical trials of our product candidate for various reasons, including noncompliance with regulatory requirements or if, in their opinion, the participating subjects are being exposed to unacceptable health risks;
- subjects may drop out of our clinical trials;
- our preclinical studies or clinical trials may produce negative, inconsistent or inconclusive results, and we may decide, or regulators may require us, to conduct additional preclinical studies or clinical trials; and
- the cost of our clinical trials may be greater than we currently anticipate.

11

Clinical trials for our human therapeutic technology will be lengthy and expensive and their outcome is uncertain.

Before obtaining regulatory approval for the commercial sales of any product containing our technology, we must demonstrate through clinical testing that our technology and any product containing our technology is safe and effective for use in humans. Conducting clinical trials is a time-consuming, expensive and uncertain process and typically requires years to complete. In our industry, the results from preclinical studies and early clinical trials often are not predictive of results obtained in later-stage clinical trials. Some products and technologies that have shown promising results in preclinical studies or early clinical trials subsequently fail to establish sufficient safety and efficacy data necessary to obtain regulatory approval. At any time during clinical trials, we or the FDA might delay or halt any clinical trial for various reasons, including:

- occurrence of unacceptable toxicities or side effects;
- ineffectiveness of the product candidate;
- negative or inconclusive results from the clinical trials, or results that necessitate additional studies or clinical trials;
- delays in obtaining or maintaining required approvals from institutions, review boards or other reviewing entities at clinical sites;
- delays in patient enrollment; or
- insufficient funding or a reprioritization of financial or other resources.

Any failure or substantial delay in successfully completing clinical trials and obtaining regulatory approval for our product candidates could severely harm our business.

If our clinical trials for our product candidates are delayed, we would be unable to commercialize our product candidates on a timely basis, which would materially harm our business.

Planned clinical trials may not begin on time or may need to be restructured after they have begun. Clinical trials can be delayed for a variety of reasons, including delays related to:

- obtaining an effective IND or regulatory approval to commence a clinical trial;
- negotiating acceptable clinical trial agreement terms with prospective trial sites;
- obtaining institutional review board approval to conduct a clinical trial at a prospective site;
- recruiting qualified subjects to participate in clinical trials;
- competition in recruiting clinical investigators;
- shortage or lack of availability of supplies of drugs for clinical trials;
- the need to repeat clinical trials as a result of inconclusive results or poorly executed testing;
- the placement of a clinical hold on a study;
-

the failure of third parties conducting and overseeing the operations of our clinical trials to perform their contractual or regulatory obligations in a timely fashion; and

- exposure of clinical trial subjects to unexpected and unacceptable health risks or noncompliance with regulatory requirements, which may result in suspension of the trial.

We believe that our product candidate has significant milestones to reach, including the successful completion of clinical trials, before commercialization. If we have significant delays in or termination of clinical trials, our financial results and the commercial prospects for our product candidates or any other products that we may develop will be adversely impacted. In addition, our product development costs would increase and our ability to generate revenue could be impaired.

Any inability to license from third parties their proprietary technologies or processes which we use in connection with the development of our technology may impair our business.

Other companies, universities and research institutions have or may obtain patents that could limit our ability to use our technology in a product candidate or impair our competitive position. As a result, we would have to obtain licenses from other parties before we could continue using our technology in a product candidate. Any necessary licenses may not be available on commercially acceptable terms, if at all. If we do not obtain required licenses, we may not be able to develop our technology into a product candidate or we may encounter significant delays in development while we redesign methods that are found to infringe on the patents held by others.

Even if we receive regulatory approval, consumers may not accept products containing our technology, which will prevent us from being profitable since we have no other source of revenue.

We cannot guarantee that consumers will accept products containing our technology. Recently, there has been consumer concern and consumer advocate activism with respect to genetically-engineered agricultural consumer products. The adverse consequences from heightened consumer concern in this regard could affect the markets for agricultural products developed with our technology and could also result in increased government regulation in response to that concern. If the public or potential customers perceive our technology to be genetic modification or genetic engineering, agricultural products grown with our technology may not gain market acceptance.

We face potential product liability exposure far in excess of our limited insurance coverage.

We may be held liable if any product we or our collaborators develop causes injury or is found otherwise unsuitable during product testing, manufacturing, marketing or sale. Regardless of merit or eventual outcome, product liability claims could result in decreased demand for our product candidates, injury to our reputation, withdrawal of patients from our clinical trials, substantial monetary awards to trial participants and the inability to commercialize any products that we may develop. These claims might be made directly by consumers, health care providers, pharmaceutical companies or others selling or testing our products. We have obtained limited product liability insurance coverage for our clinical trials; however, our insurance may not reimburse us or may not be sufficient to reimburse us for expenses or losses we may suffer. Moreover, if insurance coverage becomes more expensive, we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses due to liability. If we obtain marketing approval for any of our product candidates, we intend to expand our insurance coverage to include the sale of commercial products, but we may be unable to obtain commercially reasonable product liability insurance for any products approved for marketing. On occasion, juries have awarded large judgments in class action lawsuits for claims based on drugs that had unanticipated side effects. In addition, the pharmaceutical and biotechnology industries, in general, have been subject to significant medical malpractice litigation. A successful product liability claim or series of claims brought against us could harm our reputation and business and would decrease our cash reserves.

We depend on our key personnel and, if we are not able to attract and retain qualified scientific and business personnel, we may not be able to grow our business or develop and commercialize our technology.

We are highly dependent on our scientific advisors, consultants and third-party research partners. Our success will also depend in part on the continued service of our key employees and our ability to identify, hire and retain additional qualified personnel in an intensely competitive market. Although we have a research agreement with Dr. John Thompson, this agreement may be terminated upon short or no notice. Additionally, we do not have employment agreements with our key employees. We do not maintain key person life insurance on any member of management. The failure to attract and retain key personnel could limit our growth and hinder our research and development efforts.

Certain provisions of our charter, by-laws, Delaware law and stock plans could make a takeover difficult.

Certain provisions of our certificate of incorporation and by-laws could make it more difficult for a third party to acquire control of us, even if the change in control would be beneficial to stockholders. Our certificate of incorporation authorizes our board of directors to issue, without stockholder approval, 5,000,000 shares of preferred stock with voting, conversion and other rights and preferences that could adversely affect the voting power or other rights of the holders of our common stock.

In addition, we are subject to the Business Combination Act of the Delaware General Corporation Law which, subject to certain exceptions, restricts certain transactions and business combinations between a corporation and a stockholder owning 15% or more of the corporation's outstanding voting stock for a period of three years from the date such stockholder becomes a 15% owner. These provisions may have the effect of delaying or preventing a change of control of us without action by our stockholders and, therefore, could adversely affect the value of our common stock.

Furthermore, in the event of our merger or consolidation with or into another corporation, or the sale of all or substantially all of our assets in which the successor corporation does not assume our outstanding equity awards or issue equivalent equity awards, our current equity plans require the accelerated vesting of such outstanding equity awards.

Risks Related to Our Common Stock

Penny stock regulations may impose certain restrictions on marketability of our securities.

The SEC has adopted regulations which generally define a "penny stock" to be any equity security that has a market price of less than $5.00 per share or an exercise price of less than $5.00 per share, subject to certain exceptions. As a result, our common stock is subject to rules that impose additional sales practice requirements on broker dealers who sell such securities to persons other than established customers and accredited investors (generally those with assets in excess of $1,000,000 or annual income exceeding $200,000, or $300,000 together with their spouse). For transactions covered by such rules, the broker dealer must make a special suitability determination for the purchase of such securities and have received the purchaser's written consent to the transaction prior to the purchase. Additionally, for any transaction involving a penny stock, unless exempt, the rules require the delivery, prior to the transaction, of a risk disclosure document mandated by the SEC relating to the penny stock market. The broker dealer must also disclose the commission payable to both the broker dealer and the registered representative, current quotations for the securities and, if the broker dealer is the sole market maker, the broker dealer must disclose this fact and the broker dealer's presumed control over the market.

Finally, monthly statements must be sent disclosing recent price information for the penny stock held in the account and information on the limited market in penny stocks. Broker-dealers must wait two business days after providing buyers with disclosure materials regarding a security before effecting a transaction in such security. Consequently, the "penny stock" rules restrict the ability of broker dealers to sell our securities and affect the ability of investors to sell our securities in the secondary market and the price at which such purchasers can sell any such securities, thereby affecting the liquidity of the market for our common stock.

Stockholders should be aware that, according to the SEC, the market for penny stocks has suffered in recent years from patterns of fraud and abuse. Such patterns include:

- control of the market for the security by one or more broker-dealers that are often related to the promoter or issuer;
- manipulation of prices through prearranged matching of purchases and sales and false and misleading press releases;
- "boiler room" practices involving high pressure sales tactics and unrealistic price projections by inexperienced sales persons;

- excessive and undisclosed bid-ask differentials and markups by selling broker-dealers; and
- the wholesale dumping of the same securities by promoters and broker-dealers after prices have been manipulated to a desired level, along with the inevitable collapse of those prices with consequent investor losses.

Our management is aware of the abuses that have occurred historically in the penny stock market.

Our management and other affiliates have significant control of our common stock and could significantly influence our actions in a manner that conflicts with our interests and the interests of other stockholders.

As of September 30, 2013, our executive officers and directors together beneficially own approximately 16% of the outstanding shares of our common stock, assuming the exercise of options and warrants which are currently exercisable or will become exercisable within 60 days of September 30, 2013, held by these stockholders. As a result, these stockholders, acting together, will be able to exercise significant influence over matters requiring approval by our stockholders, including the election of directors, and may not always act in the best interests of other stockholders. Such a concentration of ownership may have the effect of delaying or preventing a change in control of us, including transactions in which our stockholders might otherwise receive a premium for their shares over then-current market prices.

A significant portion of our total outstanding shares of common stock may be sold in the market in the near future, which could cause the market price of our common stock to drop significantly.

As of September 30, 2013, we had 2,348,209 shares of our common stock issued and outstanding and 580 shares of convertible preferred stock outstanding which can convert into 193,333 shares of common stock. Additionally, we issued 690,000 shares of our common stock on October 2, 2013. Except for 90,000 shares of our common stock which cannot be sold until January 9, 2014, all of such shares are registered pursuant to registration statements on Form S-3 or are either eligible to be sold under SEC Rule 144 or are in the public float. In addition, we have registered 197,453 shares of our common stock underlying warrants previously issued on Form S-3 registration statements and we registered 260,810 shares of our common stock underlying options granted or to be granted under our stock option plan. Consequently, sales of substantial amounts of our common stock in the public market, or the perception that such sales could occur, may have a material adverse effect on our stock price. Each of the share numbers above has been adjusted to give effect to the 1:100 reverse split effected by the Company on October 21, 2013.

Our common stock has a limited trading market, which could limit your ability to resell your shares of common stock at or above your purchase price.

Our common stock is currently quoted on the OTCQB Marketplace, operated by the OTC Markets Group, or OTCQB, and our common stock currently has a limited trading market. We cannot assure you that an active trading market will develop or, if developed, will be maintained. As a result, our stockholders may find it difficult to dispose of shares of our common stock and, as a result, may suffer a loss of all or a substantial portion of their investment.

The market price of our common stock may fluctuate and may drop below the price you paid.

We cannot assure you that you will be able to resell the shares of our common stock at or above your purchase price. The market price of our common stock may fluctuate significantly in response to a number of factors, some of which are beyond our control. These factors include:

- quarterly variations in operating results;
- the progress or perceived progress of our research and development efforts;
- changes in accounting treatments or principles;
- announcements by us or our competitors of new technology, product and service offerings, significant contracts, acquisitions or strategic relationships;
- additions or departures of key personnel;
- future offerings or resales of our common stock or other securities;
-

stock market price and volume fluctuations of publicly-traded companies in general and development companies in particular; and

· general political, economic and market conditions.

For example, during the three months ended September 30, 2013, our common stock traded between $2.00 and $5.00 per share.

Because we do not intend to pay, and have not paid, any cash dividends on our shares of common stock, our stockholders will not be able to receive a return on their shares unless the value of our common stock appreciates and they sell their shares.

We have never paid or declared any cash dividends on our common stock, and we intend to retain any future earnings to finance the development and expansion of our business. We do not anticipate paying any cash dividends on our common stock in the foreseeable future. Therefore, our stockholders will not be able to receive a return on their investment unless the value of our common stock appreciates and they sell their shares.

Our stockholders may experience substantial dilution as a result of the conversion of convertible preferred stock, the exercise of options and warrants to purchase our common stock, or due to anti-dilution provisions relating to any on the foregoing.

As of September 30, 2013, we have outstanding 580 shares of convertible preferred stock which may convert into 193,333 shares of our common stock and warrants to purchase 282,866 shares of our common stock. In addition, as of September 30, 2013, we have reserved 278,051 shares of our common stock for issuance upon the exercise of options granted or available to be granted pursuant to our stock option plan, all of which may be granted in the future. Furthermore, in connection with the preferred stock agreements, we are required to reserve an additional 117,236 shares of common stock. Additionally, under a securities purchase agreement dated May 8, 2013, which contains a price protection provision, we are required to reserve an additional 72,500 shares of common stock. The conversion of the convertible preferred stock and the exercise of these options and warrants will result in dilution to our existing stockholders and could have a material adverse effect on our stock price. The conversion price of the convertible preferred stock and certain warrants are also subject to certain anti-dilution adjustments. Each of the share numbers above has been adjusted to give effect to the 1:100 reverse split effected by the Company on October 21, 2013.

Risks Related to This Offering

Our management team will have broad discretion over the use of the net proceeds from this offering.

Our management will use their discretion to direct the net proceeds from this offering. We intend to use the net proceeds, together with cash on hand, for general corporate purposes. General corporate purposes may include sales and marketing activities, clinical studies, research and development, capital expenditures, future acquisitions, working capital and repayment of debt. Our management's judgments may not result in positive returns on your investment and you will not have an opportunity to evaluate the economic, financial or other information upon which our management bases its decisions.

Investors in this offering will experience immediate and substantial dilution.

The public offering price of the securities offered pursuant to this prospectus supplement is substantially higher than the net tangible book value per share of our common stock. Therefore, if you purchase shares of common stock in this offering, you will incur immediate and substantial dilution in the pro forma net tangible book value per share of common stock from the price per share that you pay for the common stock. If the holders of outstanding options or warrants exercise those options or warrants at prices below the public offering price, you will incur further dilution.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

From time to time, in reports filed with the Securities and Exchange Commission (including this registration statement), in press releases, and in other communications to stockholders or the investment community, we may provide forward-looking statements concerning possible or anticipated future results of operations or business developments. These statements are based on our management's current expectations or predictions of future conditions, events or results based on various assumptions and our management's estimates of trends and economic factors in the markets in which we are active, as well as our business plans. Words such as "expects", "anticipates", "intends", "plans", "believes", "seeks", "estimates", "projects", "forecasts", "may", "should", variations of such words and sim expressions are intended to identify such forward-looking statements. The forward-looking statements may include, without limitation, statements regarding product development, product potential, regulatory environment, sales and marketing strategies, capital resources or operating performance. The forward-looking statements are subject to risks and uncertainties, which may cause results to differ materially from those set forth in the statements. Forward-looking statements in this registration statement should be evaluated together with the many uncertainties that affect our business and our market, particularly those discussed in the risk factors and cautionary statements in our filings with the Securities and Exchange Commission, including as described in "Risk Factors" included in this registration statement. Forward-looking statements are not guarantees of future performance, and actual results may differ materially from those projected. The forward-looking statements are representative only as of the date they are made, and we assume no responsibility to update any forward-looking statements, whether as a result of new information, future events or otherwise.

You should read this prospectus and the documents that we reference in this prospectus and have been filed as exhibits to the registration statement of which this prospectus is a part completely and with the understanding that our actual future results may be materially different from what we expect. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or any issuance or sale of our common shares. Except as required by law, we do not assume any obligation to update any forward-looking statements.

USE OF PROCEEDS

We estimate that the net proceeds to us from the sale of our common stock in this offering will be approximately , assuming a public offering price of per unit and after deducting estimated offering expenses payable by us. Any change in the assumed public offering price would not affect the net proceeds to us from this offering.

We intend to use the net proceeds from this offering for continued development of product pipeline, including product line extension, and for general working capital purposes. We have not determined the amounts we plan to spend on any of the areas listed above or the timing of these expenditures.

Therefore, investors will be relying on the judgment of our management, who will have broad discretion regarding the application of the proceeds of this offering. The amounts and timing of our actual expenditures will depend upon numerous factors, including the amount of cash generated by our operations, our cash needs, the rate of adoption of our products by the medical community and efficiency of our product development. We may find it necessary or advisable to use portions of the proceeds from this offering for other purposes.

Pending the application of the net proceeds, we intend to invest the net proceeds in investment-grade, interest-bearing securities. Our management has broad discretion over how these proceeds are used and could spend the proceeds in ways with which you may not agree, and the proceeds may not be invested in a manner that yields a favorable or any return.

DIVIDEND POLICY

We currently intend to retain earnings, if any, to finance the growth and development of our business, and we do not expect to pay any cash dividends to our stockholders in the foreseeable future.

COMMON SHARE PRICE RANGE

Our common shares currently trade on the OTCQB Marketplace under the symbol “SNTI”.

The following table sets forth, for each of the calendar periods indicated, the quarterly high and low closing bid prices for our common shares quoted on the OTCQB Marketplace or the NYSE MKT, as applicable. The prices in the table represent prices between dealers and do not include adjustments for retail mark-up, markdown or commission and may not represent actual transactions.

	Fiscal Year Ended June 30, 2014		Fiscal Year Ended June 30, 2013		Fiscal Year Ended June 30, 2012	
	High	Low	High	Low	High	Low
First Quarter	$ 6.00	$ 2.00	$ 32.00	$ 17.00	$ 31.00	$ 24.00
Second Quarter (through November 26, 2013)	$ 4.80	$ 3.00	$ 23.00	$ 12.00	$ 29.00	$ 16.00
Third Quarter			$ 17.00	$ 8.00	$ 28.00	$ 21.00
Fourth Quarter			$ 9.00	$ 2.00	$ 31.00	$ 16.00

The last reported sale price for our common shares on November 26, 2013 was $4.80 per share. As of November 26, 2013, there were approximately 234 registered holders of record of our common shares, based upon information received from our stock transfer agent. However, this number does not include beneficial owners whose shares were held of record by nominees or broker dealers. We believe that there are a significantly larger number of beneficial owners of our common shares than the number of record holders. Each of the dollar amounts listed in the table above has been adjusted to give effect to the 1:100 reverse split effected by the Company on October 21, 2013.

The following table provides information about the securities authorized for issuance under our equity compensation plans as of September 30, 2013. Each of the share numbers below has been adjusted to give effect to the 1:100 reverse split effected by the Company on October 21, 2013.

EQUITY COMPENSATION PLAN INFORMATION

	Number of securities to be issued upon exercise of outstanding options, warrants and rights and restricted stock units		Weighted-average exercise price of outstanding options, warrants and rights and restricted stock units	Number of securities remaining available for future issuance under equity compensation plans	
Equity compensation plans approved by security holders	277,240	(1)	$ 29.30	1	(2)
Equity compensation plans not approved by security holders	—		—	—	
Total	277,240	(1)	$ 29.30	1	(2)

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

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

CAPITALIZATION

The following table describes our capitalization as of September 30, 2013:

- on an actual basis; and
- on an as adjusted basis to give effect to the sale of of our shares in this offering at an assumed public offering price of per share, after deducting estimated offering expenses.

You should read this capitalization table together with our consolidated financial statements and the related notes appearing at the end of this prospectus and the "Use of Proceeds," "Summary Consolidated Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" sections and other financial information included in this prospectus.

	As of September 30, 2013, as adjusted for placement on October 2, 2013	
	Actual	**As Adjusted**
	(in thousands, except share and per share data)	
Long-term debt	$ 100	$
Stockholders' equity (deficit):		
Series A Convertible Preferred Stock, $0.01 par value; 5,000,000 shares authorized, 10,297 shares issued and 580 shares outstanding	-	-
Common Stock, $.01 par value; 500,000,000 shares authorized, 2,348,209 shares issued and outstanding (3,038,209 shares issued and outstanding, as adjusted)	24	
Additional paid-in capital	79,830	
Accumulated deficit	(76,232)	
Total stockholders' equity	3,622	
Total capitalization	$ 3,722	$

The number of our common shares outstanding after this offering is based on 3,038,209 common shares outstanding as of September 30, 2013, as adjusted for a placement of 690,000 shares of common stock for an estimated net amount of $1,505,000 on October 2, 2013 and excludes:

- 277,240 common shares issuable upon the exercise of options outstanding as of September 30, 2013 at a weighted average exercise price of $0.035 per share;

- 282,866 common shares issuable upon the exercise of warrants outstanding as of September 30, 2013 at an exercise price of $0.36 per share;

- 193,333 common shares issuable upon the conversion of 580 shares of Series A Convertible Preferred Stock; and

- 1 additional common share available for future issuance as of September 30, 2013 under our Senesco Technologies, Inc. 2008 Stock Incentive Plan.

Unless otherwise indicated, all information in this prospectus assumes no exercise of the outstanding options or the warrants described above. Each of the share numbers above has been adjusted to give effect to the 1:100 reverse split effected by the Company on October 21, 2013.

DILUTION

Our net tangible book value as of September 30, 2013 as adjusted for the placement of 690,000 shares of common stock on October 2, 2013 for net proceeds of approximately $1,505,000, was approximately $272,209, or $0.09 per common share. Net tangible book value per share is determined by dividing our total tangible assets less total liabilities by the actual number of outstanding shares of our common shares. After giving effect to our issuance of shares at the assumed public offering price of per share, and after deducting estimated offering expenses payable by us, our net tangible book value as of September 30, 2013 would have been or per common share. This represents an immediate increase in pro forma net tangible book value of per share to our existing stockholders and an immediate dilution of per share to new investors in this offering. The following table illustrates this per share dilution:

Assumed public offering price per share	
Net tangible book value per share as of September 30, 2013, as adjusted	$ 0.09
Increase per share attributable to new investors	
Pro forma net tangible book value per share after this offering	
Dilution per share to new investors	

Dilution per share to new investors is determined by subtracting pro forma net tangible book value per share after this offering from the assumed public offering price per share paid by a new investor. If any shares are issued in connection with outstanding options, you will experience further dilution. A $1.00 increase or decrease in the assumed public offering price would increase or decrease, respectively, the pro forma as adjusted net tangible book value as of September 30, 2013, as adjusted by [ ] per common share, and the dilution per share to new investors by [ ] per share, assuming the aggregate dollar value of shares offered by us, as set forth in the registration calculation table on the cover page of this registration statement, remains the same and after deducting estimated offering expenses. Additionally, a $1.00 increase in the assumed public offering price, assuming the aggregate dollar value of shares offered by us, as set forth in the registration calculation table on the cover page of this registration statement, remains the same, would decrease the number of shares issued by us in the offering by [ ]. A $1.00 decrease in the assumed public offering price, assuming the aggregate dollar value of shares offered by us, as set forth in the registration calculation table on the cover page of this registration statement, remains the same, would increase the number of shares issued by us in the offering by [ ].

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITIONS AND RESULTS OF OPERATIONS

The following discussion of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and the related notes, and the financial and other information included elsewhere in this prospectus. Among other things, those financial statements include more detailed information regarding the basis of presentation for the following information. The financial statements have been prepared in accordance with U.S. generally accepted accounting principles, or GAAP, and are presented in U.S. dollars.

This discussion contains forward-looking statements that involve risks and uncertainties based on assumptions about our future business. Our actual results may differ from those contained in the forward-looking statements and such differences may be material as a result of a number of factors. Please read "Risk Factors" and "Cautionary Note Regarding Forward-Looking Statements."

Overview

We are a development stage company. We do not expect to generate significant revenues for several years, during which time we will engage in significant research and development efforts.

Our human therapeutic research program, which has consisted of clinical and pre-clinical in-vitro and in-vivo experiments designed to assess the role and method of action of the Factor 5A genes in human diseases, is performed, at our direction, at the University of Waterloo and other commercial research facilities.

We have developed a therapeutic candidate, SNS01-T, for the potential treatment of multiple myeloma, mantle cell lymphoma and diffuse large b-cell lymphoma and have been granted orphan drug status for SNS01-T by the FDA for the potential treatment of multiple myeloma, mantle cell lymphoma and diffuse large B-cell lymphoma.

We have initiated a Phase 1b/2a clinical study with SNS01-T in multiple myeloma, mantle cell and diffuse large b-cell lymphoma patients. The clinical study is an open-label, multiple-dose, dose-escalation study, which will evaluate the safety and tolerability of SNS01-T when administered by intravenous infusion to relapsed or refractory multiple myeloma patients. The study design calls for four cohorts of three to six patients each. Patients in each cohort will receive twice-weekly dosing for six weeks followed by a safety data review period before escalating to a higher dose level in the next cohort. While the primary objective of the initial study is to evaluate safety and tolerability, the effect of SNS01-T on tumor response will also be evaluated using multiple, well-established criteria including measurement

of the monoclonal protein, or M-protein. We have selected Mayo Clinic, University of Arkansas for Medical Sciences, the Mary Babb Randolph Cancer Center at West Virginia University, the John Theurer Cancer Center at Hackensack University Medical Center and the Seattle Cancer Care Alliance in Seattle as our clinical sites. We have completed the first and second cohorts of the study and the third cohort is open for enrollment and treating patients.

We may consider other human diseases in order to determine the role of Factor 5A and SNS01-T.

Additionally, we have six active agricultural license agreements to develop and commercialize our technology in corn, soy, trees, banana, alfalfa, biofuels and turf grass. The licenses provide for upfront payments, milestone payments and royalty payments to us upon commercial introduction.

Consistent with our commercialization strategy, we may license our technology for human health applications or for additional crops, as the opportunities may arise, that may result in additional license fees, revenues from contract research and other related revenues. Successful future operations will depend on our and our partners' ability to transform our research and development activities into a commercially feasible technology.

Critical Accounting Policies and Estimates

The discussion and analysis of the Company's financial condition and results of operations is based upon the Company's consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and reported amount of expenses during the period reported. Management bases its estimates and judgments on historical experience, observance of trends in the industry, information provided by outside sources and on various other factors that are believed to be reasonable under the circumstances. Actual results may differ from these estimates under different assumptions or conditions.

Revenue Recognition

We record revenue under technology license and development agreements related to the following. Actual fees received may vary from the recorded estimated revenues.

- Nonrefundable upfront license fees that are received in exchange for the transfer of our technology to licensees, for which no further obligations to the licensee exist with respect to the basic technology transferred, are recognized as revenue on the earlier of when payments are received or collections are assured.

- Nonrefundable upfront license fees that are received in connection with agreements that include time-based payments are, together with the time-based payments, deferred and amortized ratably over the estimated research period of the license.

- Milestone payments, which are contingent upon the achievement of certain research goals, are recognized as revenue when the milestones, as defined in the particular agreement, are achieved.

The effect of any change in revenues from technology license and development agreements would be reflected in revenues in the period such determination was made. Historically, no such adjustments have been made.

Estimates of Expenses

Our research and development agreements with third parties provide for an estimate of our expenses and costs, which are variable and are based on the actual services performed by the third party. We estimate the aggregate amount of the expenses based upon the projected amounts that are set forth in the agreements, and we accrue the expenses for which we have not yet been invoiced or prepay the expenses that have been invoiced but the services have not yet been performed. In estimating the expenses, we consider, among other things, the following factors:

- the existence of any prior relationship between us and the third party provider;

- the past results of prior research and development services performed by the third party provider; and

- the scope and timing of the research and development services set forth in the agreement with the third party provider.

After the research services are performed and we are invoiced, we make any adjustments that are necessary to accurately report research and development expense for the period.

Income Taxes

We account for income taxes in accordance with an asset and liability approach requiring the recognition of deferred tax assets and liabilities for the expected tax consequences of events that have been recognized in the financial statements or tax returns. Deferred tax assets and liabilities are recorded without consideration as to their ability to be realized. The deferred tax asset includes net operating loss and credit carryforwards, and the cumulative temporary differences related to stock-based compensation. The portion of any deferred tax asset, for which it is more likely than not that a tax benefit will not be realized, must then be offset by recording a valuation allowance against the asset.

In assessing the realizability of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. Management considers the scheduled reversal of deferred tax liabilities, projected future taxable income and tax planning strategies in making this assessment. Management believes it is more likely than not that we will not realize the deferred tax assets in excess of deferred tax liabilities, and as such, a full valuation allowance is maintained against the net deferred tax assets.

While we believe that our tax positions are fully supportable, there is a risk that certain positions could be challenged successfully. In these instances, we look to establish reserves. If we determine that a tax position is more likely than not of being sustained upon audit, based solely on the technical merits of the position, we recognize the benefit. We measure the benefit by determining the amount that has likelihood greater than 50% of being realized upon settlement. We presume that all tax positions will be examined by a taxing authority with full knowledge of all relevant information. We regularly monitor our tax positions, tax assets and tax liabilities. We reevaluate the technical merits of our tax positions and recognize an uncertain tax benefit or derecognize a previously recorded tax benefit when (i) there is a completion of a tax audit, (ii) there is a change in applicable tax law including a tax case or legislative guidance, or (iii) there is an expiration of the statute of limitations. Significant judgment is required in accounting for tax reserves.

Stock-based Compensation

We measure all employee stock-based compensation awards using a fair value method and record such expense in our consolidated financial statements. Such expense is amortized on a straight line basis over the requisite service period of the award.

We estimate the grant date fair value of stock options using the Black-Scholes option-pricing model which requires the input of highly subjective assumptions. These assumptions include estimating the expected term of the award, the estimated volatility of our stock price over the expected term and the probability of achievement of any performance goals that may be required to be achieved in order for the stock options to vest. Changes in these assumptions and in the estimated forfeitures of stock option awards may materially affect the amount of stock-based compensation recognized in our consolidated statements of operations.

In connection with any performance goals that may be required to be achieved in order for the stock options to vest, our management reviews the specific goals of such plans to determine if such goals have been achieved or are probable that they will be achieved. If the goals have been achieved or are probable of being achieved, then the amount of compensation expense determined on the date of grant related to those specific goals is charged to compensation expense at such time.

Intangible Assets

We test all intangible assets for recoverability whenever events or changes in circumstances indicate that we may not be able to recover an asset’s carrying amount. We evaluate the recoverability of an asset by comparing its carrying amount to the undiscounted cash flows expected to result from the use and eventual disposition of that asset. If the undiscounted cash flows are not sufficient to recover the carrying amount, we measure any impairment loss as the excess of the carrying amount of the asset over its fair value. Events which could trigger asset impairment include significant underperformance relative to historical or projected future operating results, significant changes in the manner or use of an asset or in our overall business strategy, significant negative industry or economic trends, shortening of product life-cycles, negative changes in third party reimbursement, or changes in technology.

As of September 30, 2013, we have determined that market value of our two asset groups is in excess of their carrying value and therefore there was no impairment.

Warrant Liability

We compute valuations each quarter using the Black-Scholes model, which requires the input of subjective assumptions for volatility, for warrants that have an exercise price reset feature to account for the various possibilities that could occur due to changes in the inputs to the Black-Scholes model as a result of contractually-obligated changes. We effectively weight each calculation based on the likelihood of occurrence to determine the value of the derivative at the reporting date. The fair value of the warrants that have cash settlement features is estimated using the Black-Scholes model. Changes in these assumptions may materially affect the amount of the warrant liability recorded on our consolidated balance sheet.

Convertible Preferred Stock

During the year ended June 30, 2010, we issued convertible preferred stock and warrants for gross proceeds in the amount of $11,497,000. The proceeds have been allocated between convertible preferred stock and warrants based upon their fair values, whereby the fair value of the warrants have been determined using the Black-Scholes model. Such amount was recorded as a liability. The remaining amounts were allocated to the convertible preferred stock and were recorded as equity.

Results of Operations

Comparison of the three months ended September 30, 2013 and 2012

Revenue

Total revenue in the amount of $100,000 for the three months ended September 30, 2013 consisted of a milestone payment in connection with an agricultural license agreement.

There was no revenue during the three months ended September 30, 2012.

We may receive future milestone payments in connection with our current agricultural development and license agreements. Additionally, we may receive future royalty payments from our license agreements when our partners commercialize their crops containing our technology. However, it is difficult for us to determine our future revenue expectations because our future milestone payments are primarily contingent on our partners successful implementation of their development plan, we have no history of receiving royalties and the timing and outcome of our experiments, the timing of signing new partner agreements and the timing of our partners moving through the development process into commercialization is difficult to accurately predict.

General and Administrative Expenses

	Three Months Ended September 30,			
	2013	2012	Change	%
	(in thousands, except % values)			
Payroll and benefits	$ 145	$ 141	$ 4	2.8 %
Investor relations	379	40	339	847.5 %
Professional fees	118	194	(76)	(39.2)%
Director fees	47	64	(17)	(26.6)%
Depreciation and amortization	75	64	11	17.2 %
Other general and administrative	68	101	(33)	(32.7)%
	832	604	228	37.8 %
Stock-based compensation	108	129	(21)	(16.3)%
Total general and administrative	$ 940	$ 733	$ 207	28.2 %

- Payroll and benefits for the three months ended September 30, 2013 was higher than for the three months ended September 30, 2012, primarily as a result of salary increases effective July 1, 2012. Such salary increases were not determined until October 2012 and therefore were not paid during the three months ended September 30, 2012.

- Investor relations fees for the three months ended September 30, 2013 was higher than for the three months ended September 30, 2012, primarily as a result of a new investor relations program started in August 2013, the termination of an investor relations consulting agreement in September 2013 and a special meeting of stockholders held in August 2013. The Company entered into new investor relations consulting agreements in October 2013.

- Professional fees for the three months ended September 30, 2013 was lower than for the three months ended September 30, 2012, primarily as a result of a decrease in legal fees.

- Director fees for the three months ended September 30, 2013 was lower than for the three months ended September 30, 2012, primarily as a result of fewer meetings being held during the three months ended September 30, 2013.

- Depreciation and amortization for the three months ended September 30, 2013 was higher than for the three months ended September 30, 2012, primarily as a result of an increase in amortization of patent costs.

- Other general and administrative expenses for the three months ended September 30, 2013 was lower than for the three months ended September 30, 2012, primarily due to a decrease in travel, conferences and consultants.

- Stock-based compensation for the three months ended September 30, 2013 was lower than for the three months ended September 30, 2012, primarily due to a lower Black-Scholes value on options vesting during the three months ended September 30, 2013. Additionally, during the three months ended September 30, 2013, some of the options previously granted to management were forfeited. Such forfeitures did not occur during the three months ended September 30, 2012.

We expect cash-based general and administrative expenses to remain relatively unchanged over the next twelve months.

Research and Development Expenses

	Three Months Ended September 30,			
	2013	2012	Change	%
	(in thousands, except % values)			
Payroll	$ 44	$ 42	$ 2	4.8 %
Research contract with the University of Waterloo	114	144	(30)	(20.8)%
Other research and development	553	302	251	83.1 %
	711	488	223	45.7 %
Stock-based compensation	16	25	(9)	(36.0)%
Total research and development	$ 727	$ 513	$ 214	41.7 %

- Payroll for the three months ended September 30, 2013 was higher than for the three months ended September 30, 2012, primarily as a result of salary increases effective July 1, 2012. Such salary increases were not determined until October 2012.

- The cost associated with the research contract with the University of Waterloo for the three months ended September 30, 2013 was lower than for the three months ended September 30, 2013, primarily due to a decrease in amount being funded for agricultural and human health research.

- Other research and development costs for the three months ended September 30, 2013 was higher than for the three months ended September 30, 2012, primarily due to an increase in the costs in connection with the development of SNS01-T for multiple myeloma due to the timing of patient treatment.

- Stock-based compensation for the three months ended September 30, 2013 was lower than for the three months ended September 30, 2012, primarily due to a lower Black-Scholes value of options vesting during the three months ended September 30, 2013. Additionally, during the three months ended September 30, 2013, some of the options previously granted to management were forfeited. Such forfeitures did not occur during the three months ended September 30, 2012.

Other non-operating income and expense

Fair value – warrant liability

The amounts represent the change in the fair value of the warrant liability for the three months ended September 30, 2012. There was no warrant liability at June 30, 2013 and September 30, 2013.

Loss on settlement of warrant liabilities

During the three months ended September 30, 2012, the Company issued 33,906 shares of common stock in exchange for 96,875 warrants that were included in the computation of warrant liabilities. In connection with this exchange, the Company compared the value of the common stock issued with the Black-Scholes value of the warrants exchanged. The difference in these values resulted in a loss on settlement of warrant liabilities in the amount of $785,171.

Write-off of patents abandoned

During the quarter ended September 30, 2013, we reviewed our patent portfolio in order to determine if we could reduce our cost of patent prosecution and maintenance. We identified several patents that we believe we no longer need to maintain without having a material impact on the portfolio. We determined that we would no longer incur the cost to prosecute or maintain those patents. Therefore, we wrote-off the net book value of those patents and patents pending in the amount of $185,161.

Comparison of the fiscal years ended June 30, 2013 and 2012

Revenue

We did not earn any revenue during the fiscal year ended June 30, 2013.

During the fiscal year ended June 30, 2012, we earned revenue in the amount of $200,000, which consisted of a milestone payment in connection with an agricultural license agreement.

We anticipate that we will receive future milestone payments in connection with our current agricultural development and license agreements. Additionally, we anticipate that we may receive future royalty payments from our license agreements when and if our partners commercialize their crops containing our technology. However, it is difficult for us to determine our future revenue expectations because we are a development stage biotechnology company with a limited history of receiving development milestone payments or royalties, and the timing and outcome of our experiments, the timing of signing new partners and the timing and success of our partners moving through the development process into commercialization is difficult to accurately predict.

Operating expenses

	Fiscal Year Ended June 30,			
	2013	2012	Change	%
General and administrative	$2,499,624	$2,724,144	$(224,520)	(8.2)%
Research and development	2,086,666	2,566,247	(479,581)	(18.7)%
Write-off of patents abandoned	64,210	321,137	(256,927)	(80.0)%
Total operating expenses	$4,650,500	$5,611,528	$(961,028)	(17.1)%

We expect operating expenses to increase over the next 12 months as we anticipate that research and development expenses will increase as we continue to expand our research and development activities.

General and administrative expenses

General and administrative expenses consist of the following:

	Fiscal Year ended June 30,			
	2013	2012	Change	%
Stock-based compensation	$639,828	$721,197	$(81,369)	(11.3)%
Payroll and benefits	594,456	588,407	6,049	1.0 %
Investor relations	103,816	203,871	(100,055)	(49.0)%
Professional fees	475,274	518,473	(43,199)	(8.3)%
Director fees	62,375	44,625	17,750	39.8 %
Depreciation and amortization	293,629	258,023	35,606	13.8 %

Other general and administrative expenses	330,246	389,548	(59,302)	(15.2)%
Total general and administrative expenses	$2,499,624	$2,724,144	$(224,520)	(8.2)%

- Stock-based compensation for the fiscal years ended June 30, 2013 and June 30, 2012 consisted of the amortized portion of the Black-Scholes value of options, restricted stock units and warrants granted to directors, employees and consultants. During the fiscal years ended June 30, 2013 and 2012, 89,700 and 52,744 options, respectively, were granted to such individuals.

Stock-based compensation for the fiscal year ended June 30, 2013 was lower than the fiscal year ended June 30, 2012 primarily due to management's assessment of the probability of the vesting of the goal based options granted during the fiscal year ended June 30, 2013 being lower than for the fiscal year ended June 30, 2012. Additionally, the options granted during the fiscal year ended June 30, 2012, vested at a lower percentage than had been estimated at June 30, 2012. Therefore, stock-based compensation for the fiscal year ended June 30, 2013 was further reduced.

- Payroll and benefits for the fiscal year ended June 30, 2013 was higher than for the fiscal year ended June 30, 2012, primarily as a result of a 401K contribution made during the fiscal year ended June 30, 2012. There was no 401K contribution during the fiscal year ended June, 2013. This was partially offset by salary increases effective July 1, 2012.

- Investor relations fees for the fiscal year ended June 30, 2013 was lower than for the fiscal year ended June 30, 2012 primarily as a result of lower consultant fees.

- Professional fees for the fiscal year ended June 30, 2013 was lower than for the fiscal year ended June 30, 2012 primarily as a result of a decrease in legal and accounting fees. Legal fees decreased primarily due to higher discounts received during the fiscal year ended June 30, 2013 and a decrease in fees incurred in connection with the exploration of alternative uses of our technology. Accounting fees decreased primarily due to the use of a consultant to prepare a valuation of the Company's intangible assets during the fiscal year ended June 30, 2012.

- Director fees for the fiscal year ended June 30, 2013 were higher than for the fiscal year ended June 30, 2012, primarily as a result of more meetings being held during the fiscal year ended June 30, 2013.

- Depreciation and amortization for the fiscal year ended June 30, 2013 was higher than for the fiscal year ended June 30, 2012 primarily as a result of an increase in amortization of patent costs.

- Other general and administrative expenses for the fiscal year ended June 30, 2013 were lower than for the fiscal year ended June 30, 2012 primarily due to a decrease in conferences and travel, office supplies, state taxes and transfer agent fees.

We expect cash-based general and administrative expenses to increase slightly over the next twelve months.

Research and development expenses

	Fiscal Year Ended June 30,			
	2013	2012	Change	%
Stock-based compensation	$84,865	$44,807	$40,058	8.9 %
Payroll	174,360	167,834	6,526	3.9 %
Research contract with the University of Waterloo	628,997	573,368	55,629	9.7 %
Other research and development	1,198,444	1,780,238	(581,794)	(32.7)%
Total research and development	$2,086,666	$2,566,247	$(479,581)	(18.7)%

- Stock-based compensation for the fiscal year ended June 30, 2013 was higher than the fiscal year ended June 30, 2012 primarily because the number of options granted during the fiscal year ended June 30, 2013 was higher than the fiscal year ended June 30, 2012.

- Payroll for the fiscal year ended June 30, 2013 was higher than for the fiscal year ended June 30, 2012 primarily as a result of a salary increases effective July 1, 2012.

- The cost associated with the research contract with the University of Waterloo for the fiscal year ended June 30, 2013 were higher than for the fiscal year ended June 30, 2012 primarily due to an increase in amount being funded for

human health research.

- Other research and development costs for the fiscal year ended June 30, 2013 was lower than for the fiscal year ended June 30, 2012 primarily due to a decrease in the costs in connection with agricultural research programs and formulation studies.

The breakdown of our research and development expenses between our agricultural and human therapeutic research programs are as follows:

	Fiscal Year ended June 30,			
	2013	%	2012	%
Agricultural research programs	$53,566	3 %	$279,736	11 %
Human therapeutic research programs	2,033,100	97 %	2,286,511	89 %
Total research and development expenses	$2,086,666	100%	$2,566,247	100%

- Agricultural research expenses for the fiscal year ended June 30, 2013 were lower than for the fiscal year ended June 30, 2012 primarily due to a reduction in the funding for agricultural research at the University of Waterloo and the amendment to the Rahan Meristem agreement for the development of bananas. Effective January 1, 2012, we amended the Rahan Meristem agreement whereby we no longer incur costs related to such development.

- Human therapeutic research expenses for the fiscal year ended June 30, 2013 were lower than for the fiscal year ended June 30, 2012 primarily as a result of the timing of certain aspects of the development of our drug candidate, SNS01-T, for treating multiple myeloma. Specifically, during the nine months ended March 31, 2012, we incurred costs related to the formulation of SNS01-T, which we did not incur during the nine months ended March 31, 2013.

We expect our human therapeutic research program to modestly increase as a percentage of the total research and development expenses as we continue our current research projects and begin new human therapeutic initiatives, in particular as they relate to the clinical development of our drug candidate, SNS01-T, for treating multiple myeloma and other cancers.

Write-off of patents abandoned

During the fiscal years ended June 30, 2013 and June 30, 2012, we reviewed our patent portfolio in order to determine if we could reduce our cost of patent prosecution and maintenance. We identified several patents and patents pending that we believe we no longer need to maintain without having a material impact on the portfolio. We determined that we would no longer incur the cost to prosecute or maintain those patents or patents pending. Therefore, we wrote-off the net book value of those patents and patents pending in the amounts of $64,210 and $321,137, respectively.

Other non-operating income and expense

Change in fair value of warrant liability

The amounts represent the change in the fair value of the warrant liability for the fiscal years ended June 30, 2013 and 2012. During the fiscal year ended June 30, 2013 the fair value of the warrant liability decreased due to the expiration of certain warrants and a decrease in the Black-Scholes values of the remaining warrants as the expected term was shorter in 2013 and there was greater disparity between the market price of our common stock and the exercise price of the warrants.

Loss on settlement of warrant liabilities

During the fiscal year ended June 30, 2013, certain warrants that were recorded as liabilities were exchanged for common stock. The loss on the settlement of warrant liabilities represents the fair value of the common stock received by the warrant holders less the Black-Scholes value of the warrants exchanged on the date of the exchange.

Comparison of the fiscal years ended June 30, 2012 and 2011

Revenue

During the fiscal year ended June 30, 2012, we earned revenue in the amount of $200,000, which consisted of a milestone payment in connection with an agricultural license agreement.

We did not earn any revenue during the fiscal year ended June 30, 2011.

Operating expenses

	Fiscal Year Ended June 30,			
	2012	2011	Change	%
General and administrative	$2,724,144	$2,610,222	$113,922	4.4 %
Research and development	2,566,247	3,720,394	(1,154,147)	(31.0)%
Write-off of patents abandoned	321,137	1,588,087	(1,266,950)	(79.8)%
Total operating expenses	$5,611,528	$7,918,703	$(2,307,175)	(29.1)%

General and administrative expenses

General and administrative expenses consist of the following:

	Fiscal Year ended June 30,			
	2012	2011	Change	%
Stock-based compensation	$721,197	$709,207	11,990	1.7 %
Payroll and benefits	588,407	568,597	19,810	3.5 %
Investor relations	203,871	260,455	(56,584)	(21.7)%
Professional fees	518,473	425,640	92,833	21.8 %
Depreciation and amortization	258,023	143,274	114,749	80.0 %
Other general and administrative expenses	434,173	503,049	(68,876)	(13.7)%
Total general and administrative expenses	$2,724,144	$2,610,222	113,922	4.4 %

- Stock-based compensation for the fiscal years ended June 30, 2012 and June 30, 2011 consisted of the amortized portion of the Black-Scholes value of options, restricted stock units and warrants granted to directors, employees and consultants. During the fiscal years ended June 30, 2012 and 2011, the following options and warrants were granted to such individuals:

	June 30, 2012	June 30, 2011
Options	52,744	45,791
Warrants	None	3,050

Stock-based compensation for the fiscal year ended June 30, 2012 was higher than the fiscal year ended June 30, 2011 primarily due to the greater number of options and warrants granted.

- Payroll and benefits for the fiscal year ended June 30, 2012 was higher than for the fiscal year ended June 30, 2011 primarily as a result of a 401K contribution made during the fiscal year ended June 30, 2012 and salary increases effective July 1, 2011. There was no 401K contribution during the fiscal year ended June 30, 2011.

- Investor relations fees for the fiscal year ended June 30, 2012 was lower than for the fiscal year ended June 30, 2011 primarily as a result of lower consultant fees.

.

Professional fees for the fiscal year ended June 30, 2012 was higher than for the fiscal year ended June 30, 2011 primarily as a result of an increase in legal and accounting fees. Legal fees increased primarily due to fees incurred in connection with the exploration of alternative uses of our technology and discounts on legal fees that were recorded during the fiscal year ended June 30, 2011 but were not available during the fiscal year ended June 30, 2012. Accounting fees increased primarily due to the use of a consultant to prepare a valuation of the Company's intangible assets.

- Depreciation and amortization for the fiscal year ended June 30, 2012 was higher than for the fiscal year ended June 30, 2011 primarily as a result of an increase in amortization of patent costs.

- Other general and administrative expenses for the fiscal year ended June 30, 2012 was lower than for the fiscal year ended June 30, 2011 primarily due to a decrease in consultant costs, rent and telecom, which was partially offset by an increase in insurance costs.

Research and development expenses

	Fiscal Year Ended June 30,			
	2012	2011	Change	%
Stock-based compensation	$44,807	$41,159	$3,648	8.9 %
Payroll	167,834	176,646	(8,812)	(5.0)%
Research contract with the University of Waterloo	573,368	622,872	(49,504)	(8.0)%
Other research and development	1,780,238	2,879,717	(1,099,479)	(38.2)%
Total research and development	$2,566,247	$3,720,394	$(1,154,147)	(31.0)%

- Stock-based compensation for the fiscal year ended June 30, 2012 was higher than the fiscal year ended June 30, 2011 primarily because the number of options granted during the fiscal year ended June 30, 2012 was higher than the fiscal year ended June 30, 2011.

- Payroll for the fiscal year ended June 30, 2012 was lower than for the fiscal year ended June 30, 2011 primarily as a result of a bonus that was paid to the VP-Research during the fiscal year ended June 30, 2011. There were no bonuses paid during the fiscal year ended June 30, 2012.

- The cost associated with the research contract with the University of Waterloo for the fiscal year ended June 30, 2012 were lower than for the fiscal year ended June 30, 2011 primarily due to a reduction in the amount being funded for agricultural research, effective, March 1, 2011.

- Other research and development costs for the fiscal year ended June 30, 2012 was lower than for the fiscal year ended June 30, 2011 primarily due to a decrease in the costs incurred in connection with our development of SNS01-T for multiple myeloma. Specifically, during the fiscal year ended June 30, 2011, we incurred significant costs related to our filing and follow-up of our investigational new drug application, pivotal toxicology study and other preclinical work that we did not incur during the fiscal year ended June 30, 2012. This was partially offset by costs incurred related to the performance of the Phase 1b/2a clinical trial for multiple myeloma which were not incurred during the fiscal year ended June 30, 2011.

The breakdown of our research and development expenses between our agricultural and human therapeutic research programs are as follows:

	Fiscal Year ended June 30,					
	2012		%	2011		%
Agricultural research programs	$279,736		11 %	$467,141		13 %
Human therapeutic research programs	2,286,511		89 %	3,253,253		87 %
Total research and development expenses	$2,566,247		100%	$3,720,394		100%

- Agricultural research expenses for the fiscal year ended June 30, 2012 were lower than for the fiscal year ended June 30, 2011 primarily due to a reduction in the funding for agricultural research at the University of Waterloo and a reduction in the funding for banana field trials due to the conversion of the joint collaboration agreement with Rahan Meristem into a license agreement in December 2011.

- Human therapeutic research expenses for the fiscal year ended June 30, 2012 were lower than for the fiscal year ended June 30, 2011 primarily as a result of the timing of certain aspects of the development of our drug candidate, SNS01-T, for treating multiple myeloma. Specifically, during the fiscal year ended June 30, 2011, we incurred costs related to our filing and follow-up of our investigational new drug application, pivotal toxicology studies and other pre-clinical work that we did not incur during the fiscal year ended June 30, 2012. This was partially offset by costs incurred related to the performance of the Phase 1b/2a clinical trial for multiple myeloma which were not incurred during the fiscal year ended June 30, 2011.

Write-off of patents abandoned

During the fiscal years ended June 30, 2012 and June 30, 2011, we reviewed our patent portfolio in order to determine if we could reduce our cost of patent prosecution and maintenance. We identified several patents and patents pending that we believe we no longer need to maintain without having a material impact on the portfolio. We determined that we would no longer incur the cost to prosecute or maintain those patents or patents pending. Therefore, we wrote-off the net book value of those patents and patents pending in the amounts of $321,137 and $1,588,087, respectively.

Other non-operating income and expense

Grant income

We did not receive any grant income during the fiscal year ended June 30, 2012.

We received grant income under the Qualified Therapeutic Discovery Project in the amount of $244,479 during the fiscal year ended June 30, 2011. The funds were granted in connection with our program for the use of our lead therapeutic candidate, SNS01-T, in multiple myeloma.

Change in fair value of warrant liability

The amounts represent the change in the fair value of the warrant liability for the fiscal years ended June 30, 2012 and 2011. During the fiscal year ended June 30, 2012 the fair value of the warrant liability decreased due to a decrease in the Black-Scholes values of the remaining warrants as the expected term was shorter in 2011 and there was greater disparity between the market price of our common stock and the exercise price of the warrants.

Other noncash expense or income

During the fiscal year ended June 30, 2011, the exercise price of 40,885 warrants was adjusted from $50.00 to $32.00 in exchange for those warrant holders giving up their right to future adjustments to the exercise price. This resulted in a charge to stock-based compensation of $115,869.

Effect of Inflation

Inflation has not had a significant impact on our operations or cash flows.

Liquidity and Capital Resources

Overview

For the three months ended September 30, 2013, net cash of $670,465 was used in operating activities primarily due to a net loss of $1,784,333, which was reduced by non-cash expenses of $384,420. Cash used in operating activities was increased by changes in operating assets and liabilities in the amount of $729,448.

The $729,448 change in operating assets and liabilities was the result of a decrease in prepaid research supplies and expenses in the amount of $352,705 and an increase in accounts payable and accrued expenses in the amount of $376,743 due to the timing of expenses and payments.

During the three months ended September 30, 2013, cash used for investing activities amounted to $142,943, which was related to patent costs incurred.

Cash provided by financing activities during the three months ended September 30, 2013 amounted to $290 as a result of the exercise of warrants.

As of September 30, 2013, our cash balance totaled $789,176, and we had a working capital deficit of $(1,241,994).

In October 2013, we received net proceeds in the approximate amount of $1,505,000 from the issuance of common stock.

We expect our capital requirements to increase significantly over the next several years as we commence new research and development efforts, increase our business and administrative infrastructure and embark on developing in-house business capabilities and facilities. Our future liquidity and capital funding requirements will depend on numerous factors, including, but not limited to, the levels and costs of our research and development initiatives and the cost and timing of the expansion of our business development and administrative staff.

We anticipate that, based upon our cash balance at September 30, 2013 and the net proceeds from the issuance of common stock in October 2013, we will be able to fund our operations through March 2014. Over such period, we plan to fund our research and development and commercialization activities by:

- utilizing our current cash balance and investments;
- the placement of additional equity or debt instruments;
- achieving some of the milestones set forth in our current licensing agreements; and
- the possible execution of additional licensing agreements for our technology.

We cannot assure you that we will be able to raise money through any of the foregoing transactions on favorable terms, if at all.

Contractual Obligations

The following table lists our cash contractual obligations as of June 30, 2013:

	Payments Due by Period				
Contractual Obligations	Total	Less than 1 year	1 - 3 years	3 - 5 years	More than 5 years
Research and Development Agreements [1]	$819,771	$819,771	$ —	$ —	$ —
Facility, Rent and Operating Leases [2]	$62,733	$62,733	$ —	$ —	$ —
Employment, Consulting and Scientific Advisory Board Agreements [3]	$67,500	$67,500	$ —	$ —	$ —
Total Contractual Cash Obligations	$950,004	$950,004	$ —	$ —	$ —

(1) Certain of our research and development agreements disclosed herein provide that payment is to be made in Canadian dollars and, therefore, the contractual obligations are subject to fluctuations in the exchange rate.

(2) The lease for our office space in Bridgewater, New Jersey is subject to certain escalations for our proportionate share of increases in the building's operating costs.

(3) Certain of our consulting agreements provide for automatic renewal, which is not reflected in the table, unless terminated earlier by the parties to the respective agreements.

Effective June 20, 2011, we entered into a Master Services Agreement with Criterium under which CRITERIUM will provide professional and technical services in connection with the management of our planned Phase 1b/2a clinical trial for the treatment of multiple myeloma. The agreement, as amended, has an initial term that commences on the date of the agreement and runs for a period of twenty-nine (29) months. Our remaining financial obligation under the agreement, as amended, is estimated to be $455,000 and is included in the above table.

Effective August 15, 2011, we entered into a Clinical Trial Research Agreement with Mayo Clinic, or MAYO, under which MAYO will perform our planned Phase 1b/2a clinical trial for the treatment of multiple myeloma. The agreement has an initial term that commences on the date of the agreement and continues until the study is completed and all final study documentation required to be provided is received and accepted by us. Our financial obligation under the agreement includes a fixed cost and a cost per patient and is not included in the above table.

Effective February 28, 2012, we entered into a Clinical Trial Research Agreement with University of Arkansas for Medical Sciences, or ARKANSAS, under which ARKANSAS will perform our planned Phase 1b/2a clinical trial for the treatment of multiple myeloma. The agreement has an initial term that commences on the date of the agreement and continues until the study is completed and all final study documentation required to be provided is received and

accepted by us. Our financial obligation under the agreement includes a fixed cost and a cost per patient and is not included in the above table.

Effective March 5, 2012, we entered into a Clinical Trial Research Agreement with West Virginia University Research Corporation, or WVU, under which WVU will perform our planned Phase 1b/2a clinical trial for the treatment of multiple myeloma. The agreement has an initial term that commences on the date of the agreement and continues until the study is completed and all final study documentation required to be provided is received and accepted by us. Our financial obligation under the agreement includes a fixed cost and a cost per patient and is not included in the above table.

Effective June 15, 2012, we entered into a Clinical Trial Research Agreement with the John Theurer Cancer Center at Hackensack University Medical Center, or HACKENSACK, under which HACKENSACK will perform our planned Phase 1b/2a clinical trial for the treatment of multiple myeloma. The agreement has an initial term that commences on the date of the agreement and continues until the study is completed and all final study documentation required to be provided is received and accepted by us. Our financial obligation under the agreement includes a fixed cost and a cost per patient and is not included in the above table.

Effective September 1, 2012, we extended our research and development agreement with the University of Waterloo for an additional one-year period through August 31, 2013, in the amount of CAD $611,550, or approximately USD $612,000. Effective July 1, 2013, the budget for the research and development agreement was amended to reduce the monthly amount from $50,962 to $38,038 through August 31, 2013. Research and development expenses under this agreement for the fiscal years ended June 30, 2013, 2012 and 2011 aggregated U.S. $628,995, U.S. $573,368 and U.S. $622,872, respectively, and U.S. $7,778,296 for the cumulative period through June 30, 2013. Future obligations to be paid under the agreement through August 31, 2013 equal approximately U.S. $76,076.

Effective June 4, 2013, the Company entered into a clinical supply agreement with The University of Iowa, or IOWA, under which IOWA will provide manufacturing, vialing and testing services for certain reagents that are used in SNS01-T. The agreement will terminate upon delivery of the reagents, which is estimated to be approximately six months after the effective date of the agreement. The Company’s remaining financial obligation under the agreement is approximately $156,000.

We expect our capital requirements to increase significantly over the next several years as we commence new research and development efforts, increase our business and administrative infrastructure and embark on developing in-house business capabilities and facilities. Our future liquidity and capital funding requirements will depend on numerous factors, including, but not limited to, the levels and costs of our research and development initiatives and the cost and timing of the expansion of our business development and administrative staff.

Capital Resources

Since inception, we have generated revenues of $1,790,000 in connection with the initial fees and milestone payments received under our license and development agreements. We have also received $244,479 in grants. We have not been profitable since inception, we will continue to incur additional operating losses in the future, and we will require additional financing to continue the development and subsequent commercialization of our technology. While we do not expect to generate significant revenues from the licensing of our technology for several years, we may enter into additional licensing or other agreements with marketing and distribution partners that may result in additional license fees, receive revenues from contract research, or other related revenue.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements.

35

BUSINESS

General

Our Business

The primary business of Senesco Technologies, Inc., a Delaware corporation incorporated in 1999, and its wholly-owned subsidiary, Senesco, Inc., a New Jersey corporation incorporated in 1998, collectively referred to as "Senesco," "we," "us" or "our," is to utilize our patented and patent-pending technology related to certain genes, primarily eukaryotic translation initiation Factor 5A, or Factor 5A, and deoxyhypusine synthase, or DHS, and related technologies for human therapeutic applications to develop novel approaches to treat cancer and inflammatory diseases.

For agricultural applications, we have licensed applications of the Factor 5A, DHS and Lipase platforms to enhance the quality, productivity and stress resistance of agronomic crops and biofuel feedstock crops through the control of cell death, referred to herein as senescence, and growth in plants.

Human Therapeutic Applications

We believe that our Factor 5A gene regulatory technology could have broad applicability in the human therapeutic field, by either inducing or inhibiting programmed cell death, also known as apoptosis, which is the natural process the human body goes through in order to eliminate redundant or defective cells. Inducing apoptosis is useful in treating cancer where the defective cancer cells have failed to respond to the body's natural apoptotic signals. Conversely, inhibiting apoptosis may be useful in preventing, ameliorating or treating an exaggerated, acute immune response in a wide range of inflammatory and ischemic diseases attributable to or aggravated by premature apoptosis.

SNS01-T for Multiple Myeloma

We have developed a therapeutic candidate, SNS01-T, an improved formulation of SNS01, for the potential treatment of multiple myeloma and non-Hodgkin B-cell lymphomas. SNS01-T utilizes our Factor 5A technology and comprises two active components: a DNA plasmid, or pDNA, expressing human eIF5A containing a lysine to arginine substitution at amino acid position 50, or eIF5AK50R, and a small inhibitory RNA, or siRNA. These two components

are combined in a fixed ratio with a polymer, polyethyleneimine, or PEI, which enables self-assembly of the DNA and RNA into nanoparticles with demonstrated enhanced delivery to tissues and protection from degradation in the blood stream. Under the control of a malignant B cell selective promoter, SNS01-T's DNA plasmid up-regulates the apoptotic pathways within B cells by preferentially expressing the stable arginine form of the Factor 5A death message in target cells. The siRNA, by down-regulating the eIF5A gene, reduces accumulation of the hypusine form of Factor 5A that supports cell survival and proliferation. The down-regulatioin of the eIF5A gene by an eIF5A siRNA also down-regulates anti-apoptotic proteins, such as NF-kB, ICAM and pro-inflammatory cytokines, which protect malignant cells from apoptosis and promote cell growth in multiple myeloma. The PEI, a cationic polymer, promotes auto-assembly of a nanoparticle with the other two components for intravenous delivery and protects the combination from degradation in the bloodstream until it is taken up by the tumor cell, where the siRNA and DNA plasmid are released.

We have performed efficacy, toxicological and dose-finding studies *in vitro* in non-human and human cells and *in vivo* in mice with SNS01. We have also completed our pivotal GLP toxicology studies in mice and dogs, employing SNS01-T, an improved formulation of SNS01, and have an open investigational new drug application, or IND, with the United States Food and Drug Administration, or FDA.

We have been granted orphan drug status for SNS01-T by the FDA for the potential treatment of multiple myeloma, mantle cell lymphoma (MCL) and diffuse large B-cell lymphoma (DLBCL) and are conducting a Phase 1b/2a clinical study with SNS01-T in patients with those indications. The clinical study is an open-label, multiple-dose, dose-escalation study, which is evaluating the safety and tolerability of SNS01-T when administered by intravenous infusion to relapsed or refractory patients. The study design calls for four cohorts of three to six patients each. Patients in each cohort will receive twice-weekly dosing for six weeks followed by up to a four-week safety data review period before escalating to a higher dose level in the next cohort.

While the primary objective of this study is to evaluate safety and tolerability, the effect of SNS01-T on tumor response and time to relapse or progression will be assessed using multiple well-established metrics including measurement of monoclonal protein in multiple myeloma and CT imaging in MCL and DLBCL .

We have selected Mayo Clinic, University of Arkansas for Medical Sciences, the Randolph Cancer Center at West Virginia University, the Fred Hutchinson Cancer Research Center and the John Theurer Cancer Center at Hackensack University Medical Center as our clinical sites. We are also considering adding additional sites to increase the rate of enrollment.

The study is open and we have completed our first and second cohorts and the third cohort is open for enrollment and dosing patients. The results of the first and second cohort showed that SNS01-T was safe and well tolerated and met the criteria for Stable Disease in 2 of the 6 evaluable patients.

SNS01-T used in combination with other drugs

We have demonstrated that the combination of lenalidomide and SNS01-T performs better than either treatment alone in mouse xenograft models of human mantle cell lymphoma. When SCID mice, implanted with an aggressive human mantle cell lymphoma cell line (JVM2), were treated with either 15 mg/kg lenalidomide (5 times weekly by intra-peritoneal injection) or 0.375 mg/kg SNS01-T (twice weekly by intravenous injection) there was a growth delay of 4 days and 14 days, respectively. Mice treated with a combination of both drugs using the same dose levels and dosing regimens exhibited a tumor growth delay of 27 days (p value = 0.0008).

The median survival of mice treated with control nanoparticles was 21 days. Mice treated with lenalidomide or SNS01-T had a median survival of 28 days (33 % increase) and 37 days (76 % increase), respectively. Mice treated with the drug combination had a median survival of 52 days, an increase in survival of 148 %. Survival analysis using the Kaplan-Meier method revealed that treatment of mice with the drug combination resulted in statistically significant increases in survival compared to both SNS01-T (p value = 0.002) and lenalidomide (p value = 0.007) alone. We believe that the results of these studies not only support moving forward in multiple myeloma, but also support extending our clinical evaluation of SNS01-T in other B-cell cancers.

We may consider other human diseases in order to determine the role of Factor 5A and SNS01-T. We may further expand our research and development program beyond the initiatives listed above to include other diseases and research centers.

Human Therapeutic Target Markets

We believe that our eIF5A platform technology may have broad applicability in the human therapeutic field, by either inducing or inhibiting apoptosis. Inducing apoptosis may be useful in treating certain forms of cancer where tumor

cells do not respond to immune system signals to undergo apoptosis. Inhibiting apoptosis may be useful in preventing or treating a wide range of inflammatory and ischemic diseases attributed to premature apoptosis, including diabetes, diabetic retinopathy and lung inflammation.

We have advanced our research in multiple myeloma, MCL and DLBCL and are conducting a Phase 1b/2a clinical trial for those indications, and may select additional human therapeutic indications to investigate in clinical trials. We believe that the success of our future operations will likely depend on our ability to transform our research and development activities into commercial applications.

We anticipate that we may enter into a collaboration with a biotechnology or pharmaceutical company to support the further development of SNS01-T after we complete our Phase 1b/2a clinical trial in multiple myeloma, MCL and DLBCL. However, there can be no assurance that we will be able to enter into such a collaboration or that one will be available on terms satisfactory to us.

Human Therapeutic Research Program

Our human therapeutic research program, which consists of pre-clinical *in-vitro* and *in-vivo* experiments designed to assess the role and mode of action of Factor 5A in human diseases and a phase 1a/2b clinical trial, is being performed by third party researchers, at our direction, at Criterium, our contract research organization and the University of Waterloo and other facilities. Additionally, we outsource certain projects, such as our clinical trial, to other third party research organizations.

On September 1, 1998, we entered into, and have extended through August 31, 2014, a research and development agreement with the University of Waterloo and Dr. Thompson as the principal inventor. The Research and Development Agreement provides that the University of Waterloo will perform research and development under our direction, and we will pay for the cost of this work and make certain payments to the University of Waterloo. In return for payments made under the Research and Development Agreements, we have all rights to the intellectual property derived from the research.

Our research and development expenses incurred on human therapeutic applications were approximately $2,033,100, or 97%, of our total research and development expenses for the year ended June 30, 2013.

Our research and development expenses incurred on human therapeutic applications were approximately $2,286,511, or 89%, of our total research and development expenses for the year ended June 30, 2012.

Our research and development expenses incurred on human therapeutic applications were approximately $3,253,253, or 87%, of our total research and development expenses for the year ended June 30, 2011.

Since inception, the proportion of our research and development expenses on human therapeutic applications has increased, as compared to our research and development expenses on agricultural applications. This change is primarily due to the fact that our research focus on human therapeutics has increased and most of our research costs for plant applications have shifted to our license partners.

Our planned future research and development initiatives for human therapeutics include:

- Multiple Myeloma, Mantle Cell Lymphoma and Diffuse Large B-Cell Lymphoma. Continue a Phase 1b/2a clinical trial. In connection with the clinical trial, we have engaged Criterium to manage the operational aspects of the Phase 1b/2a clinical study. We have also entered into an agreement with Mayo Clinic, University of Arkansas for Medical Sciences, the Randolph Cancer Center at West Virginia University, the Fred Hutchinson Cancer Research Center and the John Theurer Cancer Center at Hackensack University Medical Center to be our clinical sites. We may add additional clinical sites in order to accelerate patient enrollment into the trial. The trial opened in September 2011 and we are currently treating patients. We estimate that the trial will be completed in the first half of 2014.

- We may consider targeting cancers in other tissues by modifying the structure of SNS01-T, e.g., liver cancer.

- We are exploring the use of our Factor 5A technology in other disease applications in oncology and inflammation.

In order to pursue the above research initiatives, as well as other research initiatives that may arise, we completed placements common stock on May 8, 2013 and October 2, 2013. However, it will be necessary for us to raise a significant amount of additional working capital in the future. If we are unable to raise the necessary funds, we may be required to significantly curtail the future development of some or all of our research initiatives and we will be unable to pursue other possible research initiatives.

We may further expand our research and development program beyond the initiatives listed above to include other diseases and research centers.

Human Therapeutic Suppliers

The materials for our lead therapeutic candidate, SNS01-T, for multiple myeloma consists of three parts: a pDNA expressing human eIF5A^{K50R}; an siRNA, whose sequence corresponds to an untranslated region of native eIF5A mRNA; and linear PEI which enables self-assembly of the nucleic acids into nanoparticles. We have entered into supply agreements for the components as follows:

On June 27, 2008, we entered into a supply agreement with VGXI, Inc., or VGXI, under which VGXI will supply us with the plasmid portion of the Company's combination therapy, hereinafter referred to as the VGXI Product. The agreement has an initial term that commenced on the date of the agreement and runs for a period of five (5) years. The agreement shall, upon mutual agreement, renew for consecutive one (1) year periods thereafter. Our financial obligation under the agreement is dependent upon the amount of VGXI Product ordered by the Company.

On June 30, 2008, we entered into a supply agreement with Polyplus-transfection, or POLYPLUS, under which POLYPLUS will supply the Company with its "in vivo-jetPEI", hereinafter referred to as the POLYPLUS Product, which is used in the formulation and systemic delivery of the Company's combination therapy. The agreement has an initial term which commenced on the date of the agreement and runs until the eighth anniversary of the first sale of our product containing the POLYPLUS Product. The agreement shall automatically renew for consecutive one (1) year periods thereafter, except if terminated by either party upon six (6) months written notice prior to the initial or any subsequent renewal term. The Company's financial obligation under the agreement is dependent upon the amount of POLYPLUS Product ordered by the Company.

On September 4, 2008, we entered into a supply agreement with Avecia Biotechnology, Inc., or AVECIA, under which AVECIA will supply the Company with the siRNA portion of the Company's combination therapy consisting of the siRNA against Factor 5A, hereinafter referred to as the siRNA Product. The agreement had a term which commenced on the date of the agreement and terminated on the later of the completion of all services to be provided under the agreement or 30 days following delivery of the final shipment of the siRNA Product.

Effective June 4, 2013, the Company entered into a clinical supply agreement with The University of Iowa, or IOWA, under which IOWA will provide manufacturing, vialing and testing services for certain reagents that are used in SNS01-T. The agreement will terminate upon delivery of the delivery of the reagents, which is estimated to be approximately six months. The Company's remaining financial obligation under the agreement is approximately $156,000.

Human Therapeutic Competition

Our competitors in human therapeutics that are presently attempting to distribute their technology have generally utilized one of the following distribution channels:

- Entering into strategic alliances, including licensing technology to major marketing and distribution partners; or

- Developing in-house production and marketing capabilities.

In addition, some competitors are established distribution companies, which alleviates the need for strategic alliances, while others are attempting to create their own distribution and marketing channels.

There are many large companies and development stage companies working in the field of apoptosis and B-cell cancer research including Celgene Corporation., Takeda/Millennium, ONYX Pharmaceuticals, Inc., Amgen Inc., Janssen Biotech, Inc., Novartis AG, and Pharmacyclics, Inc.

We do not currently have any commercialized products, and therefore, it is difficult to assess our competitive position in the market. However, we believe that if we are able to develop and commercialize a product or products under our patents to our Factor 5A platform technology, we will have a competitive position in the markets in which we will operate.

Agricultural Applications

Our agricultural research focuses on the discovery and development of certain gene technologies, which are designed to confer positive traits on fruits, flowers, vegetables, forestry species and agronomic crops.

We have licensed this technology to various strategic partners. We may continue to license this technology, as opportunities present themselves, to additional strategic partners and/or enter into joint collaborations or ventures.

Our ongoing research and development initiatives for agriculture include assisting our license partners to:

- further develop and implement the DHS and Factor 5A gene technology in banana, canola, cotton, turfgrass, rice, alfalfa, corn, soybean, biofuels and trees; and

- test the resultant crops for new beneficial traits such as increased yield, increased tolerance to environmental stress, disease resistance and more efficient use of fertilizer.

Agricultural Target Markets

In order to address the complexities associated with marketing and distribution in the worldwide market, we have adopted a multi-faceted commercialization strategy, in which we have entered into and plan to enter into, as the opportunities present themselves, additional licensing agreements or other strategic relationships with a variety of companies or other entities on a crop-by-crop basis. We anticipate revenues from these relationships in the form of licensing fees, royalties, usage fees, or the sharing of gross profits. In addition, we anticipate payments from certain of our partners upon their achievement of certain research and development benchmarks. This commercialization strategy allows us to generate revenue at various stages of product development, while ensuring that our technology is incorporated into a wide variety of crops. Our optimal partners combine the technological expertise to incorporate our technology into their product line along with the ability to successfully market the enhanced final product, thereby eliminating the need for us to develop and maintain a sales force.

Because the agricultural market is dominated by privately held companies or subsidiaries of foreign owned companies, market size and market share data for the crops under our license and development agreements is not readily available. Additionally, because we have entered into confidentiality agreements with our license and development partners, we are unable to report the specific financial terms of the agreements as well as any market size and market share data that our partners may have disclosed to us regarding their companies.

Agricultural Development and License Agreements

On February 8, 2012, we entered into a research and development agreement with BioCorp Ventures, LLC ("BCV"), a division of technology incubator US Equity Holdings, to use our proprietary eukaryotic translation initiation Factor 5A (eIF5A) technology platform for sustainable energy applications (the "Agreement"). BCV, a newly formed start-up company, will have a license to evaluate our technology for the development of plants and plant products suitable for use in the production of biofuel and biofuel feedstock, including all species of algae and all species in the genus Miscanthus (perennial grasses). Biofuels derived from these organisms include biodiesel and bioethanol. The companies will continue ongoing research and development as BCV works on commercializing the technology. BCV will be fully responsible for further assessing the potential of our technology for all biofuel applications and determining the route to the commercialization of biofuel products. Through our significant know-how at the University of Waterloo, we will be responsible for technology transfer and providing technical advice to facilitate BCV's operations. After the initial evaluation phase, the Agreement provides annual license maintenance payments to us and royalty payments in the mid-single digits if a product is commercialized by BCV. As part of the Agreement, after the initial evaluation phase, we will have a 15% equity interest in BCV and the right to appoint one member to BCV's advisory board.

In February 2013, BCV was in breach of the Agreement. Specifically, BCV did not make the payment required or issue our equity interest to us on the due date. On March 1, 2013, we sent BCV a notice of breach. As such breach had not been cured by April 1, 2013, the Agreement was terminated in its entirety. In May 2013, we entered into a new Biofuels Evaluation and License Agreement with the BCV under the same terms and conditions as the previous Biofuels Evaluation and License Agreement described above, except that the evaluation period was amended and the amount of the milestone payments was increased.

As of September 30, 2013, we had nine (9) active license agreements with established agricultural biotechnology companies.

In 2006, our proprietary gene technology was licensed to Bayer CropScience (“Bayer”) to enhance Canola yields in Bayer’s InVigor® canola hybrids and in 2007 for rice and cotton. Although considerable progress had been made by Bayer, continuing research on eIF5A and DHS did not achieve Bayer’s commercial performance requirements and was deprioritized from Bayer’s portfolio of technologies. Therefore, on November 11, 2013, we received notice from Bayer that it has decided not to further pursue applications of our eIF5A and DHS technology to enhance the yields of cotton, rice and Brassica (canola) and will return the rights to do so to us. The rights to develop our technology in canola, rice and cotton now revert back to us, and we now have the right to re-license our technology for these crops to other parties.

Bayer had generated a number of transgenic seed lines for each crop and tested them in the greenhouse as well as in field trials. The most promising results were seen with plants grown under conditions of nutrient stress achieved by withholding fertilizer. This is consistent with results obtained with Arabidopsis in our laboratory at the University of Waterloo showing that the yield of plants grown under conditions of environmental stress such as low nitrogen, drought and high salinity was substantively increased using our platform technology.

We were surprised that Bayer has decided to stop testing our technology when other licensees have made significant progress in other crops, including improving plant yields by as much as 45%. We expect the results of this other licensee to be published within the next 6 months. Furthermore we believe that more work is justified. We expect to seek other collaborators to continue where Bayer has left off.

Agricultural Research Program

Over the past year, our agricultural research and development has been performed by one (1) researcher, at our direction, at the University of Waterloo, where the technology was developed. Additional agricultural research and development is performed by our license or joint collaboration partners.

Agricultural Competition

Our competitors in agriculture that are presently attempting to distribute their technology have generally utilized one of the following distribution channels:

- licensing technology to major marketing and distribution partners;
- entering into strategic alliances; or
- developing in-house production and marketing capabilities.

In addition, some competitors are established distribution companies, which alleviates the need for strategic alliances, while others are attempting to create their own distribution and marketing channels.

Our competitors in the field of delaying plant senescence are companies that develop and produce transformed plants with a variety of enhanced traits. Such companies include: Mendel Biotechnology; Renessen LLC; Exelixis Plant Sciences, Inc.; and Syngenta International AG; among others.

We do not currently have any commercialized products, and therefore, it is difficult to assess our competitive position in the market. However, we believe that if we or our licensees are able to develop and commercialize a product or products using our technology, we will have a competitive position in the markets in which we or our licensees operate.

Agricultural Development Program

Generally, projects with our licensees begin by transforming seed or germplasm to incorporate our technology. Those seeds or germplasm are then grown in our partners' greenhouses. After successful greenhouse trials, our partners will transfer the plants to the field for field trials. After completion of successful field trials, our partners may have to apply for and receive regulatory approval prior to initiation of any commercialization activities.

Generally, the approximate time to complete each sequential development step is as follows:

Seed Transformation	approximately 1 to 2 years
Greenhouse	approximately 1 to 2 years
Field Trials	approximately 2 to 5 years

The actual amount of time spent on each development phase depends on the crop, its growth cycle and the success of the transformation achieving the desired results. As such, the amount of time for each phase of development could vary, or the time frames may change.

The status of each of our projects with our partners is as follows:

Project	Partner	Status

Banana	Rahan Meristem	
- Shelf Life		Field trials
- Disease Resistance		Field trials
Trees	Arborgen	
- Growth		Field trials
Alfalfa	Cal/West	Field trials
Corn	Monsanto	Field trials
Cotton	Bayer	Terminated
Canola	Bayer	Terminated
Rice	Bayer	Terminated
Soybean	Monsanto	Field trials
Turfgrass	The Scotts Company	Greenhouse
Biofuels	BioCorp Ventures	Initial Evaluation

Commercialization by our partners may require a combination of traits in a crop, such as both shelf life and disease resistance, or other traits.

Based upon our commercialization strategy, we anticipate that there may be a significant period of time before plants enhanced using our technology reach consumers, if at all.

Intellectual Property

We have twenty-nine (29) issued patents from the United States Patent and Trademark Office, or PTO, and seventy-three (73) issued patents from foreign countries. Of our one hundred and two (102) domestic and foreign issued patents, sixty-three (63) are for the use of our technology in agricultural applications and thirty-nine (39) relate to human therapeutics applications.

In addition to our one hundred and two (102) patents, we have a wide variety of patent applications, including divisional applications and continuations-in-part, in process with the PTO and internationally. We intend to continue our strategy of enhancing these new patent applications through the addition of data as it is collected.

The first of our agricultural patents are generally set to expire in 2019 in the United States and 2025 outside the United States. The first of our core human therapeutic technology patents are set to expire in 2021 in the United States and 2025 outside the United States, and our patents related to multiple myeloma are set to expire, both in and outside the United States in 2029.

On June 13, 2013, the Supreme Court of the United States of America ruled that naturally-occurring DNA sequences are unpatentable since they are products of nature. The Court further found that cDNA sequences, which are copies of non-intron containing mRNA sequences created in the laboratory, are patent eligible. We believe that the Supreme Court ruling has little impact on our patent portfolio overall and no impact on our human patents, which do not rely on claims on naturally-occurring DNA sequences. SNS01-T comprises two synthetic constructs, siRNA and a DNA plasmid, which are protected by composition of matter and method of use patent claims.

During the quarter ended September 30, 2013 and our 2013, 2012 and 2011 fiscal years, we reviewed our patent portfolio in order to determine if we could reduce our cost of patent prosecution and maintenance. We identified several patents and patents pending that we believe we no longer need to maintain without having a material impact on the portfolio. We determined that we would no longer incur the cost to prosecute or maintain those patents or patents pending.

Government Regulation

At present, the U.S. federal government regulation of biotechnology is divided among three agencies: (i) the U.S. Department of Agriculture regulates the import, field-testing and interstate movement of specific types of genetic engineering that may be used in the creation of transformed plants; (ii) the Environmental Protection Agency regulates activity related to the invention of plant pesticides and herbicides, which may include certain kinds of transformed plants; and (iii) the FDA regulates foods derived from new plant varieties. The FDA requires that transformed plants meet the same standards for safety that are required for all other plants and foods in general. Except in the case of additives that significantly alter a food's structure, the FDA does not require any additional standards or specific approval for genetically engineered foods but expects transformed plant developers to consult the FDA before introducing a new food into the market place.

In addition, our ongoing preclinical research with cell lines and lab animal models of human disease is not currently subject to the FDA requirements that govern clinical trials. However, use of our technology, SNS01-T, for human therapeutic applications, is subject to FDA regulation. Generally, the FDA must approve any drug or biologic product before it can be marketed in the United States. In addition, prior to being sold outside of the U.S., any products resulting from the application of our human therapeutic technology must be approved by the regulatory agencies of foreign governments. Prior to filing a new drug application or biologics license application with the FDA, we would have to perform extensive clinical trials, and prior to beginning any clinical trial, we need to perform extensive preclinical testing which could take several years and may require substantial expenditures.

Our current activities in human therapeutics related to our clinical trial in multiple myeloma, requires approval by the FDA. We have an open IND with the FDA for use of SNS01-T for the treatment of multiple myeloma and are subject to additional reporting to and monitoring by the FDA. Additionally, federal, state and foreign regulations relating to crop protection products and human therapeutic applications developed through biotechnology are subject to public concerns and political circumstances, and, as a result, regulations have changed and may change substantially in the future. Accordingly, we may become subject to governmental regulations or approvals or become subject to licensing requirements in connection with our research and development efforts. We may also be required to obtain such licensing or approval from the governmental regulatory agencies described above, or from state agencies, prior to the commercialization of our genetically transformed plants and human therapeutic technology. In addition, our marketing partners who utilize our technology or sell products grown with our technology may be subject to government regulations. If unfavorable governmental regulations are imposed on our technology or if we fail to obtain licenses or approvals in a timely manner, we may not be able to continue our operations.

Employees

In addition to the seven (7) scientists and monitors performing funded research for us at our CRO, the University of Waterloo, and other commercial research facilities, we have four (4) employees and five (5) consultants, four (4) of whom are executive officers and who are involved in our management. We do not anticipate hiring any additional employees over the next 12 months.

The officers are assisted by a Scientific Advisory Board that consists of prominent experts in the fields of plant and human cell biology as follows:

- Alan Bennett, Ph.D., who serves as the Chairman of the Scientific Advisory Board, is the Associate Vice Chancellor of the Office of Technology Transfer at the University of California. His research interests include the molecular biology of tomato fruit development and ripening, the molecular basis of membrane transport, and cell wall disassembly.

- Charles A. Dinarello, M.D., who serves as a member of the Scientific Advisory Board, is a Professor of Medicine at the University of Colorado School of Medicine, a member of the U.S. National Academy of Sciences and the author of over 500 published research articles. In addition to his active academic research career, Dr. Dinarello has held advisory positions with two branches of the National Institutes of Health and positions on the Board of Governors of both the Weizmann Institute and Ben Gurion University.

- James E. Mier, M.D., who serves as a member of the Scientific Advisory Board, is an Associate Professor of Medicine at Beth Israel Deaconess Medical Center, a teaching hospital of Harvard Medical School. He is also a practicing physician in the Division of Hematology-Oncology at Beth Israel. Dr. Mier’s research is funded by the NIH and he is a member of numerous professional societies.

Furthermore, pursuant to the Research and Development Agreements, a substantial amount of our research and development activities are conducted at the University of Waterloo under the supervision of Dr. Thompson, our Executive Vice President and Chief Scientific Officer. We utilize the University's research staff including graduate and post-graduate researchers.

We may also contract research to additional university laboratories or to other companies in order to advance the development of our technology.

Properties

Effective May 19, 2011, we lease office space in Bridgewater, New Jersey for a current monthly rental fee of $5,703, subject to certain escalations for our proportionate share of increases, over the base year of 2011, in the building's operating costs. The lease expires on May 31, 2014. The space is in good condition, and we believe it will adequately serve as our headquarters over the term of the lease. We also believe that this office space is adequately insured by the lessor.

Legal Proceedings

We are not currently a party to any legal proceedings; however, we may become involved in various claims and legal actions arising in the ordinary course of business.

MANAGEMENT

Executive Officers and Directors

The following is a list of our current directors and executive officers, as of November 27, 2013, together with their ages and business backgrounds:

Name	Age	Capacities in Which Served	In Current Position Since
Leslie J. Browne, Ph.D.	63	President and Chief Executive Officer, Director	May 2010
John E. Thompson, Ph.D.	72	Executive Vice President and Chief Scientific Officer, Director	July 2004
Joel P. Brooks	54	Chief Financial Officer, Treasurer and Secretary	December 2000
Richard Dondero	63	Vice President of Research and Development	July 2004
Harlan W. Waksal, M.D.	60	Chairman of the Board of Directors	June 2009
John. N. Braca (1) (2)	55	Director	October 2003
Christopher Forbes (3)	62	Director	January 1999
Warren J. Isabelle	61	Director	June 2009
Thomas C. Quick (3)	58	Director	February 1999
David Rector (1) (2)	66	Director	February 2002
Rudolf Stalder (2) (3)	72	Director	February 1999
Jack Van Hulst	74	Director	January 2007

(1) Member of the Compensation Committee
(2) Member of the Audit Committee
(3) Member of the Nominating and Corporate Governance Committee

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.

Leslie J. Browne, Ph.D. was appointed our President and Chief Executive Officer in May 2010 and has been our director since March 2011. Dr. Browne has over 30 years of experience in the pharmaceutical industry. Prior to joining Senesco in May 2010, he served from October 2008 to May 2010 as President and CEO, and is currently chair, of Phrixus Pharmaceuticals, Inc., a private biotech working on muscular dystrophy and heart failure. He recently served from January 2007 to January 2009 as chair of the New Jersey Technology Council, where he continues as a member of the board. He also served from April 2007 to January 2009 as an independent director of Genelabs Technologies, which was sold to GSK, and from September 2004 to May 2008 as President, CEO and Director of Pharmacopeia, a Nasdaq listed company, where he transformed the company from a discovery contract research organization to a clinical development stage biopharmaceutical company with multiple internal development

programs. Prior to joining Pharmacopeia, Dr. Browne was the Chief Operating Officer at Iconix Pharmaceuticals, Inc., a privately-held chemogenomics company from October 2001 to July 2004. Before Iconix, Dr. Browne held key positions at Berlex/Schering AG from 1990 to 2000, including Corporate Vice President, Berlex Laboratories, Inc. and President of Schering Berlin Venture Corporation. In 1979, Dr. Browne began his industrial career at Ciba-Geigy, now Novartis, where he invented fadrozole, for the treatment of breast cancer and was closely involved in the discoveries of Femaraâ and Diovanâ, which became major products for Novartis. Dr. Browne received his Bachelor of Science degree in Chemistry in 1972 from the University of Strathclyde, Glasgow Scotland. He received his Ph.D. in Organic Chemistry in 1978 from the University of Michigan and his postdoctoral training as a National Institutes of Health Postdoctoral Fellow at Harvard University from January 1978 to April 1979. Dr. Browne is an experienced executive with former CEO experience and senior executive level experience at large multinational, as well as development stage, life sciences companies. He also has corporate governance experience through service on boards of other companies and organizations. Dr. Browne’s educational background also provides him with the tools necessary to understand the science underlying our technology and how it relates to human health and agricultural applications.

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.

Joel Brooks was appointed our Chief Financial Officer and Treasurer in December 2000. Mr. Brooks was appointed our Secretary in May 2010. 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 is also a director and chairman of the audit committee of USA Technologies, Inc. Mr. Brooks received his Bachelor of Science degree in Commerce with a major in Accounting from Rider University in February 1983.

Richard 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.

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 July 2011 to present, Dr. Waksal has served as the Executive Vice-President, Business and Scientific Affairs of Acasti Pharma, Inc., which is a subsidiary of Neptune Technologies & Bioresources, Inc. From March 1987 through July 2003, Dr. Waksal had served in various senior roles for ImClone Systems Inc. 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 Inc. 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.

45

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. Since April 2013, Mr. Braca has been the President and sole proprietor of JNB Consulting, which provides strategic business development counsel to biotechnology companies. From August 2010 through April 2013, Mr. Braca had been the executive director controller for Iroko Pharmaceuticals, a privately-held global pharmaceutical company based in Philadelphia. From April 2006 through July 2010, Mr. Braca was 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. From September 2011 to present, Mr. Forbes has been the Vice Chairman of Forbes Media LLC and Forbes Family Holdings, and Vice President of Forbes Management Co. Inc. From 1989 through September 2011, Mr. Forbes had been Vice Chairman of Forbes, Inc. 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 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 and The New York Academy of Art. 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's knowledge regarding corporate operations as well as his business acumen, provide the board with experience in running a corporation and addressing the issues that face a growing company, such as ours.

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 experience as an investment analyst and portfolio manager provides the Company with valuable insight into the biotechnology industry and the publicly-traded capital markets.

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 and Venetian Heritage, Inc. He is a trustee of the National Corporate Theater Fund, Cold Spring Harbor Laboratories, the Norton Museum and the Inter-City Scholarship Foundation of New York City. 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.

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.) Mr. Rector also serves on the board of directors of Valor Gold Corp. 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. Since November 2012 through present, Mr. Rector has served as the CEO and President of Valor Gold. Since February 2012 through present, Mr. Rector has served as the VP Finance & Administration of Pershing Gold Corp. From May 2011 through February 2012, Mr. Rector served as the President of Sagebrush Gold, Ltd. From October 2009 through August 2011, Mr. Rector had served as President and CEO of Li3 Energy, Inc. From July 2009 through May 2011, Mr. Rector had served as President and CEO of Nevada Gold Holdings, Inc. From September 2008 through November 2010, Mr. Rector served as President and CEO Universal Gold Mining Corp. Since October 2007 through present, Mr. Rector has served as President and CEO of Standard Drilling, 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. 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 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.

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 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 and senior executive level experience at large multinational companies. He also has corporate governance experience through service on other public 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 resigned as our President and Chief Executive Officer and Secretary effective May 25, 2010. Since June 2010, Mr. Van Hulst has been the operating partner of SK Capital Partners. Mr. Van Hulst also serves as a director and member of the compensation and audit committees of 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.

Director Independence

The Company is not a listed issuer and so is not subject to the director independence requirements of any exchange or interdealer quotation system. Although we are not currently subject to director independence requirements, we have, nevertheless,, in determining whether our directors and director nominees are independent, we use the definition of independence provided under Section 803 of the NYSE MKT Company Guide. Under this definition of independence, 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 has determined that each of Messrs. Stalder, Braca, Forbes, Isabelle, Quick and Rector is an "independent director" under Section 803 of the NYSE MKT Company Guide. Messrs. Browne, Thompson and Van Hulst would not be considered independent because they currently serve or have served as Executive Officers of the Company. Mr. Waksal would not be considered independent because he has personally guaranteed a line of credit from JMP Securities LLC to the Company.

EXECUTIVE COMPENSATION

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 2013 and as anticipated for Fiscal 2014. 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:

- annually reviewing and approving, or recommending for approval by our board, the corporate goals and objectives relevant to executive officer 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.

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 research and development objectives and 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

For Fiscal 2013, the Committee's objective was 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.

During the compensation review process for Fiscal 2013, the Committee engaged J. Richard and Co., also referred to herein as J. Richard, a nationally recognized compensation consulting firm, as its compensation consultant, on an as needed basis regarding its proposed programs and approaches to compensation during Fiscal 2013, for which J. Richard was compensated. Other than as described above, J. Richard did not provide any additional services to the Committee or Senesco for Fiscal 2013, and compensation to J. Richard for services rendered in Fiscal 2013 was less than $120,000.

The Committee elected to identify various companies in the biotech sector it felt were somewhat close in scope of operation to Senesco. 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 2013, the companies we elected to evaluate were as follows: Access Pharmaceuticals (ACCP); Adventrx (ANX); Poniard (PARD); Cortex Pharmaceuticals (CORX.OB); Callisto Pharmaceuticals (CLSP.OB); RXi Pharmaceuticals (RXII); Titan Pharmaceuticals (TTNP.OB); Oxigene (OXGN); Entremed (ENMD); and Silence Therapeutics (SLNCF). For Fiscal 2014, the companies we elected to evaluate were as follows: Access Pharmaceuticals (ACCP); Mast Therapeutics (MSTX); Cortex Pharmaceuticals (CORX); RXi Pharmaceuticals (RXII); Titan Pharmaceuticals (TTNP); Oxigene (OXGN); Entremed (ENMD); and Silence Therapeutics (SLN). In selecting companies to survey for such compensation purposes, the 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. Because the biotechnology industry is a dynamic industry, our comparator group is periodically updated to ensure that companies continue to meet established criteria and remain similar in scope of operation to us.

In determining the compensation of each named executive officer, the Committee also considers a number of other factors, including our recent performance and the named executive officer's individual performance, the Chief Executive Officer's recommendations and the importance of the executive's position and role in relation to execution of our 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 Senesco and, most of all, what is considered fair and reasonable based on the scope of operations and responsibilities of the officer. For the Chief Executive Officer, for Fiscal 2013, the Committee set his performance targets and compensation levels based upon the Committee's review and analysis of his performance and the factors described above. For other named executive officers, the Committee sets performance targets and compensation levels after taking into consideration recommendations from the Chief Executive Officer. As part of this process, the Committee considers a number of factors important to our stockholders, including ongoing concerns over the dilutive effect of option grants on our outstanding shares, the compensation expense we must take for financial accounting purposes in accordance with FASB Accounting Standards Codification Topic 718 (ASC 718, Compensation-Stock Compensation) with respect to option grants in relation to the actual value anticipated to be delivered to our executive officers from such awards, and the market volatility of our stock.

Impact of 2013 Say-on-Pay Vote: The most recent stockholder advisory vote on executive officer compensation required under the federal securities laws was held on March 28, 2013. More than 93 percent of the votes cast on such proposal were in favor of the compensation of the named executive officers, as that compensation was disclosed in the Compensation Discussion and Analysis and the various compensation tables and narrative that appeared in the Company's proxy statement dated February 26, 2013. Based on that level of stockholder approval, the Committee decided not to make any material changes to the Corporation's compensation philosophies, policies and practices for the remainder of the 2013 fiscal year or for compensation decisions made in August 2013 with respect to the 2014 fiscal year compensation of the named executive officers. However, the Committee will continue to take into account future stockholder advisory votes on executive compensation and other relevant market developments affecting executive officer compensation in order to determine whether any subsequent changes to the Corporation's executive compensation programs and policies would be warranted to reflect any stockholder concerns reflected in those advisory votes or to address market developments. Based on the voting preference of our stockholders, the frequency of future Say-on-Pay votes will be every three years. Accordingly, the next stockholder advisory vote on executive officer compensation will occur at the 2016 annual meeting.

Components of Compensation

For Fiscal 2013, our executive compensation program included the following components:

- base salary; and
- annual short-term equity incentives.

Currently, for Fiscal 2014, our executive compensation program includes the following components:

- base salary; and
- annual short-term equity incentives.

The Committee seeks to align the named executive officers' and stockholders' interests in a pay for performance environment. The Committee also reviews the compensation metrics of the Chief Executive Officer versus the other named executive officers. Although certain percentages and allocations may differ, the overall cash and equity compensation package of the CEO is not materially greater than the overall cash and equity compensation package of each other named executive officer. 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.

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 stockholder value in order to (i) link a substantial portion of their compensation to the achievement of short-term objectives and (ii) to save cash given our limited capital resources.

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 we are 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 our progress.

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 approximately around the 50th percentile because of our current financial position. However, historically, the base compensation level for our executive officers has been below the 25th percentile of competitive peer group companies. In determining the compensation of each executive officer, the Committee also considers a number of other factors, including recent Senesco and individual performance, the officer's position and responsibilities and the CEO's recommendations (with respect to officers other than the CEO).

Base Salary for Fiscal 2013 – For Fiscal 2013, after review of the factors discussed above, the following named executive officers' salaries were increased as follows:

Name	Title	2013 Salary	2012 Salary	% Increase
Leslie J. Browne, Ph.D.	President and Chief Executive Officer	$271,000	$262,500	3.5 %
John E. Thompson, Ph.D.	Executive Vice-President and Chief Scientific Officer	$70,000 (1)	$67,500 (1)	3.5 %
Joel P. Brooks	Chief Financial Officer, Secretary and Treasurer	$176,000	$170,000	3.5 %
Richard Dondero	Vice-President of Research and Development	$159,000	$153,200	3.5 %

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

Base Salary for Fiscal 2014 – For Fiscal 2014, after a review of the factors discussed above, the following named executive officer's salaries were increased as follows.

Name	Title	2014 Salary	2013 Salary	% Increase
Leslie J. Browne, Ph.D.	President and Chief Executive Officer	$271,000	$271,000	0 %
John E. Thompson, Ph.D.	Executive Vice-President and Chief Scientific Officer	$70,000 (1)	$70,000 (1)	0 %
Joel P. Brooks	Chief Financial Officer, Secretary and Treasurer	$176,000	$176,000	0 %
Richard Dondero	Vice-President of Research and Development	$159,000	$159,000	0 %

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

In light of the Company's performance and financial position, the Committee determined that it would not award salary increases to management at this time for Fiscal 2014, but reserved the right to increase salaries at a later date.

Annual Bonuses for Fiscal 2013– There were no bonuses granted for Fiscal 2013.

Annual Bonuses for Fiscal 2014– Bonuses will be determined at the discretion of the board after the end of the fiscal year based upon the recommendation of the Committee.

Short Term Incentive Equity Awards

In General – A portion of each named executive 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.

Short-term equity awards were made in the form of incentive stock options, also referred to herein as ISO's, for tax purposes. The Committee has followed a grant practice of tying equity awards to its annual year-end review of individual performance, its assessment of our performance and our operational results.

Short-Term Incentive Plan for Fiscal 2013 – The Committee, in coordination with our Chief Executive Officer, established our short-term goals and objectives for Fiscal 2013, which include the following:

- Contributions relating to the development of our SNS01-T assets:

  - Maintain schedule to complete multiple myeloma study in the second half of fiscal 2013;
  - Plan a clinical study for SNS01-T in B cell cancers in addition to multiple myeloma;
  - Validate preclinical candidate for approval for IND preparation; and
  - Develop an improved SNS01-T formulation;

- Contributions relating to finance objectives:

  - Improve the capital resources of the company through a financing transaction; and
  - Regain and maintain NYSE MKT compliance;

- Contributions relating to corporate development:

  - Expand product portfolio; and
  - Integrate business acquisitions.

The foregoing goals and objectives were generally weighted as follows: 50% for contributions relating to the development of our SNS01-T assets; 25% to contributions relating to finance objectives; and 25% to contributions relating to corporate development. However, the specific weighting varied from executive officer to executive officer, in order to reflect that officer's specific duties and responsibilities.

The Committee identified additional individual performance goals and objectives for Fiscal 2013 for Messrs. Brooks and Dondero, Dr. Browne and Dr. Thompson. Mr. Brooks's goals and objectives primarily include raising capital through financings, regaining and maintaining NYSE MKT compliance and increasing Senesco's trading volume. Mr. Dondero's goals and objectives primarily include management of Senesco's clinical trials, initiation of new clinical trials for our SNS01-T assets and expanding our product portfolio. Dr. Browne's goals and objectives primarily include the completion of the current clinical trial for SNS01-T, planning of the upcoming Phase 2 clinical trial and the expansion of Senesco's product portfolio. Dr. Thompson's goals primarily include demonstrating the pre-clinical effects of SNS01-T in combination with certain approved therapeutic products and developing an improved SNS01-T formulation.

In October 2012, the Committee determined to award the following options to purchase shares of our common stock, par value $0.01, to the following named executive officers in connection with the short-term goals and objectives for Fiscal 2013:

Leslie J. Browne, Ph.D.	13,650
Joel Brooks	7,800
Richard Dondero	7,800
John E. Thompson, Ph.D.	7,800

The option awards allotted for completion of Fiscal 2013 goals and objectives were allocated to the following named executive officers as follows – Dr. Browne: 35%, Mr. Brooks: 20%, Mr. Dondero: 20%, Dr. Thompson: 20%, and 5% of the option awards will be allocated at the Committee's discretion for outstanding performance to assist Senesco in reaching such goals. Such options were granted on November 16, 2012, which was two days after the filing of our quarterly report on Form 10-Q for the quarter ended September 30, 2012, and had an exercise price equal to the closing price of the common stock on November 16, 2012. The options vest on the basis of a two-step process. First, options vest based on attainment of the pre-established corporate and individual performance goals. Second, the options that are earned based on attainment of performance will vest with respect to twenty-five percent (25%) of such options on the first anniversary of the date of grant with the balance vesting at a rate of 1/36 for each month thereafter, subject to the executive officer's continued service through each applicable vesting date. No options will vest if the Committee has determined that the performance metrics have not been met.

In August 2013, the Committee determined that the performance metrics had not been fully met. Therefore, a percentage of the options granted in November 2012 were forfeited as follows:

Name	Initial Grant	Performance Adjustment Percentage		Options Retained	Options Forfeited
Leslie J. Browne, Ph.D.	13,650	75	%	3,413	10,237
Joel Brooks	7,800	75	%	1,950	5,850
Richard Dondero	7,800	75	%	1,950	5,850
John E. Thompson, Ph.D.	7,800	75	%	1,950	5,850

The remaining retained options will continue to vest pursuant to the vesting schedule set forth above.

Short-Term Incentive Plan for Fiscal 2014 – The Committee, in coordination with our Chief Executive Officer, established our short-term goals and objectives for Fiscal 2014, which include the following:

- Contributions relating to the development of our SNS01-T assets:

  - Complete the current phase 1b/2a study in multiple myeloma;
  - Plan a clinical study for SNS01-T in B cell cancers in addition to multiple myeloma;
  - Develop an eIF5A based therapy for another indication; and
  - Develop an effective follow-up SNS01-T formulation;

- Contributions relating to finance objectives:
  - Improve the capital resources of the company; and
  - Regain a listing on a major stock exchange;

53

· Contributions relating to corporate development:

o	Expand product portfolio; and
o	Integrate business acquisitions.

The foregoing goals and objectives were generally weighted as follows: 40% for contributions relating to the development of our SNS01-T assets; 40% to contributions relating to finance objectives; and 20% to contributions relating to corporate development. However, the specific weighting varied from executive officer to executive officer, in order to reflect that officer's specific duties and responsibilities.

The Committee identified additional individual performance goals and objectives for Fiscal 2014 for Dr. Browne, Messrs. Brooks and Dondero and Dr. Thompson. Dr. Browne's goals and objectives primarily include the completion of the current clinical trial for SNS01-T, raising capital through financings, planning of the upcoming Phase 2 clinical trial and the expansion of Senesco's product portfolio. Mr. Brooks's goals and objectives primarily include raising capital through financings, regaining a listing on a major stock exchange, developing relationships with brokers, funding organizations and health organizations and developing certain financial planning models for Senesco. Mr. Dondero's goals and objectives primarily include management of Senesco's clinical trials, planning of new clinical trials for our SNS01-T assets, development of an improved and more cost effective formulation of SNS01-T and expanding our product portfolio. Dr. Thompson's goals primarily include developing an eIF5A based therapy for another cancer indication and developing an improved and more cost effective SNS01-T formulation.

In August 2013, the Committee determined to award the following options to purchase shares of our common stock, par value $0.01, to the following named executive officers in connection with the short-term goals and objectives for Fiscal 2014:

Leslie J. Browne, Ph.D.	17,230
Joel Brooks	9,850
Richard Dondero	9,850
John E. Thompson, Ph.D.	9,850

The option awards allotted for completion of Fiscal 2014 goals and objectives will be allocated to the following named executive officers as follows – Dr. Browne: 35%, Mr. Brooks: 20%, Mr. Dondero: 20%, Dr. Thompson: 20%, and 5% of the option awards will be allocated at the Committee's discretion for outstanding performance to assist Senesco in reaching such goals. Such options will be granted two days after the filing of our annual report on Form

10-K for the year ended June 30, 2013, and will have an exercise price equal to the closing price of the common stock on such date. The options vest on the basis of a two-step process. First, options vest based on attainment of the pre-established corporate and individual performance goals. Second, the options that are earned based on attainment of performance will vest with respect to twenty-five percent (25%) of such options on the first anniversary of the date of grant with the balance vesting at a rate of 1/36 for each month thereafter, subject to the executive officer's continued service through each applicable vesting date. No options will vest if the Committee has determined that the performance metrics have not been met.

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 general, we will attempt, when possible, to make equity awards to our executive officers and directors promptly after the release of our financial results.

Clawback Policy

We are reviewing our current "clawback" policy which provides for recoupment of incentive compensation in certain circumstances in connection with the enactment of recent regulations in that regard and are awaiting final SEC rules and regulations in order to revise our "clawback" policy in compliance with such rules and regulations.

Analysis of Risk Associated with our Compensation Plans

In making decisions regarding compensation program design and pay levels, our Compensation Committee and senior management, working with our Audit Committee, consider many factors, including any potential risks to Senesco and our stockholders. Although a significant portion of our executives' compensation is performance-based and "at-risk," we believe our compensation plans are appropriately structured and are not reasonably likely to have a material adverse effect on us.

We do not believe that the performance-based nature of the executive compensation program encourages excessive risk-taking by our executive officers that would threaten our economic viability. In Fiscal 2013, the Compensation Committee's performance milestones under the stock option grants for certain clinical objectives were focused on the achievement of specific milestones, rather than a successful outcome. The Compensation Committee believes that this strategy protects against the potential of short-term incentives to encourage excessive risk taking. In addition, long-term equity awards tied to the value of our common stock represent a significant component of an executive officer's total direct compensation, as evidenced by the compensation breakdown contained in the Summary Compensation Table that follows. Those awards promote a commonality of interest between the executive officers and our stockholders in sustaining and increasing stockholder value. Because the equity awards are typically made on an annual basis to the executive officers, those officers always have unvested awards outstanding that could decrease significantly in value if our business is not managed to achieve its long term goals. Accordingly the overall compensation structure is not overly-weighted toward short-term incentives, and we have taken what we believe are reasonable steps to protect against the potential of disproportionately large short-term incentives that might encourage excessive risk taking.

Executive Benefits and Perquisites

In General – The named executive officers are also provided with certain market competitive benefits, described below. 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. Generally, we do not make any contributions to the 401(k) plan and do not have any additional retirement benefits. During Fiscal 2012, due to an anomaly in the rules, the Company contributed $9,800 to the 401(k) plan for the benefit of Leslie J. Browne, Ph.D. Due to the plan structure and the rules regarding 401K plans, since Dr. Browne began his employment with the Company in May 2010 and our plan year ended June 30, 2010, he only was compensated for two months during the plan year ended June 30, 2010. As the rules do not provide for annualizing his compensation for purposes of determining whether he is a highly or non-highly compensated participant, he was deemed a non-highly compensated participant for that year and the Company was required to make a contribution on his behalf.

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.

Executive Compensation Agreements

None of our named executive officers have a current employment agreement with us.

On October 9, 2012, our board of directors approved a Retention Policy for officers of the Company (the "Policy"). Pursuant to the terms and provisions of the Policy, in the event that an officer of the Company is terminated or resigns for good reason (as such term is defined in the Policy) in connection with a change of control transaction (as such term is defined in the Policy), such officer will be entitled to receive the following (subject to the limitation discussed below):

(i) The involuntary termination benefits provided in the officer's employment agreement, if any, including unpaid compensation and benefits.

(ii) The full incentive bonus allocated to the officer for the calendar year in which termination occurs, as determined by the Board.

(iii) A multiple of the officer's annual base salary: (CEO=2x, CFO=1.5x, VP R&D=1.5x, VP Clinical=1.5x, other officers=1x);

(iv) Medical coverage with term equal to base salary continuation under the Company's group health insurance.

(v) Allowance for all vested options to be exercisable for the remainder of each such vested option's full remaining exercise period.

(vi) Immediate vesting of all unvested options granted to the officer.

Notwithstanding the foregoing, if the aggregate compensation set forth in clauses (i), (ii), (iii) and (iv) above to be paid to all officers exceeds 10% of the value of the transaction as determined by the parties (as reflected in a definitive agreement, including the fair market value of any publicly traded securities), or if not reflected in a definitive agreement, then as determined by a qualified, independent third party selected by the board of directors of the Company, then the board of directors shall have the discretion to reduce such compensation pro-rata to the extent necessary to consummate the change of control transaction.

The Policy also provides that our board of directors shall have discretion to grant a termination package in the event an officer is terminated by the board without cause (as such term is defined in the Policy) or resigns for good reason (as such term is defined in the Policy).

The Compensation Committee believes that the severance benefits under the Policy provide financial protection against the potential loss of employment in designated circumstances and will allow our executive officers to focus attention on changes that are in the best interests of the stockholders, without undue concern as to each officer's own financial situation. The Compensation Committee also believes the accelerated vesting of equity awards is justified because those awards are designed to serve as the primary vehicle for the executives to accumulate financial resources for retirement. Finally, given the time periods and risks involved in pharmaceutical development, the Compensation Committee believes that the extended exercise period is an appropriate way to provide the officers with an opportunity to realize financial gains from decisions made during his or her tenure as an officer. J. Richard advised the Compensation Committee that the Policy is within the competitive range of comparable executive officer severance packages at other companies in the comparator group.

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 three other highest paid executive officers, to the extent that such compensation exceeds $1 million per officer in any one 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 restricted stock units ("RSU's") that may be granted under our stock incentive plans 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 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 or more executive officers with the opportunity to earn incentive compensation, including cash bonus programs tied to our financial performance and RSU 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.

It is important to note that as of June 30, 2013, the Company had net operating loss carryforwards for federal income tax purposes. These loss carryforwards would defer the impact of any deductions that the Company might lose under Section 162(m) for one or more of those carryforward years.

For Fiscal 2013, none of our executive officer's compensation reached the $1 million limitation. The Committee will continue to evaluate such $1 million limitation in Fiscal 2014.

Summary Compensation Table

The following table sets forth information concerning compensation for services rendered in all capacities during the fiscal years ended June 30, 2013, June 30, 2012 and June 30, 2011 awarded to, earned by or paid to: (i) our Chief Executive Officer; (ii) our Chief Financial Officer; and (iii) each of our two other executive officers whose total compensation for Fiscal 2013 was in excess of $100,000, collectively referred to herein as the named executive officers. No other executive officers who would have otherwise been includable in such table on the basis of total compensation for Fiscal 2013 have been excluded by reason of their termination of employment or change in executive status during that year.

Name and Principal Position	Year (1)	Salary ($)(2)	Bonus ($)	Stock Awards ($) (3)	Option Awards ($) (4)	Non-Equity Incentive Plan Compensation ($)	Change in Pension Value and Nonqualified Deferred Compensation Earnings ($)	All Other Compensation ($) (5)	Total ($)
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
Leslie J. Browne, Ph.D.	2013	$273,860	-	-	$180,180	-	-	-	$454,040
(President and Chief	2012	$266,322	-	-	$151,515	-	-	$ 9,800	$427,637
Executive Officer)	2011	$250,468	-	-	$154,425	-	-	-	$404,893
Joel Brooks	2013	$178,045	-	-	$102,960	-	-	-	$281,005
(Chief Financial Officer,	2012	$172,682	-	-	$86,580	-	-	-	$259,262
Secretary and Treasurer)	2011	$165,976	-	$2,600	$90,525	-	-	-	$259,101
Richard Dondero	2013	$161,041	-	-	$102,960	-	-	-	$264,001
(Vice-President of	2012	$155,775	-	-	$86,580	-	-	-	$242,355
Research and Development)	2011	$148,827	-	-	$90,525	-	-	-	$239,352
John E. Thompson Ph.D.	2013	$67,500	-	-	$102,960	-	-	-	$170,460
(Executive Vice-President	2012	$67,500	-	-	$86,580	-	-	-	$154,080
and Chief Scientific Officer)	2011	$65,000	-	-	$90,525	-	-	-	$155,525

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

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

(3) The amounts shown are the grant date fair value of RSU's awarded to each named executive officer in each year. The fair values of the RSU's awarded were calculated based on the fair market value of the underlying shares of common stock on the respective grant dates in accordance with FASB ASC Topic 718 and were not adjusted to take into account any estimated forfeitures.

(4) The amounts shown are the grant date fair value of stock options granted to each named executive officer, in accordance with FASB ASC Topic 718 pursuant to the Black-Scholes pricing model. For a discussion of valuation assumptions used in the calculations, see Notes 2 and 10 of Notes to Consolidated Financial Statements included in Part II, Item 8 of our 2013 Form 10-K. The grant date fair values used to calculate such compensation costs were not adjusted to take into account any estimated forfeitures. In October 2012, the Committee determined that the performance metrics for the 2012 grants had not been fully met. Therefore, a percentage of the options granted in Fiscal 2012 were forfeited as follows:

	Original Grant	Percentage Forfeited		Options Forfeited	Grant Date Fair Value
Leslie J. Browne, Ph.D.	8,190	55	%	4,505	$ 83,333
Joel Brooks	4,680	60	%	2,808	$ 51,948
Richard Dondero	4,680	60	%	2,808	$ 51,948
John E. Thompson, Ph.D.	4,680	30	%	1,404	$ 25,974

In August 2013, the Committee determined that the performance metrics for the Fiscal 2013 grants had not been fully met. Therefore, a percentage of the options granted in Fiscal 2013 were forfeited as follows:

	Original Grant	Percentage Forfeited		Options Forfeited	Grant Date Fair Value
Leslie J. Browne, Ph.D.	13,650	75	%	10,238	$ 135,135
Joel Brooks	7,800	75	%	5,850	$ 77,220
Richard Dondero	7,800	75	%	5,850	$ 77,220
John E. Thompson, Ph.D.	7,800	75	%	5,850	$ 77,220

The grant date fair values used to calculate such compensation costs were not adjusted to take into account the effect of the forfeitures.

(5) Represents company contribution to the 401(k) plan.

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, 2013.

		Estimated Future Payouts Under Non-Equity Incentive Plan Awards			Estimated Future Payouts Under Equity Incentive Plan Awards			All Other Stock Awards: Number of Shares of Stock or Units	All Other Option Awards: Number of Securities Under-lying Options	Exercise or Base Price of Option Awards	Grant Date Fair Value of Equity Awards
Name	Grant Date	Threshold ($)	Target ($)	Maximum ($)	Threshold (#)	Target (#)	Maximum (#)	(#)	(#)	($/Sh)	($)(1)
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	
Leslie J. Browne,	11/16/2012	-	-	-	-	13,650	13,650	-	-	$ 16.50	$ 180,180

Ph.D.											
John E. Thompson, Ph.D.	11/16/2012	-	-	-	-	7,800	7,800	-	-	$ 16.50	$ 102,960
Joel P. Brooks	11/16/2012	-	-	-	-	7,800	7,800	-	-	$ 16.50	$ 102,960
Richard Dondero	11/16/2012	-	-	-	-	7,800	7,800	-	-	$ 16.50	$ 102,960

(1) The amounts shown are the grant date fair value of stock options granted to each named executive officer, in accordance with FASB ASC Topic 718 pursuant to the Black Scholes pricing model. For a discussion of valuation assumptions used in the calculations, see Notes 2 and 10 of Notes to Consolidated Financial Statements included in Part II, Item 8 of our 2013 Form 10-K. The grant date fair values used to calculate such compensation costs were not adjusted to take into account any estimated forfeitures. In August 2013, the Committee determined that the performance metrics had not been fully met. Therefore, a percentage of the options granted in Fiscal 2013 were forfeited as follows:

	Original Grant	Percentage Forfeited		Options Forfeited	Grant Date Fair Value
Leslie J. Browne, Ph.D.	13,650	75	%	10,238	$ 135,135
Joel Brooks	7,800	75	%	5,850	$ 77,220
Richard Dondero	7,800	75	%	5,850	$ 77,220
John E. Thompson, Ph.D.	7,800	75	%	5,850	$ 77,220

The grant date fair values used to calculate such compensation costs were not adjusted to take into account the effect of the forfeitures.

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, 2013.

	Option Awards						Stock Awards			
Name	**Number of Securities Underlying Unexercised Options (#) Exercisable**	**Number of Securities Underlying Unexercised Options (#) Unexer-cisable**	**Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Options (#)**		**Option Exercise Price ($)**	**Option Expiration Date**	**Number of Shares or Units of Stock That Have Not Vested (#)**	**Market Value of Shares or Units of Stock That Have Not Vested ($)**	**Equity Incentive Plan Awards: Number of Unearned Shares, Units or Other Rights That Have Not Vested (#)**	**Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Other Rights That Have Not Vested ($)**
(a)	**(b)**	**(c)**	**(d)**		**(e)**	**(f)**	**(g)**	**(h)**	**(i)**	**(j)**
Leslie J. Browne, Ph.D.	-	-	13,650	(1)(5)	$ 16.50	11/16/2022	-	-	-	-
	1,229 (1)	-	2,457	(1)	$ 23.00	09/30/2021	-	-	-	-
	2,568 (1)	-	4,682	(1)	$ 26.00	11/17/2020	-	-	-	-
	2,222 (1)	-	7,778	(1)	$ 55.00	05/25/2020	-	-	-	-
Joel P. Brooks	-	-	7,800	(1)(5)	$ 16.50	11/16/2022	-	-	-	-
	527 (1)	-	1,346	(1)	$ 23.00	9/30/2021	-	-	-	-
	1,505 (1)	-	2,745	(1)	$ 26.00	11/17/2020	-	-	-	-
	3,000 (2)	-	-		$ 29.00	02/19/2020	-	-	-	-
	150 (3)	-	-		$ 315.00	12/16/2013	-	-	-	-
	200 (3)	-	-		$ 345.00	12/16/2014	-	-	-	-

	250	(3)	-	-		$ 140.00	12/14/2015	-	-	-	-
	250	(3)	-	-		$ 108.00	12/14/2016	-	-	-	-
Richard Dondero	-		-	7,800	(1)(5)	$ 16.50	11/16/2022	-	-	-	-
	527	(1)	-	1,346	(1)	$ 23.00	09/30/2021	-	-	-	-
	1,505	(1)	-	2,745	(1)	$ 26.00	11/17/2020	-	-	-	-
	3,000	(2)	-	-		$ 29.00	02/19/2020	-	-	-	-
	100	(3)	-	-		$ 345.00	12/16/2014	-	-	-	-
	250	(3)	-	-		$ 140.00	12/14/2015	-	-	-	-
	250	(3)	-	-		$ 108.00	12/14/2016	-	-	-	-
	719	(4)	-	-		$ 99.00	12/13/2017	-	-	-	-
	600	(4)	-	-		$ 99.00	12/13/2017	-	-	-	-
	760	(4)	-	-		$ 60.00	11/19/2018	-	-	-	-
John E. Thompson Ph.D.	-		-	7,800	(1)(5)	$ 16.50	11/16/2022	-	-	-	-
	1,580	(1)	-	1,697	(1)	$ 23.00	09/30/2021	-	-	-	-
	1,505	(1)	-	2,745	(1)	$ 26.00	11/17/2020	-	-	-	-
	200	(3)	-	-		$ 315.00	12/16/2013	-	-	-	-
	550	(3)	-	-		$ 345.00	12/16/2014	-	-	-	-
	200	(3)	-	-		$ 140.00	12/14/2015	-	-	-	-
	250	(3)	-	-		$ 108.00	12/14/2016	-	-	-	-
	527	(4)	-	-		$ 99.00	12/13/2017	-	-	-	-
	500	(4)	-	-		$ 99.00	12/13/2017	-	-	-	-
	480	(4)	-	-		$ 60.00	11/19/2018	-	-	-	-

(1) One-quarter of such options will vest on the first anniversary of the date of grant with one-thirty-sixth of the balance vesting each month thereafter.

(2) 600 of such options vested on the date of grant and an additional 600 of such options vested on each of June 30, 2010 and June 30, 2011. An additional 600 of such options will vest on each of June 30, 2012 and June 30, 2013.

(3) One-third of such options vested on the date of grant and an additional one-third of such options vested on each of the first and second anniversary of the date of grant.

(4) Such amounts consist of performance based options which vest upon the achievement of certain milestones under our long-term incentive plan and continued service.

(5) Such amounts consist of performance based options which vest upon the achievement of certain milestones under our stock incentive plan and continued service. In August 2013, the Committee determined that the performance metrics had not been fully met. Therefore, a percentage of the options granted in Fiscal 2013 were forfeited as follows:

	Original Grant	Percentage Forfeited		Options Forfeited
Leslie J. Browne, Ph.D.	13,650	75	%	10,238
Joel Brooks	7,800	75	%	5,850
Richard Dondero	7,800	75	%	5,850
John E. Thompson, Ph.D.	7,800	75	%	5,850

The equity awards outstanding as of June 30, 2013 were not adjusted to take into account the effect of the forfeitures.

Option Exercises and Stock Vested

There were no option exercises and stock vested activity for our named executive officers during the year ended June 30, 2013.

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

None of our named executive officers have a current employment agreement with us.

Executive Severance. On October 9, 2012, our board of directors approved a Retention Policy for officers of the Company (the "Policy"). Pursuant to the terms and provisions of the Policy, in the event that an officer of the Company is terminated or resigns for good reason (as such term is defined in the Policy) in connection with a change of control transaction (as such term is defined in the Policy), such officer will be entitled to receive the following (subject to the limitation discussed below):

(i) The involuntary termination benefits provided in the officer's employment agreement, if any, including unpaid compensation and benefits.

(ii) The full incentive bonus allocated to the officer for the calendar year in which termination occurs, as determined by the Board.

(iii) A multiple of the officer's annual base salary: (CEO=2x, CFO=1.5x, VP R&D=1.5x, VP Clinical=1.5x, other officers=1x);

(iv) Medical coverage with term equal to base salary continuation under the Company's group health insurance.

(v) Allowance for all vested options to be exercisable for the remainder of each such vested option's full remaining exercise period.

(vi) Immediate vesting of all unvested options granted to the officer.

Notwithstanding the foregoing, if the aggregate compensation set forth in clauses (i), (ii), (iii) and (iv) above to be paid to all officers exceeds 10% of the value of the transaction as determined by the parties (as reflected in a definitive agreement, including the fair market value of any publicly traded securities), or if not reflected in a definitive agreement, then as determined by a qualified, independent third party selected by the board of directors of the Company, then the board of directors shall have the discretion to reduce such compensation pro-rata to the extent necessary to consummate the change of control transaction.

The Policy also provides that our board of directors shall have discretion to grant a termination package in the event an officer is terminated by the board without cause (as such term is defined in the Policy) or resigns for good reason (as such term is defined in the Policy).

Compensation of Directors

We use a combination of cash and equity-based compensation to attract and retain qualified individuals to serve on our board. Dr. Thompson has received compensation for providing research and development management services to us and does not receive any additional compensation for his services as a board member. See “Certain Relationships and Related Transactions” which sets forth the details of the compensation for Dr. Thompson.

Equity Grants Fiscal 2013:

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.

Effective November 16, 2012, the Committee granted the following options to the non-employee directors for their service during Fiscal 2012:

Director	Total # of Options Granted	
Harlan W. Waksal, M.D.	4,200	(1)
Rudolf Stalder	2,100	(1)
Christopher Forbes	2,520	(1)
Thomas C. Quick	2,100	(1)
John N. Braca	2,940	(1)
David Rector	2,940	(1)
Jack Van Hulst	2,100	(1)
Warren J. Isabelle	2,100	(1)

(1) Such grants vest as follows: 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, subject to continued board service through the vesting date.

In addition, certain board members received additional equity awards in lieu of cash compensation as more fully described below.

Cash Compensation

Commencing in Fiscal 2009, after review and consultation with the Compensation Committee's compensation consultant, we implemented a new cash compensation plan for our directors pursuant to which we pay each non-employee director cash compensation as consideration for their service on our board for each fiscal year 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 (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 to receive, in lieu of such cash payments, either (i) restricted stock units, or RSU's, covering that number of shares having a fair market value on the grant date equal to such cash award or (ii) options in an amount equal to twice the number of RSU's that would have been received. Such election to receive (y) cash or (z) equity in the form of RSU's or options applies for the entire year. In Fiscal 2013, Messrs. Braca and Rector, elected to receive their retainer fees in cash and their meeting fees in options, and Mr. Isabelle, elected to receive his fees in cash. All other directors elected to receive options in lieu of retainer and meeting fees. The options for each quarter are granted effective two (2) days following the filing of our quarterly reports on Form 10-Q for that quarter and are fully vested as of the grant date. The exercise price of the options will be the closing price on the grant date.

In August 2013, the compensation committee decided to keep director compensation for Fiscal 2014 consistent with the compensation program for 2013. The directors have all elected to receive options in lieu of cash for Fiscal 2014, except for Mr. Isabelle who elected to receive his fees in cash. 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.

Director Compensation

The table below shows the compensation paid or awarded to our non-employee directors (other than Dr. Thompson) during the fiscal year ended June 30, 2013.

Name	Fees Earned or Paid in Cash ($)	Stock Awards ($)	Option Awards (1) ($)	Non-Equity Incentive Plan Compensation ($)	Change in Pension Value and Nonqualified Deferred Compensation Earnings	All Other Compensation ($)	Total ($)
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Rudolf Stalder	—	—	$ 63,953	—	—	—	$ 63,953
Christopher Forbes	—	—	$ 39,232	—	—	—	$ 39,232
Thomas C. Quick	—	—	$ 51,559	—	—	—	$ 51,559
John N. Braca	$ 14,500	—	$ 56,546	—	—	—	$ 71,046
David Rector	$ 14,500	—	$ 61,390	—	—	—	$ 75,890
Jack Van Hulst	—	—	$ 54,448	—	—	—	$ 54,448
Harlan W. Waksal, M.D.	—	—	$ 95,960	—	—	—	$ 95,960
Warren J. Isabelle	$ 24,250	—	$ 26,670	—	—	—	$ 50,920

(1) Represents the aggregate grant date fair value for stock options granted in Fiscal 2013 as described below calculated in accordance with the FASB ASC Topic 718 and were not adjusted to take into account any estimated forfeitures. For information regarding assumptions underlying the FASB ASC Topic 718 valuation of equity awards, see Notes 2 and 10 of the Notes to the Consolidated Financial Statements in our Annual Report on Form 10-K for the fiscal year ended June 30, 2013.

As described above, our non-employee directors (other than Mr. Isabelle and Messrs. Braca and Rector (only with respect to their retainer fees)) have elected to receive option grants in lieu of their cash compensation. Accordingly, on November 16, 2012, February 16, 2013, and May 17, 2013, each of these non-employee directors received options to purchase shares of our common stock pursuant to the provisions of the 2008 Stock Plan. Additionally, on November 16, 2012, the non-employee directors were granted additional options for their service during Fiscal 2012. The options have an exercise price of $16.50 per share, $16.50 per share, $13.50 per share and $4.30 per share, respectively, the fair market value of the common stock on the grant dates (except for the grants to Christopher Forbes, which have exercise prices of $18.00 per share, $18.00 per share, $15.00 per share and $4.30 per share, respectively (110% of the fair market value of the common stock on the grant date).

The following table sets forth information relating to options granted to the directors during Fiscal 2013.

Director	Option Grant Date	Exercise Price	# of Shares		Grant Date Fair Value
Rudolf Stalder	05/17/2013	$ 4.30	2,965		$ 9,192
	02/16/2013	$ 13.50	1,193		$ 11,455
	11/16/2012	$ 16.50	1,364		$ 16,636
	11/16/2012	$ 16.50	2,100	*	$ 26,670
Christopher Forbes	05/17/2013	$ 4.30	2,384		$ 7,390
	02/16/2013	$ 15.00	890		$ 4,362
	11/16/2012	$ 18.00	1,242		$ 8,076
	11/16/2012	$ 18.00	2,520	*	$ 19,404
Thomas C. Quick	05/17/2013	$ 4.30	1,628		$ 5,046
	02/16/2013	$ 13.50	758		$ 7,273
	11/16/2012	$ 16.50	1,030		$ 12,570
	11/16/2012	$ 16.50	2,100	*	$ 26,670
John N. Braca	05/17/2013	$ 4.30	1,395		$ 4,326
	02/16/2013	$ 13.50	568		$ 5,455
	11/16/2012	$ 16.50	773		$ 9,427
	11/16/2012	$ 16.50	2,940	*	$ 37,338
David Rector	05/17/2013	$ 4.30	2,442		$ 7,570
	02/16/2013	$ 13.50	966		$ 9,273
	11/16/2012	$ 16.50	591		$ 7,209
	11/16/2012	$ 16.50	2,940	*	$ 37,338
Jack Van Hulst	05/17/2013	$ 4.30	2,558		$ 7,930
	02/16/2013	$ 13.50	720		$ 6,909
	11/16/2012	$ 16.50	1,061		$ 12,939
	11/16/2012	$ 16.50	2,100	*	$ 26,670
Harlan W. Waksal, M.D.	05/17/2013	$ 4.30	2,733		$ 8,471
	02/16/2013	$ 13.50	1,458		$ 14,000
	11/16/2012	$ 16.50	1,652		$ 20,149
	11/16/2012	$ 16.50	4,200	*	$ 53,340
Warren J. Isabelle	11/16/2012	$ 16.50	2,100	*	$ 26,670

(*) Represents additional options granted for service during Fiscal 2013, not for cash compensation for Fiscal 2013.

The following table shows the total number of shares of our common stock subject to option awards (vested and unvested) held by each non-employee director as of June 30, 2013:

Director	Total # of Options Outstanding
Rudolf Stalder	22,149
Christopher Forbes	16,842
Thomas C. Quick	13,728
John N. Braca	16,212
David Rector	17,098
Jack Van Hulst	16,118
Harlan W. Waksal, M.D.	27,066
Warren J. Isabelle	4,900

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 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.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Contractual Relationships

Service Agreements

Christopher Forbes, our director, is Vice Chairman of Forbes Media LLC, Vice Chairman of Forbes Family Holdings, Inc. and Vice President of Forbes Management Co., Inc. Mr. Forbes was also Vice Chairman of Forbes Inc. Forbes, Inc. and Forbes Management Company, Inc. have 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 Fiscal 2012, we granted to Forbes Management Company, Inc. an option to purchase shares of our common stock. The awards to the Forbes entities are described in the table below.

Date of Grant	# of Option Shares	Exercise Price	Value of Services on Date of Grant	# of Option Shares Vested
September 30, 2011	100	$ 23.00	$ 1,780	67

The exercise price of the option granted to Forbes Management Company, Inc. represented the fair market value of our common stock on the respective dates of grant. *Research and Development Agreements*

Effective September 1, 1998, we entered into a three-year research and development agreement, which has been extended for successive periods through August 31, 2013, 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 0.9% 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, 2013 and 2012 aggregated US $628,995 and US $573,368, respectively. Effective September 1, 2012, we, Dr. Thompson and the University extended the agreement for an additional one-year period through August 31, 2013 in the amount of CAN $611,500. Effective September 1, 2013, we, Dr. Thompson and the University extended the agreement for an additional one-year period through August 31, 2014 in the amount of CAN $371,400. As of August 31, 2013, such amount represented approximately US $371,400.

Consulting Agreement

Effective May 1, 1999, we entered into a three-year consulting agreement, which has been extended for successive periods through June 30, 2014, 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, 2007 and 2011, the agreement was amended to increase the monthly payments from $3,000 to $5,000, from $5,000 to $5,200, from $5,200 to $5,417, and from $5,417 to $5,625, respectively.

Debt / Equity Transactions

Line of Credit

On February 17, 2010, we entered into a credit agreement with JMP Securities LLC. The agreement provides us with, subject to certain restrictions, including the existence of suitable collateral, up to a $3.0 million line of credit upon which we may draw at any time (the “Line of Credit”). Any draws upon the Line of Credit accrue at a monthly interest rate of the broker rate in effect at the interest date (which was 3.75% at June 30, 2013), plus 2.0%. There are no other conditions or fees associated with the Line of Credit. The Line of Credit is not secured by any of our assets, but it is secured by certain assets of a member of our board of directors, Harlan W. Waksal, M.D., which security interest is currently held by JMP Securities. The balance outstanding as of June 30, 2013 was $2,187,082.

January 2012 Transaction with Christopher Forbes and Harlan W. Waksal, M.D.

On January 6, 2012, in connection with a public placement of our common stock, we entered into securities purchase agreements with, among others, certain of our directors, Christopher Forbes and Harlan Waksal, pursuant to which such directors purchased an aggregate of 11,538 shares of our common stock at a purchase price of $26.00 per share, for an approximate aggregate value of $300,000.

Conversion of Preferred Stock

On August 8, 2012, in connection with a warrant exchange, certain of our directors, Christopher Forbes and Harlan Waksal, converted their 1,200 shares of Series B preferred stock into 46,154 shares of our common stock, as determined pursuant to the terms set forth in the Certificate of Designation of Preferences, Rights and Limitations of 10% Series B Convertible Preferred Stock. The aggregate value of such shares of common stock was approximately $1,292,308 on the date of conversion based upon the closing price of $28.00 per share on August 8, 2012. Such conversions were not made pursuant to warrant exchange agreements and therefore such directors did not receive any additional Common Stock. Following this conversion, no shares of Series B Preferred Stock remain outstanding.

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.

PRINCIPAL STOCKHOLDERS

The following table sets forth, as of November 26, 2013, the beneficial ownership of the 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, and our named executive officers; 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)]	
(i) Certain Beneficial Owners:				
Paul E. Klaver 134 Columbia Street W Unit 18 Waterloo, Ontario N2L 3K8	257,831	(4)	8.1	%
Michael Brauser 4400 Biscayne Blvd., Suite 850 Miami, FL 33137	180,000	(5)	5.7	%
(ii) Directors (which includes all nominees), Named Executive Officers and Chief Executive Officer:				
Harlan W. Waksal, M.D.	63,253	(6)	2.0	%
John N. Braca	19,417	(7)	*	
Jack Van Hulst	17,759	(8)	*	
Christopher Forbes	178,181	(9)	5.6	%
Warren J. Isabelle	7,283	(10)	*	
Thomas C. Quick	23,143	(11)	*	
David Rector	22,311	(12)	*	
Rudolf Stalder	32,835	(13)	1.0%	
John E. Thompson, Ph.D.	14,388	(14)	*	
Joel P. Brooks	9,747	(15)	*	
Richard Dondero	11,217	(16)	*	
Leslie J. Browne, Ph.D.	19,450	(17)	*	
(iii) All Directors and current executive officers as a group (12 persons)	418,985	(18)	12.4	%

*Less than 1%

(1) Unless otherwise provided, all addresses should be care of Senesco Technologies, Inc., 721 Route 202/206, Suite 130, Bridgewater, New Jersey 08807.

(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 3,157,375, shares of our common stock outstanding as of November 26, 2013, 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 November 26, 2013.

(4) Represents 60,000 shares of common stock held by Urantia Outreach, of which Mr. Klaver is the President. Represents 73,600 shares of common stock, 44,231 shares of common stock issuable pursuant to presently exercisable warrants and 80,000 shares of common stock issuable pursuant to the conversion of convertible preferred stock at a conversion rate of $0.025 held by Mr. Klaver.

(5) Includes 20,000 shares of common stock held by Birchtree Capital, LLC (“Birchtree”). Michael Brauser is the Manager of Birchtree and in such capacity has voting and dispositve power over the shares held by Birchtree.

(6) Includes 35,061 shares of common stock issuable pursuant to presently exercisable warrants and options or options which will become exercisable within sixty (60) days after November 26, 2013. Excludes 3,692 shares of common stock issuable pursuant to options which become exercisable after sixty (60) days from November 26, 2013.

(7) Includes 18,037 shares of common stock issuable pursuant to presently exercisable warrants and options or options which will become exercisable within sixty (60) days after November 26, 2013. Excludes 1,855 shares of common stock issuable pursuant to options which become exercisable after sixty (60) days from November 26, 2013.

(8) Includes 17,358 shares of common stock issuable pursuant to presently exercisable warrants and options or options which will become exercisable within sixty (60) days after November 26, 2013. Excludes 1,429 shares of common stock issuable pursuant to options which become exercisable after sixty (60) days from November 26, 2013.

(9) Includes 50,608 shares of common stock issuable pursuant to presently exercisable warrants and options or options which will become exercisable within sixty (60) days after November 26, 2013. Excludes 1,590 shares of common stock issuable pursuant to options which become exercisable after sixty (60) days from November 26, 2013.

(10) Includes 6,245 shares of common stock issuable pursuant to presently exercisable options or options which will become exercisable within sixty (60) days after November 26, 2013. Excludes 1,325 shares of common stock issuable pursuant to options which become exercisable after sixty (60) days from November 26, 2013.

(11) Represents 6,752 shares of common stock and 141 shares of common stock issuable pursuant to warrants issued to Thomas C. Quick Charitable Foundation, of which Mr. Quick is the sole trustee. Represents 1,397 shares of common stock and 14,853 shares of common stock issuable pursuant to presently exercisable options or options which will become exercisable within sixty (60) days after November 26, 2013 issued to Thomas C. Quick. Excludes 1,325 shares of common stock issuable pursuant to options issued to Thomas C. Quick which become exercisable after sixty (60) days from November 26, 2013.

(12) Includes 18,783 shares of common stock issuable pursuant to presently exercisable warrants and options or options which will become exercisable within sixty (60) days after November 26, 2013. Excludes 1,855 shares of common stock issuable pursuant to options which become exercisable after sixty (60) days from November 26, 2013.

(13)

Includes 22,161 shares of common stock issuable pursuant to presently exercisable warrants and options or options which will become exercisable within sixty (60) days after November 26, 2013. Excludes 2,575 shares of common issuable pursuant to options which will become exercisable after sixty (60) days from November 26, 2013.

(14) Represents 5,720 shares of common stock held by 2091794 Ontario Ltd., of which Dr. Thompson is the sole owner, and 8,668 shares of common stock issuable pursuant to presently exercisable options or options which will become exercisable within sixty (60) days after November 26, 2013 issued to John E. Thompson, Ph.D. Excludes 13,164 shares of common issuable pursuant to options which will become exercisable after sixty (60) days from November 26, 2013.

(15) Includes 9,238 shares of common stock issuable pursuant to presently exercisable options or options which will become exercisable within sixty (60) days after November 26, 2013. Excludes 12,384 shares of common stock issuable pursuant to options which will become exercisable after sixty (60) days from November 26, 2013.

(16) Includes 11,217 shares of common stock issuable pursuant to presently exercisable options or options which will become exercisable within sixty (60) days after November 26, 2013. Excludes 12,384 shares of common stock issuable pursuant to options which will become exercisable after sixty (60) days from November 26, 2013.

(17) Includes 18,960 shares of common stock issuable pursuant to presently exercisable options or options which will become exercisable within sixty (60) days after November 26, 2013. Excludes 22,618 shares of common stock issuable pursuant to options which will become exercisable after sixty (60) days from November 26, 2013.

(18) See Notes 5 through 17.

DESCRIPTION OF COMMON STOCK

General

The following description does not purport to be complete and is subject in all respects to applicable Delaware law and to the provisions of the Senesco Amended and Restated Certificate of Incorporation and bylaws, as amended to the date of this prospectus. Our stockholders are urged to read the Amended and Restated Certificate of Incorporation and bylaws for a more complete description of these provisions and other information that may be important to our stockholders.

Capital Stock

Our authorized capital stock consists of 505,000,000 shares, par value $0.01 per share, which includes 500,000,000 shares of authorized common stock, par value $0.01 per share and 5,000,000 shares of authorized preferred stock, par value $0.01 per share. The authorized capital stock is divisible into the classes and series, has the designation, voting rights, and other rights and preferences and is subject to the restrictions that our Board of Directors may from time to time establish. The holders of our common shares: (1) have equal ratable rights to dividends from funds legally available therefor, when, as and if declared by our Board of Directors; (2) are entitled to share ratably in all assets available for distribution to holders our common shares upon liquidation, dissolution or winding up of its affairs; (3) do not have preemptive, subscription or conversion rights and there are no redemption or sinking fund provisions applicable thereto; and (4) are entitled to one vote per share on all matters which stockholders may vote on at all meetings of stockholders.

All shares of our common shares now outstanding are fully paid and nonassessable. The holders of our common shares do not have cumulative voting rights, which means that the holders of more than 50% of the outstanding shares voting for the election of directors can elect all of our directors to be elected, if they so choose. In such event, the holders of the remaining shares will not be able to elect any directors.

After consummation of this offering, we expect to have common shares outstanding.

American Stock Transfer and Trust is the transfer agent for our common shares.

Delaware Law and Certain Certificate of Incorporation and By-Law Provisions

The provisions of Delaware law and of our certificate of incorporation and by-laws discussed below could discourage or make it more difficult to accomplish a proxy contest or other change in our management or the acquisition of control by a holder of a substantial amount of our voting stock. It is possible that these provisions could make it more difficult to accomplish, or could deter, transactions that stockholders may otherwise consider to be in their best interests or the best interests of Senesco.

- *Business Combinations*. We are subject to the provisions of Section 203 of the General Corporation Law of Delaware. Section 203 prohibits a publicly held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner. A "business combination" includes mergers, asset sales and other transactions resulting in a financial benefit to the interested stockholder. Subject to specified exceptions, an "interested stockholder" is a person who, together with affiliates and associates, owns, or within three years did own, 15% or more of the corporation's voting stock.

Limitation of Liability; Indemnification. Our certificate of incorporation contains provisions permitted under the General Corporation Law of Delaware relating to the liability of directors. The provisions eliminate, to the extent legally permissible, a director's liability for monetary damages for a breach of fiduciary duty, except in circumstances involving wrongful acts, such as the breach of a director's duty of loyalty or acts or omissions that involve intentional misconduct or a knowing violation of law. The limitation of liability described above does not alter the liability of

- our directors and officers under federal securities laws. Furthermore, our certificate of incorporation contains provisions to indemnify our directors and officers to the fullest extent permitted by the General Corporation Law of Delaware. These provisions do not limit or eliminate our right or the right of any stockholder of ours to seek non-monetary relief, such as an injunction or rescission in the event of a breach by a director or an officer of his duty of care to us. We believe that these provisions assist us in attracting and retaining qualified individuals to serve as directors.

Trading

Our common shares currently trade on the OTCQB Marketplace under the symbol “SNTI”.

Transfer Agent and Registrar

The transfer agent and registrar for our common shares is American Stock Transfer and Trust.

PLAN OF DISTRIBUTION

The Company will solicit offers to purchase the shares of common stock in this offering. No placement agent nor any broker-dealer or FINRA member has been retained for this offering.

In connection with the Company’s selling efforts in the offering, the Company will not register as a broker-dealer pursuant to Section 15 of the Exchange Act, but rather will rely upon the “safe harbor” provisions of SEC Rule 3a4-1, promulgated under the Exchange Act. Generally speaking, Rule 3a4-1 provides an exemption from the broker-dealer registration requirements of the Exchange Act for persons associated with an issuer that participate in an offering of the issuer’ securities. Each of our officers and directors is not subject to a statutory disqualification, as that term is defined in Section 3(a)(39) of the Exchange Act. Each of our officers and directors will not be compensated in connection with his participation in the offering by payment of commissions or other remuneration based either directly or indirectly on transactions in our securities. Each of our officers and directors is not now, nor have they been within the past 12 months, a broker or dealer, and they have not been, within the past 12 months, an associated person of a broker or dealer. At the end of the offering, each of our officers and directors will continue to primarily perform substantial duties for the Company or on its behalf otherwise than in connection with transactions in securities. Each of our officers and directors will not and has not participated in selling an offering of securities for any issuer more than once every 12 months other than in reliance on Exchange Act Rule 3a4-1(a)(4)(i) or (iii).

In order to comply with the applicable securities laws of certain states, the securities will be offered or sold in those states only if they have been registered or qualified for sale, exempted from such registration or if a qualification requirement is available and with which the Company has complied. In addition, and without limiting the foregoing, the Company will be subject to applicable provisions, rules and regulations under the Exchange Act with regarding to security transactions during the period of time when this Registration Statement is effective.

We are subject to Regulation M of the Exchange Act. Regulation M governs activities of underwriters, issuers, selling security holders and others in connection with offerings of securities. Regulation M prohibits distribution participants and their affiliated purchasers from bidding for, purchasing or attempting to induce any person to bid for or purchase the securities being distributed.

The Company proposes to arrange for the sale of the shares it is offering pursuant to this registration statement to one or more investors through a securities purchase agreement directly between the investors and the Company. All of the shares will be sold at the same price and, we expect, at a single closing. We established the price following negotiations with prospective investors and with reference to the prevailing market price of our common stock, recent trends in such price and other factors. It is possible that not all of the shares we are offering pursuant to this registration statement will be sold at the closing, in which case our net proceeds would be reduced. We expect that the sale of the shares will be completed on the date indicated on the cover page of this prospectus.

In connection with this offering, the Company may distribute this registration statement and the accompanying prospectus electronically.

The estimated offering expenses payable by us are approximately $[_____], which includes legal and printing costs and various other fees associated with registering the common stock. After deducting our estimated offering expenses, we expect the net proceeds from this offering to be approximately .

LEGAL MATTERS

Certain legal matters in connection with the securities offered hereby will be passed upon for us by Morgan, Lewis & Bockius LLP, Princeton, New Jersey.

EXPERTS

The consolidated financial statements appearing in this Prospectus and Registration Statement have been audited by McGladrey LLP, an independent registered public accounting firm, as stated in their report appearing elsewhere herein, which report expresses an unqualified opinion and includes an explanatory paragraph relating to the Company's ability to continue as a going concern and are included in reliance upon such report and upon the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement under the Securities Act of 1933 that registers the distribution of the common shares offered under this prospectus. The registration statement contains additional relevant information about us and the common shares. The rules and regulations of the SEC allow us to omit from this prospectus certain information included in the registration statement. Statements contained in this prospectus as to the contents of any documents that we have filed as an exhibit to the registration statement are qualified in their entirety by reference to the exhibits for a complete statement of their terms and conditions.

In addition, we file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy this information and the registration statement at the SEC public reference room located at 100 F Street, N.E., Washington D.C. 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. Any information we file with the SEC is also available on the SEC's website at http://www.sec.gov. We also maintain a website at http://www.senesco.com/sec.php through which you can access our SEC filings. We have included our website address in this prospectus solely as an inactive textual reference. The information contained on, or that can be accessed through, our website is not part of this prospectus.

SENESCO TECHNOLOGIES, INC.

INDEX TO FINANCIAL STATEMENTS

Audited Consolidated Financial Statements

Report of Independent Registered Public Accounting Firm	F-2
Consolidated Balance Sheets as of June 30, 2013 and 2012	F-3
Consolidated Statements of Operations for the Fiscal Years Ended June 30, 2013, 2012, 2011 and From Inception on July 1, 1998 through June 30, 2013	F-4
Consolidated Statements of Stockholders' Equity From Inception on July 1, 1998 through June 30, 2013	F-5
Consolidated Statements of Cash Flows for the Fiscal Years Ended June, 2013, 2012, 2011 and From Inception on July 1, 1998 through June 30, 2013	F-12
Notes to Consolidated Financial Statements	F-13

Unaudited Condensed Consolidated Financial Statements

Condensed Consolidated Balance Sheets as of September 30, 2013 and June 30, 2013	F-35
Condensed Consolidated Statements of Operations and Comprehensive Loss for the Three Months Ended September 30, 2013 and 2012, and From Inception on July 1, 1998 through September 30, 2013	F-36
Condensed Consolidated Statement of Stockholders' Equity for the Three Months Ended September 30, 2013	F-37
Condensed Consolidated Statements of Cash Flows for the Three Months Ended September 30, 2013, and 2012, and From Inception on July 1, 1998 through September 30, 2013	F-38
Notes to Condensed Consolidated Financial Statements	F-39

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders

Senesco Technologies, Inc.

We have audited the accompanying consolidated balance sheets of Senesco Technologies, Inc. and Subsidiary (a development stage company) as of June 30, 2013 and June 30, 2012, and the related consolidated statements of operations, stockholders' equity and cash flows for each of the three years in the period ended June 30, 2013 and cumulative amounts from July 1, 1998 (inception) to June 30, 2013. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company’s internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Senesco Technologies, Inc. and Subsidiary as of June 30, 2013 and June 30, 2012, and the results of their operations and their cash flows for each of the three years in the period ended June 30, 2013 and cumulative amounts from July 1, 1998 (inception) to June 30, 2013, in conformity with U.S. generally accepted accounting principles.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the financial statements, the Company has suffered recurring losses from operations, generated minimal revenues, and continues to incur significant expenses that exceed revenue streams. This raises substantial doubt about the Company’s ability to continue as a going concern. Management’s plans in regard to these matters are also described in Note 1. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ McGladrey LLP

New York, New York

September 11, 2013, except for Note 16, as to which the date is September 30, 2013

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

CONSOLIDATED BALANCE SHEETS

	June 30, 2013	June 30, 2012
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 1,602,294	$ 2,001,325
Prepaid research supplies and expenses	1,919,220	1,548,524
Total Current Assets	3,521,514	3,549,849
Equipment, furniture and fixtures, net	4,555	5,857
Intangible assets, net	3,566,497	3,393,992
Security deposit	5,171	5,171
TOTAL ASSETS	$ 7,097,737	$ 6,954,869
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accounts payable	$ 637,320	$ 594,514
Accrued expenses	387,540	369,695
Line of credit	2,187,082	2,199,108
Total Current Liabilities	3,211,942	3,163,317
Warrant liabilities	-	238,796
Other liabilities	99,728	99,728
TOTAL LIABILITIES	3,311,670	3,501,841
COMMITMENTS (Note 12)		
STOCKHOLDERS' EQUITY:		
Convertible preferred stock, $0.01 par value, authorized 5,000,000 shares		
Series A 10,297 shares issued and 800 and 3,379 shares outstanding, respectively (liquidation preference of $820,000 and $3,463,475 at June 30, 2013 and June 30, 2012, respectively)	8	34
Series B 1,200 shares issued and 0 and 1,200 outstanding, respectively (liquidation preference of $0 and $1,230,000 at June 30, 2013 and June 30, 2012, respectively)	-	12
Common stock, $0.01 par value, authorized 500,000,000 shares, issued and outstanding 2,272,062 and 941,125, respectively	22,271	9,411
Capital in excess of par	78,189,173	70,883,866
Deficit accumulated during the development stage	(74,425,835)	(67,440,295)

Total Stockholders' Equity	3,786,067	3,453,028
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 7,097,737	$ 6,954,869

See Notes to Consolidated Financial Statements

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS

	Fiscal Year Ended June 30,			Cumulative Amounts from
	2013	2012	2011	Inception
Licensing Revenue	$ -	$ 200,000	$ -	$ 1,790,000
Operating expenses:				
General and administrative	2,499,624	2,724,144	2,610,222	34,114,301
Research and development	2,086,666	2,566,247	3,720,394	23,322,271
Write-off of patents abandoned	64,210	321,137	1,588,087	1,973,434
Total operating expenses	4,650,500	5,611,528	7,918,703	59,410,006
Loss from operations	(4,650,500)	(5,411,528)	(7,918,703)	(57,620,006)
Other non-operating income (expense)				
Grant income	-	-	244,479	244,479
Change in fair value of warrant liability	371,591	472,463	609,239	8,701,721
Sale of state income tax loss – net	-	-	-	586,442
Other noncash (expense) income, net	-	-	(115,869)	205,390
Loss on settlement of warrant liabilities	(1,724,546)	-	-	(1,724,546)
Loss on extinguishment of debt	-	-	-	(361,877)
Amortization of debt discount and financing costs	-	-	-	(11,227,870)
Interest expense – convertible notes	-	-	-	(2,027,930)
Interest (expense) income - net	(119,087)	(127,068)	(88,122)	164,901
Net loss	(6,122,542)	(5,066,133)	(7,268,976)	(63,059,296)
Preferred dividends	(862,998)	(1,625,727)	(2,638,300)	(11,366,539)
Loss applicable to common shares	(6,985,540)	(6,691,860)	(9,907,276)	(74,425,835)

Other comprehensive loss	-	-	-	-
Comprehensive loss	$ (6,985,540)	$ (6,691,860)	$ (9,907,276)	$ (74,425,835)
Basic and diluted net loss per common share	$ (5.11)	$ (7.81)	$ (14.29)	
Basic and diluted weighted-average number of common shares outstanding	1,366,384	857,033	693,324	

See Notes to Consolidated Financial Statements

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY

Period from July 1, 1998 (date of inception) to June 30, 2013

	Preferred Stock		Common Stock		Capital in Excess	Deficit Accumulated During the Development	Stockholders' Equity
	Shares	Amount	Shares	Amount	of Par Value	Stage	(Deficiency)
Common stock outstanding	-	$ -	20,005	$ 200	$ (200)	$ -	$ -
Contribution of capital	-	-	-	-	85,179	-	85,179
Issuance of common stock in reverse merger on January 22, 1999 at $1.00 per share	-	-	34,000	340	(340)	-	-
Issuance of common stock for cash on May 21, 1999 at $263.437 per share	-	-	7,592	76	1,995,906	-	1,995,982
Issuance of common stock for placement fees on May 21, 1999 at $1.00 per share	-	-	531	5	(5)	-	-
Net loss	-	-	-	-	-	(1,168,995)	(1,168,995)
Balance at June 30, 1999	-	-	62,128	621	2,080,540	(1,168,995)	912,166
Issuance of common stock for cash on January 26, 2000 at $286.7647 per share	-	-	174	2	49,998	-	50,000

Issuance of common stock for cash on January 31, 2000 at $287.875 per share	-	-	347	3	99,997	-	100,000
Issuance of common stock for cash on February 4, 2000 at $292.4582 per share	-	-	852	9	249,991	-	250,000
Issuance of common stock for cash on March 15, 2000 at $252.7875 per share	-	-	514	5	129,995	-	130,000
Issuance of common stock for cash on June 22, 2000 at $150.00 per share	-	-	14,717	147	2,207,404	-	2,207,551
Commissions, legal and bank fees associated with issuances for the year ended June 30, 2000	-	-	-	-	(260,595)	-	(260,595)
Fair market value of options and warrants vested during the year ended June 30, 2000	-	-	-	-	1,475,927	-	1,475,927
Net loss	-	-	-	-	-	(3,346,491)	(3,346,491)
Balance at June 30, 2000	-	-	78,732	787	6,033,257	(4,515,486)	1,518,558
Fair market value of options and warrants vested during the year ended June 30, 2001	-	-	-	-	308,619	-	308,619
Net loss	-	-	-	-	-	(2,033,890)	(2,033,890)
Balance at June 30, 2001	-	-	78,732	787	6,341,876	(6,549,376)	(206,713)

continued

See Notes to Consolidated Financial Statements

F-5

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY

Period from July 1, 1998 (date of inception) to June 30, 2013

	Preferred Stock		Common Stock		Capital in Excess	Deficit Accumulated During the Development
	Shares	Amount	Shares	Amount	of Par Value	Stage
Issuance of common stock and warrants for cash from November 30, 2001 through April 17, 2002 at $175.00 per unit	-	$ -	37,014	$ 370	$ 6,477,130	$ -
Issuance of common stock and warrants associated with bridge loan conversion on December 3, 2001	-	-	3,053	31	534,285	-
Commissions, legal and bank fees associated with issuances during the year ended June 30, 2002	-	-	-	-	(846,444)	-
Fair market value of options and warrants vested during the year ended June 30, 2002	-	-	-	-	1,848,726	-
Net loss	-	-	-	-	-	(3,021,709)
Balance at June 30, 2002	-	-	118,799	1,188	14,355,573	(9,571,085)
Fair market value of options and warrants vested during the year ended June 30, 2003	-	-	-	-	848,842	-
Net loss	-	-	-	-	-	(2,778,004)
Balance at June 30, 2003	-	-	118,799	1,188	15,204,415	(12,349,089)
Issuance of common stock and warrants for cash from January 15, 2004 through February 12, 2004 at $237.00 per unit	-	-	15,369	154	3,642,346	-

Allocation of proceeds to warrants	-	-	-	-	(2,099,090)	-
Reclassification of warrants	-	-	-	-	1,913,463	-
Commissions, legal and bank fees associated with issuances for the year ended June 30, 2004	-	-	-	-	(378,624)	-
Fair market value of options and warrants vested during the year ended June 30, 2004	-	-	-	-	1,826,514	-
Options and warrants exercised during the year ended June 30, 2004 at exercise prices ranging from $100.00 to $325.00	-	-	3,703	37	696,612	-
Net loss	-	-	-	-	-	(3,726,951)
Balance at June 30, 2004	-	-	137,871	1,379	20,805,636	(16,076,040)

continued

See Notes to Consolidated Financial Statements

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY

Period from July 1, 1998 (date of inception) to June 30, 2013

	Preferred Stock		Common Stock		Capital in Excess	Deficit Accumulated During the Development	S
	Shares	Amount	Shares	Amount	of Par Value	Stage	(
Issuance of common stock and warrants for cash on May 9, 2005 at $211.00 per unit	-	$ -	15,957	$ 160	$ 3,366,669	$ -	$
Allocation of proceeds to warrants	-	-	-	-	(1,715,347)	-	
Reclassification of warrants	-	-	-	-	1,579,715	-	
Commissions, legal and bank fees associated with the issuance on May 9, 2005	-	-	-	-	(428,863)	-	
Options and warrants exercised during the year ended June 30, 2005 at exercise prices ranging from $150.00 to $325.00	-	-	845	8	61,117	-	
Fair market value of options and warrants vested during the year ended June 30, 2005	-	-	-	-	974,235	-	
Net loss	-	-	-	-	-	(2,978,918)	
Balance at June 30, 2005	-	-	154,673	1,547	24,643,162	(19,054,958)	
Warrants exercised during the year ended June 30, 2006 at an exercise price of $1.00	-	-	100	1	99	-	
Fair market value of options and warrants vested during the year ended June 30, 2006	-	-	-	-	677,000	-	

Net loss	-	-	-	-	-	(3,314,885)
Balance at June 30, 2006	-	-	154,773	1,548	25,320,261	(22,369,843)
Issuance of common stock and warrants for cash on October 10, 2006 at $113.50 per unit	-	-	19,863	198	2,249,293	-
Commissions, legal and bank fees associated with the issuance on October 10, 2006	-	-	-	-	(230,483)	-
Warrants exercised during the year ended June 30, 2007 at an exercise price of $1.00	-	-	100	1	99	-
Fair market value of options and warrants vested during the year ended June 30, 2007	-	-	-	-	970,162	-
Net loss	-	-	-	-	-	(3,251,697)
Balance at June 30, 2007	-	-	174,736	1,747	28,309,332	(25,621,540)

continued

See Notes to Consolidated Financial Statements

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY

Period from July 1, 1998 (date of inception) to June 30, 2013

	Preferred Stock		Common Stock		Capital in Excess	Defi Acc Duri
	Shares	Amount	Shares	Amount	of Par Value	Dev Stag
Fair market value of options and warrants vested during the year ended June 30, 2008	-	$ -	-	$ -	$ 1,536,968	$ -
Allocation of proceeds, net of fees paid to holder, from the issuance of convertible notes and warrants on September 21, 2007, October 16, 2007, December 20, 2007, and June 30, 2008	-	-	-	-	9,340,000	-
Convertible notes converted into common stock during the year ended June 30, 2008	-	-	5,556	55	436,453	-
Issuance of common stock in lieu of cash payment for interest during the year ended June 30, 2008	-	-	3,459	35	434,119	-
Net loss	-	-	-	-	-	(4
Balance at June 30, 2008	-	-	183,751	1,837	40,056,872	(3
Fair market value of options and warrants vested during the year ended June 30, 2009	-	-	-	-	506,847	-
Warrants exercised during the year ended June 30, 2009 at an exercise price of $1.00	-	-	24	1	(1)	-
Issuance of common stock in lieu of cash payment for interest during the year ended June 30, 2009	-	-	12,718	127	1,007,117	-

Convertible notes converted into common stock during the year ended June 30, 2009	-	-	500	5	44,928	-
Issuance of common stock in connection with Short-Term Incentive Plan during the year ended June 30, 2009	-	-	1,127	11	(11)	-
Net loss	-	-	-	-	-	(5
Balance at June 30, 2009	-	-	198,120	1,981	41,615,752	(3

continued

See Notes to Consolidated Financial Statements

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY

Period from July 1, 1998 (date of inception) to June 30, 2013

	Preferred Stock		Common Stock		Capital in Excess
	Shares	Amount	Shares	Amount	of Par Valu
Cumulative effect of change in accounting principle-implementation of FASB ASC Topic 815-40	-	$ -	-	$ -	$ (7,931,87
Issuance of common stock and warrants for cash on July 9, 2009 and September 30, 2009 at $90.00 per unit	-	-	17,000	170	1,529,830
Issuance of common stock and warrants for satisfaction of accounts payable on September 30, 2009	-	-	1,944	20	261,512
Legal and regulatory fees associated with the issuances on July 9, 2009 and September 30, 2009	-	-	-	-	(180,862
Issuance of preferred stock and warrants for cash on April 1, 2010 and June 2, 2010	11,497	115	-	-	11,496,88
Deemed dividend- Preferred Stock	-	-	-	-	5,330,039
Legal and regulatory fees associated with the issuances of preferred stock and warrants on April 1, 2010 and June 2, 2010	-	-	-	-	(793,498
Fair value of warrants issued on April 1, 2010 and June 2, 2010	-	-	-	-	(1,759,00
Preferred stock converted into common stock during the year ended June 30, 2010	(2,262)	(23)	70,688	707	(684
Warrants exercised during the year ended June 30, 2010 at an exercise price of $1.00	-	-	10,050	100	9,950

Issuance of common stock in lieu of cash payment for interest during the year ended June 30, 2010	-	-	13,531	135	552,538
Issuance of common stock in lieu of cash payment for dividends during the year ended June 30, 2010	-	-	30,295	303	678,297
Convertible notes converted into common stock during the year ended June 30, 2010	-	-	156,592	1,566	7,617,794
Issuance of common stock in connection with Short-Term Incentive Plan during the year ended June 30, 2010	-	-	1,160	12	(12
Issuance of common stock for services during the year ended June 30, 2010	-	-	1,542	15	53,785
Fair market value of options and warrants vested during the year ended June 30, 2010	-	-	-	-	386,639
Repurchase of warrants during the year ended June 30, 2010	-	-	-	-	(50,000
Dividends accrued for the period from April 1, 2010 through June 30, 2010	-	-	-	-	-
Net loss	-	-	-	-	-

continued

See Notes to Consolidated Financial Statements

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY

Period from July 1, 1998 (date of inception) to June 30, 2013

	Preferred Stock		Common Stock		Capital in Excess of Par Value	Deficit Accumu During t Develop Stage
	Shares	Amount	Shares	Amount		
Balance at June 30, 2010	9,235	$ 92	500,922	$ 5,009	$ 58,817,082	$ (50,84
Issuance of common stock at prices ranging from $30.00 per share to $36.00 per share	-	-	59,114	591	1,852,828	-
Commissions and other fees related to the issuance of common stock	-	-	-	-	(197,908)	-
Preferred stock converted into common stock	(4,345)	(43)	136,688	1,367	(1,324)	-
Warrants converted into common stock			1,750	18	1,732	-
Issuance of common stock in lieu of cash payment for dividends	-	-	79,123	791	2,385,399	$ (2,155
Fair market value of options and warrants vested and amended	-	-	-	-	866,235	-
Reclassification of warrant liability	-	-	-	-	1,173,296	-
Issuance of common stock under the Company's the Company's long-term incentive plan	-	-	100	1	(1)	-
Deemed dividend - Preferred Stock	-	-	-	-	360,733	(360,7
Dividends accrued and unpaid at June 30, 2011	-	-	-	-	-	(122,2
Net loss	-	-	-	-	-	(7,268

Balance at June 30, 2011	4,890	$ 49	777,697	$ 7,777	$ 65,258,072	$ (60,74
Issuance of common stock at prices ranging from $26.00 per share to $31.00 per share	-	-	128,423	1,284	3,370,397	-
Commissions and other fees related to the issuance of common stock	-	-	-	-	(143,765)	-
Preferred stock converted into common stock	(311)	(3)	11,786	118	(115)	-
Issuance of common stock in lieu of cash payment for dividends	-	-	23,219	232	556,918	(434,8
Deemed dividend - Preferred Stock	-	-	-	-	1,076,355	(1,076
Fair market value of options and warrants vested	-	-	-	-	766,004	-
Dividends accrued and unpaid at June 30, 2012	-	-	-	-	-	(114,4
Net loss	-	-	-	-	-	(5,066
Balance at June 30, 2012	4,579	$ 46	941,125	$ 9,411	$ 70,883,866	$ (67,44

continued

See Notes to Consolidated Financial Statements

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY

Period from July 1, 1998 (date of inception) to June 30, 2013

	Preferred Stock		Common Stock		Capital i Excess of Par V
	Shares	Amount	Shares	Amount	
Issuance of common stock for cash at $0.26 per share in July 2012	-	$ -	3,539	$ 35	$ 100,53
Commissions and other fees related to the issuance of common stock in July 2012	-	-	-	-	(6,387
Issuance of common stock and warrants for cash at $10.00 per unit on January 8, 2013	-	-	300,000	3,000	2,997,(
Fees related to the issuance of common stock and warrants on January 8, 2013	-	-	-	-	(151,2
Issuance of common stock for cash at $3.00 on May 8, 2013	-	-	418,333	4,184	1,250,3
Fees related to the issuance of common stock on May 8, 2013	-	-	-	-	(153,3
Fair value of warrants issued on January 8, 2013	-	-	-	-	(459,0
Preferred stock converted into common stock	(3,779)	(38)	202,846	2,029	(1,991
Issuance of common stock in lieu of cash payment for dividends	-	-	37,197	372	590,94
Issuance of common stock in exchange for warrants	-	-	369,022	3,690	1,720,3
Deemed dividend - preferred stock	-	-	-	-	366,15

Reclassification of warrant liability	-	-	-	-	326,20
Stock-based compensation	-	-	-	-	724,69
Dividends accrued and upaid at June 30, 2013	-	-	-	-	-
Net loss	-	-	-	-	-
Balance July 1, 1998 (inception) through June 30, 2013	800	$ 8	2,272,062	$ 22,721	$ 78,189

See Notes to Consolidated Financial Statements

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

CONSOLIDATED STATEMENT OF CASH FLOWS

	Fiscal Year Ended June 30,			Cumulative Amounts from Inception
	2013	2012	2011	
Cash flows from operating activities:				
Net loss	$(6,122,542)	$(5,066,133)	$(7,268,976)	$(63,059,296)
Adjustments to reconcile net loss to net cash used in operating activities:				
Noncash capital contribution	-	-	-	85,179
Noncash conversion of accrued expenses into equity	-	-	-	131,250
Noncash income related to change in fair value of warrant liability	(371,591)	(472,463)	(609,239)	(9,022,980)
Noncash charge for change in warrant terms	-	-	115,869	115,869
Issuance of common stock and warrants for interest	-	-	-	2,003,386
Issuance of common stock for services	-	-	-	53,800
Stock-based compensation expense	724,693	766,004	750,366	12,830,646
Depreciation and amortization	293,629	258,023	143,274	1,393,934
Write-off of intangibles	64,210	321,137	1,588,087	1,973,434
Deferred rent	-	-	(8,060)	-
Amortization of convertible note discount	-	-	-	10,000,000
Amortization of deferred financing costs	-	-	-	1,227,869
Loss on settlement of warrant liabilities	1,724,546	-	-	1,724,546
Loss on extinguishment of debt	-	-	-	361,877
(Increase) decrease in operating assets:				
Prepaid expenses and other current assets	(370,696)	(102,460)	(141,269)	(1,919,220)
Security deposit	-	7,187	(5,171)	(5,171)
Increase (decrease) in operating liabilities:				
Accounts payable	42,806	34,989	2,105	637,320
Accrued expenses	112,319	(132,333)	41,572	542,541
Net cash used in operating activities	(3,902,626)	(4,386,049)	(5,391,442)	(40,925,016)
Cash flows from investing activities:				
Patent costs	(527,761)	(446,035)	(684,399)	(6,752,473)
Purchase of equipment, furniture and fixtures	(1,281)	(4,461)	(2,026)	(185,947)
Net cash used in investing activities	(529,042)	(450,496)	(686,425)	(6,938,420)
Cash flows from financing activities:				
Proceeds from grant	-	-	-	99,728
Proceeds (repayments) from line of credit	(12,026)	-	4,264	2,187,082

Proceeds from issuance of bridge notes	-	-	-	525,000
Proceeds from issuance of preferred stock and warrants, net	-	-	-	10,754,841
Redemption of convertible notes and warrants	-	-	-	(2,160,986)
Proceeds from issuance of convertible notes	-	-	-	9,340,000
Deferred financing costs	-	-	-	(651,781)
Proceeds from issuance of common stock and warrants, net and exercise of warrants and options	4,044,663	3,227,916	1,657,261	29,371,846
Net cash provided by financing activities	4,032,637	3,227,916	1,661,525	49,465,730
Net (decrease) increase in cash and cash equivalents	(399,031)	(1,608,629)	(4,416,342)	1,602,294
Cash and cash equivalents at beginning of period	2,001,325	3,609,954	8,026,296	-
Cash and cash equivalents at end of period	$1,602,294	$2,001,325	$3,609,954	$1,602,294

See Notes to Consolidated Financial Statements

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Principal Business Activity:

The Company

Senesco Technologies, Inc. ("ST") is a development stage biotechnology company whose mission is to develop novel approaches to treat programmed cell death diseases in humans (apoptosis), and to enhance the quality and productivity of fruits, flowers, vegetables and agronomic crops through the control of cell death in plants (senescence).

Senesco, Inc. ("SI" and together with SI, the "Company"), a New Jersey corporation, was incorporated on November 24, 1998 and is the successor entity to Senesco, L.L.C., a New Jersey limited liability company that was formed on June 25, 1998 but commenced operations on July 1, 1998.

Liquidity

As shown in the accompanying consolidated financial statements, the Company has a history of losses with a deficit accumulated during the development stage from July 1, 1998 (inception) through June 30, 2013 of $74,425,835. Additionally, the Company has generated minimal revenues by licensing its technology for certain crops to companies willing to share in its development costs. In addition, the Company's technology may not be ready for commercialization for several years. The Company expects to continue to incur losses for the next several years because it anticipates that its expenditures on research and development, and administrative activities will significantly exceed its revenues during that period. The Company cannot predict when, if ever, it will become profitable.

As of June 30, 2013, the Company had cash and cash equivalents in the amount of $1,602,294, which consisted of checking accounts and money market funds. The Company estimates that its cash and cash equivalents will cover its expenses through November 2013. In order to provide the Company with the cash resources necessary to fund operations through at least June 30, 2014, the Company will continue its efforts to raise additional capital through a private or public equity placement in the near future. To that goal, the Company has received approval from the

Company's stockholders for up to a 1:100 reverse stock split and the Company has filed a preliminary S-1 registration statement.

The Company will need additional capital and plans to raise additional capital through the placement of debt instruments or equity or both. However, the Company may not be able to obtain adequate funds for its operations when needed or on acceptable terms. If the Company is unable to raise additional funds, it will need to do one or more of the following:

· delay, scale-back or eliminate some or all of its research and product development programs;

· license third parties to develop and commercialize products or technologies that it would otherwise seek to develop and commercialize itself;

· seek strategic alliances or business combinations;

· attempt to sell the Company;

· cease operations; or

· declare bankruptcy.

Risks and Uncertainties

The Company operates in an industry that is subject to intense competition, government regulation and rapid technological change. The Company's operations are subject to significant risk and uncertainties including financial, operational, technological, regulatory and other risks, including the potential risk of business failure.

The Company's limited capital resources and operations to date have been funded primarily with the proceeds from public and private equity and debt financings and milestone payments on license agreements. The Company does not have adequate cash on hand to cover its anticipated expenses for the next 12 months. If the Company fails to raise a significant amount of capital, it may need to significantly curtail operations, cease operations or seek federal bankruptcy protection in the near future. These conditions raise substantial doubt about its ability to continue as a going concern. Consequently, the audit report prepared by the Company's independent public accounting firm relating to its financial statements for the year ended June 30, 2013 includes a going concern explanatory paragraph.

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

2. Summary of Significant Accounting Policies:

Principles of consolidation

The accompanying consolidated financial statements include the accounts of Senesco Technologies, Inc. and its wholly owned subsidiary, Senesco, Inc. All significant intercompany accounts and transactions have been eliminated in consolidation.

Management Estimates and Judgments

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and judgments that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. The critical accounting policies that require management's most significant estimate and judgment are the assessment of the recoverability of intangible assets, the variables and method used to calculate stock-based compensation and warrant liabilities, and the valuation allowance on deferred tax assets. Actual results experienced by the Company may differ from management's estimates.

Cash and Cash Equivalents and Short-Term Investments

The Company considers all highly liquid instruments with an original maturity of 90 days or less at the time of purchase to be cash equivalents. Cash and cash equivalents consist of deposits that are readily convertible into cash.

Fair Value Measurements

ASC Topic 820, Fair Value Measurements, defines fair value, establishes a framework for measuring fair value and expands the related disclosure requirements. The guidance applies under other accounting pronouncements that require or permit fair value measurements. The statement indicates, among other things, that a fair value measurement assumes that the transaction to sell an asset or transfer a liability occurs in the principal market for the asset or liability or, in the absence of a principal market, the most advantageous market for the asset or liability. ASC 820 defines fair value based upon an exit price model.

The Company categorizes its financial instruments into a three-level fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value into three broad levels. The fair value hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). If the inputs used to measure fair value fall within different levels of the hierarchy, the category level is based on the lowest priority level input that is significant to the fair value measurement of the instrument. Financial assets recorded at fair value on the Company’s consolidated balance sheets are categorized as follows:

· Level 1: Observable inputs such as quoted prices in active markets;

· Level 2: Inputs, other than the quoted prices in active markets, that are observable either directly or indirectly; and

· Level 3: Unobservable inputs in which there is little or no market data, which require the reporting entity to develop its own assumptions.

The fair value of the warrant liabilities is based on the Black-Scholes Merton and Modified Black-Scholes Merton option pricing models (“Black-Scholes model”) (Level 3). (See note 8).

The carrying value of prepaid research supplies and expenses, accounts payable, accrued expenses, and line of credit reported in the consolidated balance sheets equal or approximate fair value due to their short maturities.

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Concentrations of Credit Risk

The Company maintains its cash primarily in investment accounts within one large financial institution. The Federal Deposit Insurance Corporation insures these balances up to $250,000 per bank. The Company has not experienced any losses on its bank deposits and believes these deposits do not expose the Company to any significant credit risk.

Prepaid Research Services and Supplies

Prepaid research services and supplies are carried at cost and are included in prepaid expenses and other current assets on the accompanying consolidated balance sheet. When such services are performed and supplies are used, the carrying value of the supplies are expensed in the period that they are performed or used for the development of proprietary applications and processes.

Equipment, Furniture and Fixtures, Net

Equipment, furniture and fixtures are recorded at cost. Depreciation is calculated on a straight-line basis over four years for equipment and seven years for furniture and fixtures. Expenditures for major renewals and improvements are capitalized, and expenditures for maintenance and repairs are charged to operations as incurred. (See note 4).

Intangibles, Net

The Company conducts research and development activities, the cost of which is expensed as incurred, in order to generate patents that can be licensed to third parties in exchange for license fees and royalties. Because the patents are the basis of the Company’s future revenue, the patent costs are capitalized. The capitalized patent costs represent the outside legal fees incurred by the Company to submit and undertake all necessary efforts to have such patent applications issued as patents.

The length of time that it takes for an initial patent application to be approved is generally between four to six years. However, due to the unique nature of each patent application, the actual length of time may vary. If a patent application is denied, the associated cost of that application would be written off. However, the Company has not had any patent applications denied as of June 30, 2013. Additionally, should a patent application become impaired during the application process, the Company would write down or write off the associated cost of that patent application.

Issued patents and agricultural patent applications pending are being amortized over a period of 17 years from inception, the expected economic life of the patent. (See note 5).

Impairment of Long-lived Assets

The Company assesses the impairment in value of intangible assets whenever events or circumstances indicate that their carrying value may not be recoverable. Factors the Company considers important which could trigger an impairment review include the following:

- significant negative industry trends;
- significant underutilization of the assets;
- significant changes in how the Company uses the assets or its plans for their use; and
- changes in technology and the appearance of competing technology.

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

If a triggering event occurs and if the Company's review determines that the future discounted cash flows related to the groups, including these assets, will not be sufficient to recover their carrying value, the Company will reduce the carrying values of these assets down to its estimate of fair value and continue amortizing them over their remaining useful lives. To date, except for certain patents and patents pending that the Company abandoned during the fiscal years ended June 30, 2013, 2012 and 2011, the Company has not recorded any impairment of intangible assets. During the fiscal years ended June 30, 2013, 2012 and 2011, in order to reduce its cost of patent prosecution and maintenance, the Company reviewed its patent portfolio and identified several patents and patent applications that it believed it no longer needed to maintain without having a material impact on the patent portfolio. Accordingly, during the fiscal years ended June 30, 2013, 2012 and 2011, the Company wrote off patent costs in the net amount of $64,210, $321,137 and $1,588,087, respectively.

Net Loss per Common Share

Basic loss per share is computed by dividing net loss available to common stockholders by the weighted average number of shares of the Company’s common stock, par value $0.01 per share (the “Common Stock”) assumed to be outstanding during the period of computation. Diluted earnings per share is computed similar to basic earnings per share except that the denominator is increased to include the number of additional shares of Common Stock that would have been outstanding if the potential shares of Common Stock had been issued and if the additional shares of Common Stock were dilutive.

For all periods presented, basic and diluted loss per share are the same, as any additional Common Stock equivalents would be anti-dilutive. Potentially dilutive shares of Common Stock have been excluded from the calculation of the weighted average number of dilutive shares of Common Stock as follows:

	June 30,		
	2013	**2012**	**2011**
Common Stock to be issued upon conversion of convertible preferred stock	266,667	176,115	163,000
Outstanding warrants	283,156	572,260	553,012
Outstanding options	231,748	156,477	113,483
Total potentially dilutive shares of Common Stock	781,571	904,852	829,495

Income Taxes

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to the differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

The asset and liability method requires that deferred tax assets and liabilities be recorded without consideration as to their realizability. The deferred tax asset primarily includes net operating loss carryforwards. The portion of any deferred tax asset for which it is more likely than not that a tax benefit will not be realized must then be offset by recording a valuation allowance. A valuation allowance has been established against all of the deferred tax assets as it is more likely than not that these assets will not be realized given the history of operating losses.

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

While the Company believes that its tax positions are fully supportable, there is a risk that certain positions could be challenged successfully. In these instances, the Company looks to establish reserves. If the Company determined that a tax position is more likely than not of being sustained upon audit, based solely on the technical merits of the position, the Company would recognize the benefit. The Company measures the benefit by determining the amount that has a likelihood greater than 50% of being realized upon settlement. The Company presumes that all tax positions will be examined by a taxing authority with full knowledge of all relevant information. The Company regularly monitors its tax positions, tax assets and tax liabilities. The Company reevaluates the technical merits of its tax positions and would recognize an uncertain tax benefit or derecognize a previously recorded tax benefit when (i) there is a completion of a tax audit, (ii) there is a change in applicable tax law including a tax case or legislative guidance, or (iii) there is an expiration of the statute of limitations. Significant judgment is required in accounting for tax reserves. As of June 30, 2013, the Company determined that it had no liability for uncertain income taxes. The Company's policy is to recognize potential accrued interest and penalties related to the liability for uncertain tax benefits, if applicable, in income tax expense. The Company's tax returns for periods prior to the fiscal year ended June 30, 2010 are no longer open for examination. (See note 11).

Revenue Recognition

The Company has received certain nonrefundable upfront fees in exchange for the transfer of its technology to licensees. Upon delivery of the technology, the Company had no further obligations to the licensee with respect to the basic technology transferred and, accordingly, recognized revenue at that time. The Company has and may continue to receive additional payments from its licensees in the event such licensees achieve certain development or commercialization milestones in their particular field of use. Milestone payments, which are contingent upon the achievement of certain research goals, are recognized as revenue when the milestones, as defined in the particular agreement, are achieved.

Stock-based Payments

The Company accounts for stock-based compensation under the provisions of FASB ASC Topic 718, Compensation—Stock Compensation ("ASC 718"), which requires the measurement and recognition of compensation expense for all stock-based awards made to employees and directors based on estimated fair values on the grant date. The Company estimates the fair value of stock-based awards on the date of grant using the Black-Scholes model. The value of the portion of the award that is ultimately expected to vest is recognized as

expense over the requisite service periods using the straight-line method. The Company estimates forfeitures at the time of grant and revises its estimate in subsequent periods if actual forfeitures differ from those estimates.

The Company accounts for stock-based compensation awards to non-employees in accordance with FASB ASC Topic 505-50, Equity-Based Payments to Non-Employees ("ASC 505-50"). Under ASC 505-50, the Company determines the fair value of the warrants or stock-based compensation awards granted as either the fair value of the consideration received or the fair value of the equity instruments issued, whichever is more reliably measurable.

All issuances of stock options or other equity instruments to non-employees as consideration for goods or services received by the Company are accounted for based on the fair value of the equity instruments issued. Any stock options issued to non-employees are recorded as an expense and additional paid-in capital in stockholders' equity over the applicable service periods using variable accounting through the vesting dates based on the fair value of the options at the end of each period.

The following table sets forth the total stock-based compensation expense and issuance of Common Stock for services included in the consolidated statements of operations for the fiscal years ended June 30, 2013, 2012 and 2011 and from inception to date.

	Fiscal Year Ended June 30,			**Cummulative**
	2013	**2012**	**2011**	**From Inception**
General and administrative	$639,828	$721,197	$709,207	$ 11,234,942
Research and development	84,865	44,807	41,159	1,649,504
Total	$724,693	$766,004	$750,366	$ 12,884,446

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The Company estimated the fair value of each option grant throughout the year using the Black-Scholes option-pricing model using the following assumptions:

	Fiscal Year Ended June 30,		
	2013	**2012**	**2011**
Risk-free interest rate (1)	0.3-0.8 %	0.4-1.9 %	1.3-2.9 %
Expected volatility	67-102 %	78-105 %	103-104 %
Dividend yield	None	None	None
Expected life (2)	2.5 - 10.0	2.5 - 10.0	5.0 - 10.0

(1) Represents the interest rate on a U.S. Treasury security with a maturity date corresponding to that of the option term.

(2) Expected life for employee based stock options was estimated using the “simplified” method, as allowed under the provisions of the Securities and Exchange Commission Staff Accounting Bulletin No. 110.

The economic values of the options will depend on the future price of the Company's Common Stock which cannot be forecast with reasonable accuracy.

Research and Development

Research and development costs are expensed as incurred.

Recent Accounting Pronouncements Applicable to the Company

The Company does not believe that the following recent accounting pronouncements or any other recently issued, but not yet effective accounting standards will have a material effect on the Company's consolidated financial position, results of operations, or cash flows.

Effective July 1, 2012, the Company adopted Financial Accounting Standards Board's ("FASB") ASU No. 2011-05, Comprehensive Income (Topic 220): Presentation of Comprehensive Income and ASU No. 2011-12, Comprehensive Income (Topic 220): Deferral of the Effective Date for Amendments to the Presentation of Reclassifications of Items Out of Accumulated Other Comprehensive Income in ASU No. 2011-5 .. In these updates, an entity has the option to present the total of comprehensive income, the components of net income, and the components of other comprehensive income either in a single continuous statement of comprehensive income or in two separate but consecutive statements. In both choices, an entity is required to present each component of net income along with total net income, each component of other comprehensive income along with a total for other comprehensive income, and a total amount for comprehensive income. ASU No. 2011-05 eliminates the option to present the components of other comprehensive income as part of the statement of changes in stockholders' equity. The amendments in ASU No. 2011-05 do not change the items that must be reported in other comprehensive income or when an item of other comprehensive income must be reclassified to net income. The adoption of ASU Nos. 2011-05 and 2011-12 did not have a material impact on the Company's consolidated financial statements. The Company has presented comprehensive loss in the accompanying consolidated statements of operations and comprehensive loss.

In February 2013, the FASB issued ASU No. 2013-02, Other Comprehensive Income (Topic 220): Reporting of Amounts Reclassified Out of Accumulated Other Comprehensive Income. ASU No. 2013-02 does not change the current requirements for reporting net income or other comprehensive income in financial statements, however, it does require an entity to report the effect of significant reclassifications out of accumulated other comprehensive income on the respective line items in net income if the amounts are required to be reclassified in their entirety to net income. For other amounts that are not required to be reclassified in their entirety to net income in the same reporting period, an entity is required to cross-reference to other disclosures that provide additional detail about those amounts. This guidance will be effective for reporting periods beginning after December 15, 2012, which will be the Company's fiscal year 2014 (or July 1, 2013). The Company does not expect the adoption of this guidance to have a material impact on its consolidated financial statements.

Reclassifications

Certain accounts in the prior year financial statements have been reclassified, for comparative purposes, in order to conform with the presentation in the current year financial statements. These reclassifications have no effect on the previously reported net loss.

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

3. **Fair Value Measurements:**

The following tables provide the assets and liabilities carried at fair value measured on a recurring basis as of June 30, 2013 and 2012:

	Carrying	**Fair Value Measurement at June 30, 2013**		
	Value	**Level 1**	**Level 2**	**Level 3**
Assets:				
Cash and cash equivalents	$1,602,294	$1,602,294	$ -	$ -

	Carrying	**Fair Value Measurement at June 30, 2012**		
	Value	**Level 1**	**Level 2**	**Level 3**
Assets:				
Cash and cash equivalents	$2,001,325	$2,001,325	$ -	$-
Liabilities:				
Warrant liabilities	$238,796	$-	$ -	$238,796

The following table summarizes the changes in fair value of the Company's Level 3 financial instruments:

	Fiscal Year ended June 30,	
	2013	**2012**
Beginning Balance	$238,796	$711,259
Issuance of common stock warrants	459,000	-
Change in fair value of warrant liabilities, net	(371,591)	(472,463)
	(326,205)	-

Reclassification to equity due to exchange of common stock warrants into common stock		
Ending Balance	$-	$238,796

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

4. **Equipment, Furniture and Fixtures:**

Equipment, Furniture and Fixtures consist of the following:

	June 30,	
	2013	**2012**
Equipment	$32,334	$31,053
Furniture and fixtures	67,674	67,674
	100,008	98,727
Less—Accumulated depreciation	(95,453)	(92,870)
	$4,555	$5,857

Depreciation expense aggregated $2,583, $2,386, $2,798 and $181,392 for the fiscal years ended June 30, 2013, 2012, 2011, and cumulatively from inception through June 30, 2013, respectively.

5. Intangible assets:

Intangible assets consist of the following:

	June 30,	
	2013	**2012**
Patents approved	$2,665,436	$2,209,286
Patents pending	1,919,360	1,912,526
	4,584,796	4,121,812
Accumulated amortization	(1,018,299)	(727,820)
	$3,566,497	$3,393,992

During the fiscal years ended June 30, 2013 and 2012, the Company incurred $527,761 and $446,035 of legal fees related to the prosecution of patent costs.

During the fiscal years ended June 30, 2013 and 2012, the Company abandoned certain patents and patents pending. Accordingly, intangible assets were reduced by the net carrying value of those patents and patents pending in the amount of $64,210 and $321,137, respectively.

Amortization expense amounted to $291,046, $255,637, $140,476 and $1,212,542 for the fiscal years ended June 30, 2013, 2012, 2011, and cumulatively from inception through June 30, 2013, respectively.

Estimated amortization expense for the next five fiscal years is as follows:

Fiscal Year ended June 30,	
2014	$300,000
2015	300,000
2016	300,000
2017	300,000
2018	300,000

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

6. Accrued Expenses:

Accrued expenses were comprised of the following:

	June 30, 2013	2012
Accrued research	$210,696	$113,264
Accrued dividends payable	20,000	114,474
Accrued other	156,844	141,957
	$387,540	$369,695

7. Line of Credit:

On February 17, 2010, the Company entered into a credit agreement with JMP Securities LLC. 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 (the “Line of Credit”). Any draws upon the Line of Credit accrue interest at an annual rate of (i) the broker rate in effect at the interest date (which was 3.75% at June 30, 2013), plus (ii) 2.0%. There are no other conditions or fees 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 one of a member of the Company’s Board of Directors, Harlan W. Waksal, M.D., which is currently held by JMP Securities. The balance outstanding as of June 30, 2013 and 2012 was $2,187,082 and $2,199,108, respectively. In April 2011, we were required to enter into a new demand note with the clearing agent for JMP Securities in connection with the Line of Credit.

Total interest expense recorded under the Line of Credit for the fiscal years ended June 30, 2013, 2012 and 2011 amounted to $122,453, $134,549 and $110,649, respectively.

8. Warrant Liabilities:

The warrant liabilities represent the fair value of Common Stock purchase warrants, which have exercise price reset features and cash settlement features.

The fair value of the warrants that have exercise price reset features is estimated using an adjusted Black-Scholes model. The Company computes valuations, each quarter, using the Black-Scholes model for such warrants to account for the various possibilities that could occur due to changes in the inputs to the Black-Scholes model as a result of contractually-obligated changes. The Company effectively weights each calculation based on the likelihood of occurrence to determine the value of the derivative at the reporting date. The Company has an unobservable input for the estimation of the likelihood of a reset occurring, which was estimated to be 75% made up of various reset amounts with probabilities ranging between 10% and 25% per occurrence. These estimates of the likelihood of completing an equity raise that would meet the criteria to trigger the reset provisions are based on numerous factors, including the remaining term of the financial instruments and the Company's overall financial condition. As of June 30, 2013, all warrants that had an exercise price reset feature had been exchanged for Common Stock or had expired.

The fair value of the warrants that have cash settlement features were estimated using a probability –weighted Black-Scholes model. The unobservable input used by the Company on certain warrants was the estimation of the likelihood of a fundamental transaction, as defined in the related agreements, which was estimated to be 50% at June 30, 2013 and 15% at June 30, 2012 and 2011.

Changes in the unobservable input values would have likely cause material changes in the fair value of the Company's Level 3 financial instruments. The significant unobservable input used in the fair value measurement was the estimation of the likelihood of the occurrence of a change to the strike price of the warrants or the occurrence of a fundamental transaction. A significant increase (decrease) in the this likelihood would have resulted in a higher (lower) fair value measurement.

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

During the year ended June 30, 2013, the Company issued 369,022 shares of Common Stock in exchange for 396,875 warrants that were included in the computation of warrant liabilities. In connection with the exchanges, the Company compared the value of the Common Stock issued with the adjusted Black-Scholes value of the warrants exchanged. The difference in these values resulted in a loss on the settlement of warrant liabilities in the aggregate amount of $1,724,546. Additionally, the value of the warrants on the dates of the exchanges, in the aggregate amount of $326,205, was reclassified from warrant liabilities to additional paid in capital.

During the fiscal year ended June 30, 2011, the holders of an aggregate of 226,417 warrants amended the terms of their warrants. As of the dates of the amendments to the warrants, the Black-Scholes value in the amount of $1,173,296 was reclassified from warrant liabilities to equity with the change in fair value from June 30, 2010 through the dates of the amendments being recorded in the consolidated statement of operations.

The Company also recorded a charge of $115,869 during the fiscal year ended June 30, 2011, as a result of the amendment to certain of the warrants that had an exercise price reset feature, whereby the exercise price of $50.00, subject to future adjustments, was reset to $32.00 and would no longer be subject to future adjustments and accordingly are no longer deemed to be liabilities. The charge of $115,869 represents the difference in the Black-Scholes value of the warrants immediately prior to the amendment and the Black-Scholes value of the warrants immediately after the amendment.

During the fiscal years ended June 30, 2013, 2012 and 2011, the Company revalued all of the remaining warrant liabilities, using the adjusted Black-Scholes and probability-weighted Black-Scholes models. A gain on the change in fair value of the warrant liabilities in the amount of $371,591, $472,463 and $609,239 was recorded in the Consolidated Statement of Operations for the fiscal years ended June 30, 2013, 2012 and 2011, respectively.

At June 30, 2013 and 2012, there were an aggregate of 87,672 and 213,078 warrants, respectively, included in the fair value of the warrant liabilities. However, the value of the warrants outstanding at June 30, 2013 was de minimis.

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The assumptions used to value the warrants were as follows:

	June 30, 2013	June 30, 2012
Warrants issued on December 20, 2007		
Estimated life in years	-	0.50
Risk-free interest rate [(1)]	-	0.15%
Volatility	-	75%
Dividend paid	-	None
Range of estimated strike prices	-	$33.00-$36.00
Range of estimated probabilities	-	10% - 50%
Warrants issued on June 30, 2008		
Estimated life in years	-	1.00
Risk-free interest rate (1)	-	0.21%
Volatility	-	75%
Dividend paid	-	None
Range of estimated strike prices	-	$33.00-$36.00
Range of estimated probabilities	-	10% - 50%
Warrants issued on April 1, 2010		
Estimated life in years	1.75	2.75
Risk-free interest rate (1)	0.36%	0.39%
Volatility	72%	78%
Dividend paid	None	None
Estimated probability of a fundamental transaction	50%	15%

(1) Represents the interest rate on a U.S. Treasury security with a maturity date corresponding to that of the warrant term.

9. Stockholders' Equity:

Preferred Stock

On April 1, 2010, the Company sold 10,297 shares of 10% Series A convertible preferred stock to non-affiliated purchasers for $10,297,000. On June 2, 2010, the Company sold 1,200 shares of 10% Series B convertible preferred stock (together with the Series A preferred stock, the "Convertible Preferred Stock") to affiliated purchasers for $1,200,000. After deducting cash closing costs of $742,159, the Company received aggregate net cash proceeds from the sale of the Convertible Preferred Stock in the amount of $10,754,841.

Pursuant to the terms of the Convertible Preferred Stock, the Convertible Preferred Stock was initially convertible into approximately 359,281 shares of the Company's Common Stock, subject to adjustment. In addition, the holders of the Convertible Preferred Stock received immediately exercisable warrants to purchase up to approximately 359,281 shares of the Company's Common Stock.

Each share of Convertible Preferred Stock has a stated value of $1,000 (the "Stated Value"). Each holder of shares of Convertible Preferred Stock is entitled to receive semi-annual dividends at the rate of 10% per annum of the Stated Value for each share of Convertible 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. If the dividends are paid in shares of Common Stock, such shares will be priced at the lower of 90% of the average volume weighted-average price for the 20 trading days immediately preceding the payment date or $0.224. The dividends were subject to a 30% make whole provision. At June 30, 2013 the make whole provision had been satisfied.

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The shares of Convertible Preferred Stock were convertible into shares of Common Stock at an initial conversion price of $32.00 per share and are convertible at any time. The conversion price is subject to adjustment if the Company sells or grants any Common Stock or Common Stock equivalents, subject to certain exclusions, at an effective price per share that is lower than the conversion price of the Convertible Preferred Stock. After 18 months from the date of issuance of the Convertible Preferred Stock, if the Company's Common Stock trades above $80.00 for 20 out of 30 consecutive trading days, the Convertible Preferred Stock will no longer be subject to adjustment.

On December 27, 2010, in connection with the Company's ATM facility, discussed below, the conversion price on the then outstanding 5,325 shares of Convertible Preferred Stock was adjusted from $32.00 to $30.00, resulting in an additional 11,094 shares of Common Stock that would be issued upon conversion of the then outstanding Convertible Preferred Stock. In connection with the adjustment of the conversion price, due to a beneficial conversion feature, an additional dividend in the amount of $360,733 was recorded as an increase to both additional paid-in capital and accumulated deficit.

On July 18, 2011, in connection with the Company's ATM facility, the conversion price on the then outstanding 4,860 shares of Convertible Preferred Stock was adjusted from $30.00 to $27.00, resulting in an additional 18,000 shares of Common Stock that would be issued upon conversion of the then outstanding Convertible Preferred Stock. In connection with the adjustments to the conversion price, due to a beneficial conversion feature, an additional dividend in the amount of $778,000 was recorded as an increase to both additional paid-in capital and accumulated deficit.

On January 6, 2012, in connection with the Company's placement of Common Stock and warrants, the conversion price on the then outstanding 4,845 shares of Convertible Preferred Stock was adjusted from $27.00 to $26.00, resulting in an additional 6,902 shares of Common Stock that would be issued upon conversion of the then outstanding Convertible Preferred Stock. In connection with the adjustments to the conversion price, due to a beneficial conversion feature, an additional dividend in the amount of $298,355 was recorded as an increase to both additional paid-in capital and accumulated deficit.

On January 4, 2013, in connection with the Company's placement of Common Stock and warrants, the conversion price on the then outstanding 995 shares of Convertible Preferred Stock was adjusted from $26.00 to $10.00, resulting in an additional 61,231 shares of Common Stock that would be issued upon conversion of the then outstanding Convertible Preferred Stock. In connection with the adjustments to the conversion price, due to a beneficial conversion feature, an additional dividend in the amount of $125,260 was recorded as an increase to both additional

paid-in capital and accumulated deficit.

On May 9, 2013, in connection with the Company's placement of Common Stock, the conversion price on the then outstanding 965 shares of Convertible Preferred Stock was adjusted from $10.00 to $3.00, resulting in an additional 232,167 shares of Common Stock that would be issued upon conversion of the then outstanding Convertible Preferred Stock. As a result of the resets to the conversion price, each share of Preferred Stock was convertible into 333 shares of Common Stock (a conversion price of $3.00).

On August 8, 2012, in connection with a warrant exchange, 2,384 shares of Series A convertible preferred stock were converted into 91,692 shares of Common Stock. Additionally, certain directors of the Company converted their 1,200 shares of Series B convertible preferred stock into 46,154 of Common Stock.

On June 24, 2013, in connection with an exchange offer, 135 shares of Series A convertible preferred stock were converted into 56,250 shares of Common Stock. Subsequent to June 24, 2013, there were 800 shares of Series A convertible preferred stock outstanding and no shares of Series B convertible preferred stock outstanding.

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

During the fiscal year ended June 30, 2011, 4,345 shares of Convertible Preferred Stock were converted into 136,688 shares of Common Stock. During the fiscal year ended June 30, 2011, the Company issued an additional 79,123 shares of Common Stock for the payment of dividends in the amount of $2,277,567. Total dividends payable on the outstanding 4,890 shares of Convertible Preferred Stock at June 30, 2011 amounted to $122,252.

During the fiscal year ended June 30, 2012, 311 shares of Convertible Preferred Stock were converted into 11,786 shares of Common Stock. During the fiscal year ended June 30, 2012, the Company issued an additional 23,219 shares of Common Stock for the payment of dividends in the amount of $557,150. Total dividends payable on the outstanding 4,579 shares of Convertible Preferred Stock at June 30, 2012 amounted to $114,474.

During the fiscal year ended June 30, 2013, 3,779 shares of Convertible Preferred Stock were converted into 202,846 shares of Common Stock. Additionally, in connection with a convertible preferred stock conversion agreement entered into on June 24, 2013, an additional 11,250 shares of Common Stock were issued to the holders of 135 shares of Convertible Preferred Stock. During the fiscal year ended June 30, 2013, the Company issued an additional 37,196 shares of Common Stock for the payment of dividends in the amount of $591,321. Total dividends payable on the outstanding 800 shares of Convertible Preferred Stock at June 30, 2012 amounted to $20,000.

Warrants

Pursuant to the purchase agreements, the Company delivered a Warrant to purchase shares of Common Stock to the Series A Non-Affiliate Investors and a Warrant to purchase shares of Common Stock to the Series B Affiliate Investors (the “Warrants”). Each Warrant has an initial exercise price of $35.00 per share of Common Stock. The Warrants are immediately exercisable and have a five year term. The Warrants issued to the Series A Non-Affiliate Investors also contain a provision which limits the holder’s beneficial ownership to a maximum of 4.99% (which percentage may be increased to 9.99% upon 60 days notice to the Company).

On August 8, 2012, pursuant to a warrant exchange agreement, 172,625 warrants were exchanged for 69,022 shares of Common Stock.

As discussed in Note 8 above, the Company is required to record the warrants as liabilities. As a result, the Company must allocate the proceeds to the warrants based upon their fair value with the remainder of the proceeds allocated to the Preferred Stock. The Company allocated the gross proceeds of the offering as follows:

	Series A Convertible Preferred Stock	Series B Convertible Preferred Stock	Total
Total gross proceeds	$ 10,297,000	$ 1,200,000	$11,497,000
Allocated to warrants	(1,530,070)	(228,938)	(1,759,008)
Allocated to Convertible Preferred Stock	$ 8,766,930	$ 971,062	$9,737,992

Due to the allocation of the proceeds to the fair value of the warrant at the issuance dates, the convertible feature of the Preferred Stock was below market value. Such feature, as it specifically relates to the convertible feature of the Preferred Stock, is characterized as a “Beneficial Conversion Feature” (“BCF”). Pursuant to existing accounting standards, FASB ASC topic 470.20 – Debt with Conversion and Other Options”, the estimated relative fair value of the BCF was $15,068,031. The value of the BCF which amounted to $5,330,039 was determined utilizing an intrinsic value method with the fair value of the warrants determined using the Black-Scholes model at the date of issuance.

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Placement Agent Warrants

On April 1, 2010, in connection with the issuance of the Series A convertible preferred stock, the Company issued warrants to purchase 10,797 shares of the Company's Common Stock as partial compensation for services related to the raising of the capital. Each warrant has an initial exercise price of $35.00 per share of Common Stock. The warrants are immediately exercisable and have a five year term. In accordance with ASC 480-10, Distinguishing Liabilities from Equity, the Company determined that such warrants are to be accounted for as a liability. Accordingly, using the Black-Scholes model, the Company recorded a warrant liability in the amount of $51,339 related to the warrants on the issuance date. The Company recorded a charge to additional paid in capital as an additional cost of capital.

Common Stock

On September 22, 2009, the stockholders approved a proposal to increase the authorized Common Stock of the Company from 100,000,000 shares to 120,000,000 shares. On May 25, 2010, the stockholders approved a proposal to increase the authorized Common Stock of the Company from 120,000,000 shares to 250,000,000 shares. On December 14, 2011, the stockholders approved a proposal to increase the authorized Common Stock of the Company from 250,000,000 shares to 350,000,000 shares. On March 25, 2013, the stockholders approved a proposal to increase the authorized Common Stock of the Company from 350,000,000 shares to 500,000,000 shares.

At the Market Sales Agreement

On December 22, 2010, the Company entered into an At Market Issuance Sales Agreement (the "ATM") under which the Company, from time to time, may issue and sell shares of its Common Stock, with an aggregate offering price of up to $5,500,000. Such Common Stock will be offered and sold pursuant to a prospectus supplement filed with the Securities and Exchange Commission in connection with the Company's shelf registration statement on Form S-3 (File No. 333-170140), which became effective on November 9, 2010.

During the fiscal year ended June 30, 2013, the Company issued 3,539 shares of Common Stock under the ATM for gross proceeds in the amount of $100,570.

During the fiscal year ended June 30, 2012, the Company issued 18,346 shares of Common Stock under the ATM for gross proceeds in the amount of $509,670.

During the fiscal year ended June 30, 2011, the Company issued 59,115 shares of Common Stock under the ATM for gross proceeds in the amount of $1,853,421.

From the inception of the ATM through June 30, 2013, the Company has issued 81,000 shares of Common Stock under the ATM for gross proceeds in the amount of $2,463,661.

In November 2012, the Company was delisted from the NYSE MKT exchange and is now quoted on the OTCQB. Since the Company is no longer listed on the NYSE MKT exchange, the Company is no longer be able to issue and sell shares of its Common Stock under the ATM.

Public Placements of Common Stock and Warrants

January 6, 2012 and March 1, 2012 Placement

On January 6, 2012 and March 1, 2012, the Company entered into securities purchase agreements to raise an aggregate of $2,862,012 in gross proceeds through the sale of an aggregate of 110,077 shares of its Common Stock. The investors, excluding officers and directors of Senesco or funds affiliated with such officers or directors participating in the offering, also received 50% warrant coverage at an exercise price of $28.60 per share. The Common Stock and 50% warrant coverage (the “Unit”) was priced at $26.00 per Unit.

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

January 4, 2013 Placement

On January 4, 2013, the Company entered into definitive agreements to issue 300,000 shares of Common Stock (the "Shares") and five year warrants (the "Warrants") to purchase 300,000 shares of Common Stock with an exercise price of $12.00 per share (the shares underlying the Warrants, the "Warrant Shares", together with the Shares and Warrants, the "Securities") (the "Offering") for gross proceeds of $3,000,000, before deducting estimated offering expenses, in a registered direct offering. The Warrants are exercisable from the date that is one year and one day following the issuance date until the fifth anniversary of the issuance date and contain standard anti-dilution provisions and adjustment provisions in the event of stock splits, combinations, dividends, distributions or reorganizations. Additionally, the Warrants contain exercise price reset features for a period of eighteen months from the date of issuance and cash settlement features in the event of a fundamental transaction. Due to the cash settlement features in the Warrants, $459,000 of the net proceeds was recorded as a warrant liability. Each Share, together with the Warrant, was sold at a price of $10.00 per unit. In April and June 2013, all of the warrants were exchanged for Common Stock (see Note 8). Therefore, these Warrants are not included in the calculation of the warrant liability at June 30, 2013.

The net offering proceeds to the Company from the sale of the Common Stock and Warrants, after deducting the offering expenses payable by the Company of $151,202, were $2,848,798. Six hundred thousand dollars of the net proceeds of the offering are being used for investor relations purposes and the remainder was used for working capital, research and development and general corporate purposes.

The Offering closed on January 8, 2013.

May 9, 2013 Placement

On May 9, 2013, the Company entered into definitive agreements to issue 418,333 shares of Common Stock (the "Shares") (the "Offering") at an offering price of $3.00 per share for gross proceeds of $1,255,000, before deducting estimated offering expenses, in a registered direct offering. Additionally, the Shares contain exercise price reset features for a period of one year from the date of issuance.

The net offering proceeds to the Company from the sale of the Common Stock, after deducting the offering expenses payable by the Company of $153,318, were $1,101,682. The net proceeds of the offering are being used for working capital, research and development and general corporate purposes.

The Offering closed on May 10, 2013.

10. Stock-Based Compensation

In December 2008, the Company adopted the 2008 Incentive Compensation Plan (the "2008 Plan"), which provides for the grant of stock options, stock grants and stock purchase rights to certain designated employees and certain other persons performing services for the Company, as designated by the board of directors. Pursuant to the 2008 Plan, an aggregate of 51,372 shares of Common Stock had been reserved for issuance. On May 25, 2010, the Company increased the aggregate shares of Common Stock reserved for issuance under the 2008 Plan to 111,372. On March 11, 2011, the Company increased the aggregate shares of Common Stock reserved for issuance under the 2008 Plan to 230,050. Additionally, on January 1 of each calendar year beginning with the calendar year 2012 and ending with the calendar year 2015, the share reserve will automatically increase so that the total number of shares available for issuance under the 2008 Plan is 15% of the fully diluted shares as of the date of such increase, but in no event will such annual increase exceed 70,000 shares per year. On January 1, 2012, the increase in Common Stock reserved for issuance under the 2008 Plan was 22,103. On January 1, 2013, the increase in Common Stock reserved for issuance under the 2008 Plan was 8,658. The 2008 Plan is intended to serve as a successor to the Amended and Restated 1998 Stock Incentive Plan (the “1998 Plan”), which terminated in December 2008. On February 19, 2009, the Company filed a registration statement with the SEC to register all of the 61,372 shares of Common Stock underlying the 2008 Plan. On June 8, 2010, the Company filed with the SEC an amendment to the registration statement to register the additional 50,000 shares of Common Stock underlying the 2008 Plan. On January 4, 2012, the Company filed with the SEC an amendment to the registration statement to register the additional 22,103 shares of Common Stock underlying the 2008 Plan. On March 8, 2013, the Company filed with the SEC an amendment to the registration statement to register the additional 8,658 shares of Common Stock underlying the 2008 Plan. The registration statement and amendments were deemed effective upon filing.

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The terms and vesting schedules for share-based awards vary by type of grant and the employment status of the grantee. Generally, the awards vest based upon time-based conditions or achievement of specified goals and milestones.

On November 16, 2012, the Company issued 37,050 options that are subject to vesting first based upon specified goals and milestones and then based upon time-based conditions. On the issuance date, such options had an aggregate Black-Scholes value of $489,060. As of June 30, 2013, the Company reviewed the specified goals and milestones on an employee by employee basis. Based upon the review, the Company has estimated that it was probable that, on average, the employees would achieve 55% of the target goals. As a result, the Company is recognizing 55% of the aggregate fair value of the options ratably over the time-based vesting period.

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Stock option activity under the 2008 Plan and 1998 Plan is summarized as follows:

	Aggregate Number	Weighted Average Exercise Price	Exercise Price Range
Outstanding, July 31, 2010	72,692	$ 113.00	$ 29.00 - 400.00
Granted	45,791	26.00	26.00 – 32.00
Exercised	-	-	-
Cancelled	-	-	-
Expired	(5,000)	114.00	99.00 – 225.00
Outstanding, June 30, 2011	113,483	78.00	26.00 – 400.00
Granted	52,744	23.00	20.00 – 26.00
Exercised	-	-	-
Cancelled	-	-	-
Expired	(9,750)	232.00	15.00 – 400.00
Outstanding, June 30, 2012	156,477	50.00	20.00 – 345.00
Granted	89,670	14.00	4.00 - 18.00
Exercised	-	-	-
Cancelled	(11,525)	23.00	23.00
Expired	(2,875)	202.00	109.00 - 235.00
Outstanding, June 30, 2013	231,747	$ 35.00	$ 4.00 - 345.00
Options exercisable at June 30, 2013	166,122	$ 41.00	
Options exercisable at June 30, 2012	101,011	$ 62.00	
Options exercisable at June 30, 2011	72,744	$ 104.00	

Weighted average fair value of options granted during the fiscal year ended June 30, 2013	$ 11.00
Weighted average fair value of options granted during the fiscal year ended June 30, 2012	$ 17.00
Weighted average fair value of options granted during the fiscal year ended June 30, 2011	$ 33.00

Non-vested stock option activity under the Plan is summarized as follows:

	Number of Options	Weighted-average Grant-Date Fair Value
Non-vested stock options at July 1, 2012	55,467	$25.00
Granted	89,670	11.00
Vested	(67,986)	13.00
Forfeited	(11,525)	18.00
Non-vested stock options at June 30, 2013	65,626	$ 16.00

As of June 30, 2013, the aggregate intrinsic value of stock options outstanding was $0, with a weighted-average remaining term of 7.6 years. The aggregate intrinsic value of stock options exercisable at that same date was $0, with a weighted-average remaining term of 7.1 years. As of June 30, 2013, the Company has 4,630,353 shares available for future stock option grants.

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

As of June 30, 2013, the aggregate intrinsic value of stock options outstanding was $0, with a weighted-average remaining term of 7.6 years. The aggregate intrinsic value of stock options exercisable at that same date was $0, with a weighted-average remaining term of 7.1 years. As of June 30, 2013, the Company has 46,304 shares available for future stock option grants.

Warrants

Total outstanding warrants at June 30, 2013 were as follows:

Strike Price	Warrants
$ 345.00	150
$ 315.00	200
$ 140.00	50
$ 108.00	25
$ 60.00	27,709
$ 35.00	197,453
$ 32.00	3,000
$ 29.00	49,269
$ 26.00	50
$ 1.00	5,250
	283,156

As of June 30, 2013, all of the above warrants are exercisable expiring at various dates through 2017. At June 30, 2013, the weighted-average exercise price on the above warrants was $36.00.

On August 8, 2012, pursuant to a warrant exchange agreement, 172,625 of the warrants with an exercise price of $35.00 were exchanged for 69,022 shares of Common Stock.

On April 8, 2013 and June 24, 2013, pursuant to warrant exchange agreements, an aggregate of 300,000 of the warrants with an initial exercise price of $12.00, which was subsequently reset to $3.00, were exchanged for an aggregate of 300,000 shares of Common Stock.

Long-Term Incentive Program

On December 13, 2007, the Company adopted a Long-Term Equity Incentive Program for the members of the executive management team in which key employees will be awarded shares of the Company's Common Stock and options to acquire shares of the Company's Common Stock if the Company achieves certain target goals relating to its multiple myeloma research project over the three fiscal year period from the date of adoption.

During the fiscal year ended June 30, 2011, the Company determined that the first target goal under the Long-Term Equity Incentive Program had been met and, therefore, recognized $93,500 of compensation. The Company also determined that the second and third target goals under the Long-Term Equity Incentive Program would not be met. As such, the eligible shares and options related thereto did not vest and the remaining $374,000 of potential compensation expense was not recognized.

11. Income Taxes:

Since the Company has recurring losses and a valuation allowance against deferred tax assets, there is no tax expense (benefit) for all periods presented.

The Company files a consolidated federal income tax return. The subsidiary files separate state and local income tax returns.

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The Company accounts for income taxes under FASB ASC 740 ("ASC 740"). Deferred income tax assets and liabilities are determined based upon differences between financial reporting and tax bases of assets and liabilities, which are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse.

As of June 30, 2013, the Company had federal net operating loss (“NOL”) carry forwards of $49,277,000 and state NOL carry forwards of approximately $41,910,000, which are available to reduce future taxable income. The federal NOL carry forwards will begin to expire in 2019. The state NOL carry forwards will begin to expire at various dates starting in 2019. The NOL carry forwards are subject to review and possible adjustment by the Internal Revenue Service and state tax authorities. NOL carry forwards may become subject to an annual limitation in the event of certain cumulative changes in the ownership interest of significant shareholders over a three-year period in excess of 50%, as defined under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, as well as similar state tax provisions. This could limit the amount of NOLs that the Company can utilize annually to offset future taxable income or tax liabilities. The amount of the annual limitation, if any, will be determined based on the value of the Company immediately prior to the ownership change. Subsequent ownership changes may further affect the limitation in future years.

The Company's reserves related to taxes are based on a determination of whether and how much of a tax benefit taken by the Company in its tax filings or positions is more likely than not to be realized. The Company recognized no material adjustment for unrecognized income tax benefits. Through June 30, 2013, the Company had no unrecognized tax benefits or related interest and penalties accrued.

ASC 740 requires a valuation allowance to reduce the deferred tax assets reported if, based on the weight of available evidence, it is more likely than not that some portion or all of the deferred tax assets will not be realized. After consideration of all the evidence, both positive and negative, the Company has recorded a full valuation allowance against its deferred tax assets at June 30, 2013 and 2012, respectively, because the Company's management has determined that is it more likely than not that these assets will not be fully realized.

The reconciliation of the effective income tax rate to the federal statutory rate is as follows:

	June 30,					
	2013		**2012**		**2011**	
Federal income tax provision at statutory rate	(34.0)	%	(34.0)	%	(34.0)	%
Fair value - warrant liability	(2.0)	%	(3.2)	%	(2.8)	%
Loss on settlement of warrant liabilities	1.0	%	-		-	
Other	(4.0)	%	(0.6)	%	(1.9)	%
Change in valuation allowance	39.0	%	37.8	%	38.7	%
Actual income tax provision (benefit) effective tax rate	-	%	-	%	-	%

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The principal components of deferred income tax assets consists of the following:

	June 30, 2013	**2012**
Net operating loss carryforwards	$19,269,000	$17,738,000
Stock-based compensation	2,507,000	2,243,000
Other	44,000	(42,000)
	21,820,000	19,939,000
Valuation allowance	(21,820,000)	(19,939,000)
Net deferred tax asset	$-	$-

12. Commitments:

Research Agreement

Effective September 1, 1998, the Company entered into a research and development agreement, which has subsequently been renewed, with The University of Waterloo which Dr. John Thompson, who is an officer, director and stockholder of the Company, is affiliated with. Pursuant to the agreement, the university provides research and development under the direction of the researcher and the Company. The agreement is renewable annually by the Company which has the right of termination upon 30 days' advance written notice. Effective September 1, 2011, the Company extended the research and development agreement for an additional one-year period through August 31, 2012 in the amount of 555,900 Canadian dollars. Effective September 1, 2012, the Company extended the research and development agreement for an additional one-year period through August 31, 2013 in the amount of Can $611,550. Effective July 1, 2013, the budget for the research and development agreement was amended to reduce the monthly amount from $50,962 to $38,038 through August 31, 2013. Research and development expenses under this agreement for the fiscal years ended June 30, 2013, 2012 and 2011 aggregated U.S. $628,995, U.S. $573,368 and U.S. $622,872, respectively, and U.S. $7,778,296 for the cumulative period through June 30, 2013. Future obligations to be paid under the agreement through August 31, 2013 equal approximately U.S. $76,076.

Supply and service agreements

Effective June 20, 2011, the Company entered into an agreement with Criterium, Inc. (“Criterium”) under which Criterium will provide monitoring, project and data management services in connection with the Company’s Phase 1b/2a clinical trial. The agreement, as amended, has an initial term that commences on the date of the agreement and runs for a period of seventeen (17) months. The Company’s remaining financial obligation under the agreement is estimated to be approximately $455,000.

Effective June 4, 2013, the Company entered into a clinical supply agreement with The University of Iowa (“Iowa”) under which Iowa will provide manufacturing, vialing and testing services for certain reagents that are used in SNS01-T. The agreement will terminate upon delivery of the delivery of the reagents, which is estimated to be approximately six months. The Company’s remaining financial obligation under the agreement is approximately $156,000.

Consulting and other Agreements

Effective May 1, 1999, the Company entered into a consulting agreement for research and development with Dr. John Thompson. The agreement was renewed for an additional one-year term through June 30, 2014. Future obligations to be paid under the agreement equal $67,500.

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The Company is obligated under a non-cancelable operating lease of office space expiring on May 31, 2014. The aggregate minimum future payments are $63,261. Rent expense charged to operations aggregated $69,538, $69,174, $88,766 and $984,270 for the fiscal years ended June 30, 2013, 2012, 2011, and from inception through June 30, 2013, respectively.

13. Collaborative Arrangements:

On May 14, 1999, the Company entered into an agreement (the "Collaboration") with an Israeli partnership that is engaged in the worldwide marketing of tissue culture plants. The purpose of the Collaboration is to develop enhanced banana plants which will result in banana fruit with improved consumer- and grower-driven traits. The program had been performed as a joint collaboration whereby the Company paid for 50% of the research costs of the program.

In July 1999, the Collaboration applied for and received a conditional grant from the Israel - United States Binational Research and Development Foundation (the "BIRD Foundation"). This agreement, as amended, allowed the Collaboration to receive $340,000 over a five-year period ending May 31, 2004. Grants received from the BIRD Foundation will be paid back only upon the commercial success of the Collaborations technology, as defined. The Company has received a total of $99,728, all of which was received prior to the fiscal years ended June 30, 2013, June 30, 2012 and June 30, 2011.

Effective December 22, 2011, the Company re-structured the Collaboration with the Israeli partnership to reflect the priorities of both Companies. The new agreement is an amendment to the original research and development agreement, dated May 14, 1999, that provided the Israeli company access to the Company’s proprietary technology enabling the two Companies to engage in a jointly-funded research and development program relating to the development and production of banana plants with improved traits. The new agreement re-structures the collaboration from a cost and profit sharing arrangement to a license agreement, which provides the Company with a mid- to upper-single digit royalty on incremental revenue as defined in the agreement, from the sale of the Israeli company’s banana seedling products containing the Company’s technology without any future payments by the Company for the costs of development and commercialization. If a product, which incorporates the Company’s technology, is commercialized by the Israeli partnership, the royalties will be payable from first commercial sale for the longer of ten (10) years or the expiration of the last valid patent on a country-by-country basis.

The Company's portion of the expenses of the collaboration approximated $0, $100,000 and $205,000 for the fiscal years ended June 30, 2013, 2012 and 2011, respectively, and is included in research and development expenses.

14. Grant Income:

On October 29, 2010, the Company was approved for a grant in the amount of $244,479 in connection with the Qualified Therapeutic Discovery Project, which is Section 48D of the Internal Revenue Code. The funds were granted in connection with the Company’s program for the use of its lead therapeutic candidate, SNS01-T, in multiple myeloma.

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

15. Supplemental Cash Flow Information:

	Fiscal Year Ended June 30,			Cumulative Amounts from Inception
	2013	2012	2011	
Supplemental disclosure of non-cash transactions:				
Conversion of convertible note into common stock	$-	$-	$-	$10,000,000
Conversion of bridge notes into common stock	-	-	-	534,316
Conversion of preferred stock into common stock	202,808	11,783	136,644	421,922
Allocation of common stock proceeds to warrants	459,000	-	-	459,000
Allocation of preferred stock proceeds to warrants and beneficial conversion feature	-	1,076,355	360,733	8,526,135
Allocation of convertible debt proceeds to warrants and beneficial conversion feature	-	-	-	9,340,000
Warrants issued for financing costs	-	-	-	690,984
Issuance of common stock for interest payments on convertible notes	-	-	-	2,003,386
Issuance of common stock for dividend payments on preferred stock	591,321	557,153	2,155,315	4,213,264
Issuance of common stock in settlement of accounts payable	-	-	-	175,000
Dividends accrued on preferred stock	20,000	114,474	122,252	20,000
Supplemental disclosure of cash flow information:				
Cash paid for interest	122,454	134,549	110,649	494,137

16. Reverse Stock Split

At a Special Meeting of Stockholders held on August 22, 2013, the Company’s stockholders approved the filing of a Certificate of Amendment to effect a reverse stock split of its issued and outstanding common stock. On September 13, 2013, the Company’s Board of Directors authorized a reverse stock split at a ratio of 1-for-100. Accordingly, the Company amended its Amended and Restated Certificate of Incorporation by the filing of a Certificate of Amendment

with the Delaware Secretary of State on October 16, 2013, to effect a 1-for-100 reverse stock split of our common stock, par value $0.01 per share, to take effect on October 21, 2013. All references in this Report to number of shares, price per share and weighted average number of shares outstanding of Common Stock prior to this reverse stock split have been adjusted to reflect the reverse stock split on a retroactive basis, unless otherwise noted.

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

CONDENSED CONSOLIDATED BALANCE SHEETS

	September 30 2013	June 30, 2013
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 789,176	$ 1,602,294
Prepaid research supplies and expenses	1,566,515	1,919,220
Total Current Assets	2,355,691	3,521,514
Equipment, furniture and fixtures, net	4,032	4,555
Intangible assets, net	3,450,009	3,566,497
Security deposit	5,171	5,171
TOTAL ASSETS	$ 5,814,903	$ 7,097,737
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accounts payable	$ 1,003,824	$ 637,320
Accrued expenses	406,779	387,540
Line of credit	2,187,082	2,187,082
Total Current Liabilities	3,597,685	3,211,942
Other liabilities	99,728	99,728
TOTAL LIABILITIES	3,697,413	3,311,670
COMMITMENTS		
STOCKHOLDERS' EQUITY:		
Convertible preferred stock, $0.01 par value, authorized 5,000,000 shares Series A 10,297 shares issued and 580 and 800 shares outstanding, respectively (liquidation preference of $609,000 and $820,000 at September 30, 2013 and June 30, 2013, respectively)	6	8
Common stock, $0.01 par value, authorized 500,000,000 shares, issued and outstanding 2,348,209 and 2,272,062, respectively	23,482	22,721
Capital in excess of par	78,325,793	78,189,173
Deficit accumulated during the development stage	(76,231,791)	(74,425,835)
Total Stockholders' Equity	2,117,490	3,786,067

TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 5,814,903	$ 7,097,737

See Notes to Condensed Consolidated Financial Statements

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS

	Three Months Ended September 30,		Cumulative Amounts from Inception
	2013	2012	
Licensing Revenue	$ 100,000	$ -	$ 1,890,000
Operating expenses:			
General and administrative	940,449	732,720	35,054,750
Research and development	727,119	513,433	24,049,390
Write-off of patents abandoned	185,161	-	2,158,595
Total operating expenses	1,852,729	1,246,153	61,262,735
Loss from operations	(1,752,729)	(1,246,153)	(59,372,735)
Other non-operating income (expense)			
Grant income	-	-	244,479
Change in fair value of warrant liability	-	(20,148)	8,701,721
Sale of state income tax loss net	-	-	586,442
Other noncash (expense) income, net	-	-	205,390
Loss on settlement of warrant liabilities	-	(785,171)	(1,724,546)
Loss on extinguishment of debt	-	-	(361,877)
Amortization of debt discount and financing costs	-	-	(11,227,870)
Interest expense convertible notes	-	-	(2,027,930)
Interest (expense) income - net	(31,604)	(33,982)	133,297
Net loss	(1,784,333)	(2,085,454)	(64,843,629)
Preferred dividends	(21,623)	(624,169)	(11,388,162)
Loss applicable to common shares	(1,805,956)	(2,709,623)	(76,231,791)

Other comprehensive loss	-	-	-
Comprehensive loss	$ (1,805,956)	$ (2,709,623)	$ (76,231,791)
Basic and diluted net loss per common share	$ (0.78)	$ (2.52)	
Basic and diluted weighted-average number of common shares outstanding	2,307,926	1,074,493	

See Notes to Condensed Consolidated Financial Statements

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

CONDENSED CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY

FOR THE THREE MONTHS ENDED SEPTEMBER 30, 2013

(unaudited)

	Preferred Stock		Common Stock		Capital in Excess of Par Value	Deficit Accumulated During the Development Stage	Stockholders' Equity (Deficiency)
	Shares	Amount	Shares	Amount			
Balance at June 30, 2013	800	$ 8	2,272,062	$ 22,721	$ 78,189,173	$ (74,425,835)	$ 3,786,067
Stock-based compensation	-	-	-	-	124,466	-	124,466
Exercise of warrants	-	-	290	3	287	-	290
Preferred stock converted into common stock	(220)	(2)	73,333	733	(731)	-	-
Issuance of common stock in lieu of cash payment for dividends	-	-	2,524	25	12,598	(12,623)	-
Dividends accrued and upaid at September 30, 2013	-	-	-	-	-	(9,000)	(9,000)
Net loss	-	-	-	-	-	(1,784,333)	(1,784,333)
Balance July 1, 1998 (inception) through September 30, 2013	580	$ 6	2,348,209	$ 23,482	$ 78,325,793	$ (76,231,791)	$ 2,117,490

See Notes to Condensed Consolidated Financial Statements

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(unaudited)

	Three Months Ended September 30,		Cumulative Amounts from Inception
	2013	2012	
Cash flows from operating activities:			
Net loss	$ (1,784,333)	$ (2,085,454)	$ (64,843,629)
Adjustments to reconcile net loss to net cash used in operating activities:			
Noncash capital contribution	-	-	85,179
Noncash conversion of accrued expenses into equity	-	-	131,250
Noncash income related to change in fair value of warrant liability	-	20,148	(9,022,980)
Noncash charge for change in warrant terms	-	-	115,869
Issuance of common stock and warrants for interest	-	-	2,003,386
Issuance of common stock for services	-	-	53,800
Stock-based compensation expense	124,466	153,562	12,955,112
Depreciation and amortization	74,793	63,572	1,468,727
Write-off of intangibles	185,161	-	2,158,595
Amortization of convertible note discount	-	-	10,000,000
Amortization of deferred financing costs	-	-	1,227,869
Loss on settlement of warrant liabilities		785,171	1,724,546
Loss on extinguishment of debt	-	-	361,877
(Increase) decrease in operating assets:			
Prepaid expenses and other current assets	352,705	88,881	(1,566,515)
Security deposit	-	-	(5,171)
Increase (decrease) in operating liabilities:			
Accounts payable	366,504	337,653	1,003,824
Accrued expenses	10,239	13	552,780
Net cash used in operating activities	(670,465)	(636,454)	(41,595,481)
Cash flows from investing activities:			
Patent costs	(142,943)	(145,717)	(6,895,416)
Purchase of equipment, furniture and fixtures	-	(1,281)	(185,947)
Net cash used in investing activities	(142,943)	(146,998)	(7,081,363)
Cash flows from financing activities:			
Proceeds from grant	-	-	99,728

Proceeds (repayments) from line of credit	-	-	2,187,082
Proceeds from issuance of bridge notes	-	-	525,000
Proceeds from issuance of preferred stock and warrants, net	-	-	10,754,841
Redemption of convertible notes and warrants	-	-	(2,160,986)
Proceeds from issuance of convertible notes	-	-	9,340,000
Deferred financing costs	-	-	(651,781)
Proceeds from issuance of common stock and warrants, net and exercise of warrants and options	290	94,183	29,372,136
Net cash provided by financing activities	290	94,183	49,466,020
Net (decrease) increase in cash and cash equivalents	(813,118)	(689,269)	604,015
Cash and cash equivalents at beginning of period	1,602,294	2,001,325	-
Cash and cash equivalents at end of period	$ 789,176	$ 1,312,056	$ 789,176
Supplemental disclosure of non-cash transactions:			
Conversion of convertible note into common stock	$ -	$ -	$ 10,000,000
Conversion of bridge notes into common stock	-	-	534,316
Conversion of preferred stock into common stock	73,331	137,810	495,253
Allocation of preferred stock proceeds to warrants and beneficial conversion feature	-	-	8,526,135
Allocation of convertible debt proceeds to warrants and beneficial conversion feature	-	-	9,340,000
Warrants issued for financing costs	-	-	690,984
Issuance of common stock for interest payments on convertible notes	-	-	2,003,386
Issuance of common stock for dividend payments on preferred stock	12,623	448,000	4,225,887
Issuance of common stock in settlement of accounts payable	-	-	175,000
Dividends accrued on preferred stock	9,000	(64,722)	143,474
Supplemental disclosure of cash flow information:			
Cash paid for interest	32,197	34,990	526,334

See Notes to Condensed Consolidated Financial Statements

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(unaudited)

Note 1 - Basis of Presentation:

The financial statements included herein have been prepared by Senesco Technologies, Inc. (the "Company"), without audit, pursuant to the rules and regulations of the Securities and Exchange Commission. Certain information and footnote disclosures normally included in financial statements prepared in accordance with United States generally accepted accounting principles have been condensed or omitted pursuant to such rules and regulations. These unaudited condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and notes thereto included in the Company's Annual Report on Form 10-K for the fiscal year ended June 30, 2013, as amended.

The Company's board of directors authorized a 1:100 reverse stock split on September 30, 2013, to take effect on October 21, 2013. All share and related option and warrant information presented in these financial statements and accompanying footnotes have been retroactively adjusted to reflect the reduced number of shares resulting from this action.

In the opinion of the Company's management, the accompanying unaudited condensed consolidated financial statements contain all adjustments, consisting solely of those which are of a normal recurring nature, necessary to present fairly its financial position as of September 30, 2013 and the results of its operations and cash flows for the three months ended September 30, 2013 and 2012.

Interim results are not necessarily indicative of results for the full fiscal year.

Note 2 Liquidity:

As shown in the accompanying condensed consolidated financial statements, the Company has a history of losses with a deficit accumulated during the development stage from July 1, 1998 (inception) through September 30, 2013 of $76,231,791. Additionally, the Company has generated minimal revenues by licensing its technology for certain crops to companies willing to share in its development costs. In addition, the Company's technology may not be ready for commercialization for several years. The Company expects to continue to incur losses for the next several years because it anticipates that its expenditures on research and development and administrative activities will significantly exceed its revenues during that period. The Company cannot predict when, if ever, it will become profitable.

As of September 30, 2013, the Company had cash and cash equivalents in the amount of $789,176, which consisted of checking accounts and money market funds. In October 2013, the Company received net proceeds of approximately $1,505,000 from the placement of the Company's common stock, par value $0.01 per share (the "Common Stock"). The Company estimates that its cash and cash equivalents as of September 30, 2013 and the net proceeds of the placement of Common Stock in October 2013 will cover its expenses through March 2014. In order to provide the Company with the cash resources necessary to fund operations through at least September 30, 2014, the Company will continue its efforts to raise additional capital through a private or public placement in the near future. To that goal, the Company effected a 1:100 reverse stock split and the Company has filed a preliminary S-1 registration statement in October 2013.

The Company will need additional capital and plans to raise additional capital through the placement of debt instruments, equity instruments or both. However, the Company may not be able to obtain adequate funds for its operations when needed or on acceptable terms. If the Company is unable to raise additional funds, it will need to do one or more of the following:

- delay, scale-back or eliminate some or all of its research and product development programs;
- license third parties to develop and commercialize products or technologies that it would otherwise seek to develop and commercialize itself;
- seek strategic alliances or business combinations;
- attempt to sell the Company;
- cease operations; or
- declare bankruptcy.

Note 3 Intangible Assets:

The Company conducts research and development activities, the cost of which is expensed as incurred, in order to generate patents that can be licensed to third parties in exchange for license fees and royalties. Because the patents are the basis of the Company's future revenue, the patent costs are capitalized. The capitalized patent costs represent the outside legal fees incurred by the Company to submit and undertake all necessary efforts to have such patent applications issued as patents. The Company incurred $142,943 and $145,717 of such costs for the three months ended September 30, 2013 and 2012, respectively.

The length of time that it takes for an initial patent application to be approved is generally between four to six years. However, due to the unique nature of each patent application, the actual length of time may vary. If a patent application is denied, the associated cost of that application would be written off. However, the Company has not had any patent applications denied as of September 30, 2013. Additionally, should a patent application become impaired during the application process, the Company would write down or write off the associated cost of that patent application.

Issued patents and agricultural patent applications pending are being amortized over a period of 17 years from inception, the expected economic life of the patent. During the three months ended September 30, 2013 and 2012, the Company recorded amortization expense in the amount of $74,270 and $62,925, respectively.

The Company assesses the impairment in value of intangible assets whenever events or circumstances indicate that their carrying value may not be recoverable. Factors the Company considers important which could trigger an impairment review include the following:

- significant negative industry trends;
- significant underutilization of the assets;
- significant changes in how the Company uses the assets or its plans for their use; and
- changes in technology and the appearance of competing technology.

If a triggering event occurs and the Company's review determines that the future discounted cash flows related to the groups, including these assets, will not be sufficient to recover their carrying value, the Company will reduce the carrying values of these assets down to its estimate of fair value and continue amortizing them over their remaining useful lives. During the quarter ended September 30, 2013, in order to reduce its cost of patent prosecution and maintenance, the Company reviewed its patent portfolio and identified several patents and patent applications that it believed it no longer needed to maintain without having a material impact on the patent portfolio. Accordingly, during the quarter ended September 30, 2013, the Company wrote off patent costs in the net amount of $185,161.

Note 4 - Loss Per Share:

Basic loss per share is computed by dividing net loss available to common shareholders by the weighted average number of the Company's Common Stock assumed to be outstanding during the period of computation. Diluted earnings per share is computed similar to basic earnings per share except that the denominator is increased to include the number of additional shares of Common Stock that would have been outstanding if the potential shares of Common Stock had been issued and if the additional shares of Common Stock were dilutive.

For all periods presented, basic and diluted loss per share are the same, as any additional Common Stock equivalents would be anti-dilutive. Potentially dilutive shares of Common Stock have been excluded from the calculation of the weighted average number of dilutive shares of Common Stock as follows:

	September 30,	
	2013	2012
Common stock to be issued upon conversion of convertible preferred stock	193,333	38,269
Outstanding warrants	282,866	400,968
Outstanding options	277,240	156,477
Total potentially dilutive shares of common stock	753,440	595,715

Note 5 Stock-Based Compensation:

The terms and vesting schedules for share-based awards vary by type of grant and the employment status of the grantee. Generally, the awards vest based upon time-based conditions or achievement of specified goals and milestones.

On September 13, 2013, the Company issued 46,780 options that are subject to vesting first based upon specified goals and milestones and then based upon time-based conditions. On the issuance date, such options had an aggregate Black-Scholes value of $201,154. As of September 30, 2013, the Company reviewed the specified goals and milestones on an employee by employee basis. Based upon the review, the Company has estimated that it was probable that, on average, the employees would achieve 41% of the target goals. As a result, the Company is recognizing 41% of the aggregate fair value of the options ratably over the time-based vesting period.

Also, on September 13, 2013, the Company issued an additional 26,500 options that are subject to time-based conditions only. On the issuance date, such options had an aggregate Black-Scholes value of $108,650.

There were no options granted during the three month period ended September 30, 2012.

The fair value of each stock option granted or vesting has been determined using the Black-Scholes model. The material factors incorporated in the Black-Scholes model in estimating the value of the options include the following:

Three Months Ended September 30,		
	2013	2012
Risk-free interest rate (1)	1.65-1.96%	None
Expected volatility	99%	None
Dividend yield	None	None
Expected life (2)	5.5-10.0	None

(1) Represents the interest rate on a U.S. Treasury security with a maturity date corresponding to that of the option term.

(2) Expected life for time based stock options was estimated using the “simplified” method, as allowed under the provisions of the Securities and Exchange Commission Staff Accounting Bulletin No.110. Expected life for performance based stock options was the actual term of the option.

In August 2013, the Company’s compensation committee determined that the performance metrics for the options granted in November 2012 had not been fully met and 75% of those options were forfeited. As a result of the options being forfeited, stock based compensation was reduced by $9,100 during the three month period ended September 30, 2013. The remaining retained options will continue to vest pursuant to the vesting schedule.

The economic values of the options will depend on the future price of the Company's Common Stock, which cannot be forecast with reasonable accuracy.

Stock option activity under the Company’s 2008 Plan and 1998 Plan for the three months ended September, 2013 is summarized as follows:

	Aggregate Number	Weighted Average Exercise Price	Exercise Price Range	
Outstanding, July 1, 2013	231,748	$ 35.00	$ 4.30	345.00
Granted	73,280	5.40	5.40	
Exercised	-	-	-	
Forfeited	(27,788)	16.50	16.50	

Expired	-	-	-
Outstanding, September 30, 2013	277,240	$ 29.30	$ 4.30 - 345.00
Options exercisable at September 30, 2013	185,031	$ 38.37	
Options exercisable and expected to become exercisable at September 30, 2013	262,795		
Weighted average fair value of options granted during the three months ended September 30, 2013	$ 4.23		

F-42

As of September 30, 2013, the aggregate intrinsic value of stock options outstanding was $0, with a weighted-average remaining term of 7.9 years. The aggregate intrinsic value of stock options exercisable at that same date was $0, with a weighted-average remaining term of 7.1 years. As of September 30, 2013, the Company has 811shares available for future stock option grants.

Stock-based compensation expense for the three months ended September 30, 2013 and September 30, 2012 amounted to $124,466 and $153,562, respectively.

As of September 30, 2013, total stock-based compensation expense not yet recognized related to stock option grants amounted to approximately $762,000**,** which will be recognized over the next 47.5 months.

Note 6 Line of Credit:

On February 17, 2010, the Company entered into a credit agreement with JMP Securities LLC. 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 (the “Line of Credit”). In April 2011, we were required to enter into a new demand note with the clearing agent for JMP Securities in connection with the Line of Credit.

Any draws upon the Line of Credit accrue at an annual interest rate of (i) the broker rate in effect at the interest date (which was 3.75% at September 30, 2013), plus (ii) 2.0% and are due on demand. There are no other conditions or fees 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 a member of the Company’s Board of Directors, Harlan W. Waksal, M.D., which assets are currently held by JMP Securities. The principal balance outstanding as of September 30, 2013 and June 30, 2013 was $2,187,082.

Total interest expense recorded under the Line of Credit for the three months ended September 30, 2013 and 2012 amounted to $32,197 and $34,990, respectively.

Note 7 Income Taxes:

No provision for income taxes has been made for the three months ended September 30, 2013 and 2012 given the Company's losses in 2013 and 2012 and available net operating loss carryforwards. A benefit has not been recorded as the realization of the net operating losses is not assured and the timing in which the Company can utilize its net operating loss carryforwards in any year or in total may be limited by provisions of the Internal Revenue Code regarding changes in ownership of corporations.

Note 8 - Fair Value Measurements:

The following tables provide the assets and liabilities carried at fair value measured on a recurring basis as of September 30, 2013 and June 30, 2013:

	Carrying Value	Fair Value Measurement at September 30, 2013 Level 1	Level 2	Level 3
Assets:				
Cash and cash equivalents	$ 789,176	$ 789,176	$ -	$ -

	Carrying Value	Fair Value Measurement at June 30, 2013 Level 1	Level 2	Level 3
Assets:				
Cash and cash equivalents	$ 1,602,294	$ 1,602,294	$ -	$ -

Note 9 Warrant Liabilities:

At September 30, 2013 and June 30, 2013, there were an aggregate of 87,672 warrants included in the fair value of the warrant liabilities. However, the value of the warrants outstanding at September 30, 2013 and June 30, 2013 was de minimis.

Note 10 Convertible Preferred Stock

During the three months ended September 30, 2013, 220 shares of Convertible Preferred Stock were converted into 73,333 shares of Common Stock. During the three months ended September 30, 2013, the Company issued an additional 2,524 shares of Common Stock for the payment of dividends in the amount of $12,623. Total dividends payable on the outstanding 580 shares of Convertible Preferred Stock at September 30, 2013 amounted to $29,000.

As a result of the issuance of Common Stock on October 2, 2013, the conversion rate on the Convertible Preferred Stock was adjusted from $3.00 to $2.50.

Note 11 Recent Accounting Pronouncements

In July 2013, the Financial Accounting Standards Board ("FASB") issued ASU 2013-11, "Incomes Taxes (Topic 740): Presentation of an Unrecognized Tax Benefit When a Net Operating Loss Carryforward, a Similar Tax Loss, or a Tax Credit Carryforward Exists." This update addresses the diversity in practice regarding financial statement presentation of an unrecognized tax benefit when a net operating loss carryforward, a similar tax loss, or a tax credit carryforward exists. The guidance requires an unrecognized tax benefit, or a portion thereof, to be presented in the financial statements as a reduction to a deferred tax asset for a net operating loss carryforward, a similar tax loss, or a tax credit carryforward. To the extent the deferred tax asset is not available at the reporting date to settle any additional income taxes that would result from the disallowance of a tax position; the unrecognized tax benefit should be presented in the financial statements as a liability and should not be combined with the deferred tax asset. The amendments in this standard are effective for reporting periods beginning after December 15, 2013, with early adoption permitted. We do not believe the adoption of this standard will have a material impact on our financial position, results of operations or cash flows.

Note 12 Subsequent Event

On October 2, 2013, the Company completed a Common Stock offering for $1,725,000 in gross proceeds, before deducting estimated offering expenses, in a registered direct offering of 690,000 shares of the Company's Common Stock. Each Share was sold at a price of $2.50 per share. The Shares were sold pursuant to the Registration Statement in the form of a unit, at $5.00 per unit, with each unit consisting of 2 shares of Common Stock.

The net offering proceeds to the Company from the sale of the Common Stock, after deducting the estimated offering expenses payable by the Company of approximately $220,000 were approximately $1,505,000. The net proceeds of the offering will be used for working capital, research and development and general corporate purposes.

SENESCO TECHNOLOGIES, INC.

Units, Each Consisting of

Shares of Common Stock

Prospectus

, 2013

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth the various expenses to be incurred in connection with the registration of the securities being registered hereby, all of which will be borne by the registrant. All amounts shown are estimates except the SEC registration fee.

SEC registration fee	$1,288
FINRA fee	$[_____]
Legal fees and expenses	$[_____]
Accounting fees and expenses	$[_____]
Transfer agent and miscellaneous expenses	$[_____]
Total	$[_____]

Item 14. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law empowers a Delaware corporation to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of such corporation) by reason of the fact that such person is or was a director, officer, employee or agent of such corporation, or is or was serving at the request of such corporation as a director, officer, employee or agent of another corporation or enterprise. A corporation may, in advance of the final disposition of any civil, criminal, administrative or investigative action, suit or proceeding, pay the expenses (including attorneys' fees) incurred by any officer, director, employee or agent in defending such action, provided that the director or officer undertakes to repay such amount if it shall ultimately be determined that he is not entitled to be indemnified by the corporation. A corporation may indemnify such person against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful.

A Delaware corporation may indemnify officers and directors in an action by or in the right of the corporation to procure a judgment in its favor under the same conditions, except that no indemnification is permitted without judicial approval if the officer or director is adjudged to be liable to the corporation. Where an officer or director is successful

on the merits or otherwise in the defense of any action referred to above, the corporation must indemnify him against the expenses (including attorneys fees) which he actually and reasonably incurred in connection therewith. The indemnification provided is not deemed to be exclusive of any other rights to which an officer or director may be entitled under any corporation's by-law, agreement, vote or otherwise.

Our certificate of incorporation includes a provision that eliminates the personal liability of our directors to us or our stockholders for monetary damages for breach of their fiduciary duty to the maximum extent permitted by the DGCL. The DGCL does not permit liability to be eliminated (i) for any breach of a director's duty of loyalty to us or our stockholders, (ii) for acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law, (iii) for unlawful payments of dividends or unlawful stock repurchases or redemptions, as provided in Section 174 of the DGCL, or (iv) for any transaction from which the director derived an improper personal benefit. In addition, as permitted in Section 145 of the DGCL, our certificate of incorporation and by-laws provide that we shall indemnify our directors and officers to the fullest extent permitted by the DGCL, including those circumstances in which indemnification would otherwise be discretionary, subject to certain exceptions. Our by-laws also provide that we shall advance expenses to directors and officers incurred in connection with an action or proceeding as to which they may be entitled to indemnification, subject to certain exceptions.

Each of our indemnification agreements with each of our executive officers and directors provides for indemnification to the maximum extent permitted by applicable law. We also indemnify each of our directors and executive officers with the maximum indemnification allowed to directors and executive officers by the DGCL, subject to certain exceptions, as well as certain additional procedural protections. In addition, we will generally advance expenses incurred by directors and executive officers in any action or proceeding as to which they may be entitled to indemnification, subject to certain exceptions.

The indemnification provisions in our certificate of incorporation and by-laws also permit indemnification for liabilities arising under the Securities Act of 1933. Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable.

We currently carry director and officer liability insurance in the amount of $10,000,000.

Item 15. Recent Sales of Unregistered Securities.

During the three year period preceding the date of the filing of this registration statement, we have issued securities in the transactions described below without registration under the Securities Act of 1933.

On August 8, 2012, we completed an exchange of certain five-year warrants we issued in 2010 to purchase 149,188 shares of common stock in exchange for 60,819 shares of common stock, pursuant to warrant exchange agreements by and between us and certain holders of the warrants. The shares of our common stock were issued solely to former holders of the warrants upon exchange pursuant to the exemption from registration provided under Section 3(a)(9) of the Securities Act of 1933, as amended. This exemption is available to us because the shares of our common stock were exchanged by us with our existing security holders with no commission or other remunerations being paid or given for soliciting such an exchange.

On April 26, 2013, we completed an exchange of certain five-year warrants we issued in January 2013 to purchase 105,000 shares of common stock in exchange for 52,500 shares of common stock, pursuant to warrant exchange agreements by and between us and certain holders of the warrants. The shares of our common stock were issued solely to former holders of the warrants upon exchange pursuant to the exemption from registration provided under Section 3(a)(9) of the Securities Act of 1933, as amended. This exemption is available to us because the shares of our common stock were exchanged by us with our existing security holders with no commission or other remunerations being paid or given for soliciting such an exchange.

On June 24, 2013, we completed an exchange of certain five-year warrants we issued in January 2013 to purchase 195,000 shares of common stock in exchange for 195,000 shares of common stock, pursuant to warrant exchange agreements by and between us and certain holders of the warrants. Additionally, due to certain rights given to those investors during the exchange of warrants for common stock that took place on April 26, 2013, we issued 52,500 additional shares of our common stock to the investors that took part in that exchange transaction. The shares of our common stock were issued solely to former holders of the warrants upon exchange pursuant to the exemption from registration provided under Section 3(a)(9) of the Securities Act of 1933, as amended. This exemption is available to us because the shares of our common stock were exchanged by us with our existing security holders with no commission or other remunerations being paid or given for soliciting such an exchange.

Item 16. Exhibits and Financial Statement Schedules.

(a) The following exhibits are filed herewith:

Exhibit No.	Description of Exhibit
2.1	Merger Agreement and Plan of Merger by and among Nava Leisure USA, Inc., an Idaho corporation, the Principal Stockholders (as defined therein), Nava Leisure Acquisition Corp., and Senesco, Inc., dated October 9, 1998. (Incorporated by reference to Senesco Technologies, Inc. definitive proxy statement on Schedule 14A dated January 11, 1999.)
2.2	Merger Agreement and Plan of Merger by and between Senesco Technologies, Inc., an Idaho corporation, and Senesco Technologies, Inc., a Delaware corporation, dated September 30, 1999. (Incorporated by reference to Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended September 30, 1999.)
3.1	Amended and Restated Certificate of Incorporation of Senesco Technologies, Inc. filed with the State of Delaware on January 22, 2007. (Incorporated by reference to Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended December 31, 2006.)
3.2	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of Senesco Technologies, Inc. filed with the State of Delaware on January 22, 2008. (Incorporated by reference to Exhibit 3.1 of Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended December 31, 2007.)
3.3	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of Senesco Technologies, Inc. filed with the State of Delaware on September 22, 2009. (Incorporated by reference to Exhibit 3.3 of Senesco Technologies, Inc. annual report on Form 10-K/A for the period ended June 30, 2009.)
3.4	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of Senesco Technologies, Inc. filed with the State of Delaware on May 25, 2010. (Incorporated by reference to Exhibit 3.1 to Senesco Technologies, Inc. current report on Form 8-K filed on May 28, 2010.)
3.5	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of Senesco Technologies, Inc. filed with the State of Delaware on December 22, 2011. (Incorporated by reference to Exhibit 3.1 to Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended December 31, 2011.)
3.6	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of Senesco Technologies, Inc. filed with the State of Delaware on April 1, 2013. (Incorporated by reference to Exhibit 3.1 to Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended March 31, 2013.)
3.7	

	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of Senesco Technologies, Inc. filed with the State of Delaware on October 16, 2013. (Incorporated by reference to Exhibit 3.1 to Senesco Technologies, Inc. current report on Form 8-K filed on October 21, 2013.)
3.8	Amended and Restated By-laws of Senesco Technologies, Inc. as adopted on October 2, 2000. (Incorporated by reference to Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended December 31, 2000.)
3.9	Certificate of Designations to the Company's Certificate of Incorporation (Series A)(Incorporated by reference to Exhibit 3.1 to Senesco Technologies, Inc. current report on Form 8-K filed on March 29, 2010).
4.1	Form of Series B Warrant issued to Partlet Holdings Ltd. (Incorporated by reference to Exhibit 4.2 of Senesco Technologies, Inc. current report on Form 8-K, filed on July 10, 2009.)

4.2	Form of Series A Warrant issued to each of Robert Forbes, Timothy Forbes, 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. (Incorporated by reference to Exhibit 4.1 of Senesco Technologies, Inc. current report on Form 8-K, filed on July 30, 2009.)
4.3	Form of Series B Warrant issued to each of Robert Forbes, Timothy Forbes, 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. (Incorporated by reference to Exhibit 4.1 of Senesco Technologies, Inc. current report on Form 8-K, filed on July 30, 2009.)
4.4	Form of Series B Warrant issued to Cato Holding Company. (Incorporated by reference to Exhibit 4.1 of Senesco Technologies, Inc. current report on Form 8-K, filed on July 30, 2009.)
4.5	Form of Series A Common Stock Purchase Warrant issued to certain accredited investors (Incorporated by reference to Exhibit 4.1 of Senesco Technologies, Inc. current report on Form 8-K filed on March 29, 2010.)
4.6	Form of Series B Common Stock Purchase Warrant issued to certain affiliated investors (Incorporated by reference to Exhibit 4.2 of Senesco Technologies, Inc. current report on Form 8-K filed on March 29, 2010.)
4.7	Form of Warrant (Incorporated by reference to Exhibit 4.1 of Senesco Technologies, Inc. current report on Form 8-K filed on January 9, 2012.)
4.8	Form of Warrant (Incorporated by reference to Exhibit 4.1 of Senesco Technologies, Inc. current report on Form 8-K filed on March 2, 2012.)
4.9	Form of Warrant Clarification Letter (Incorporated by reference to Exhibit 4.16 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2012.)
4.10	Form of January 2013 Warrant (Incorporated by reference to Exhibit 4.1 of Senesco Technologies, Inc. current report on Form 8-K filed on January 4, 2013.)
5.1 †	Opinion of Morgan, Lewis & Bockius, LLP regarding the validity of the shares being registered.
10.1	Indemnification Agreement by and between Senesco Technologies, Inc. and Christopher Forbes, dated January 21, 1999. (Incorporated by reference to Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended December 31, 1998.)
10.2	Indemnification Agreement by and between Senesco Technologies, Inc. and Thomas C. Quick, dated February 23, 1999. (Incorporated by reference to Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended March 31, 1999.)
10.3	Indemnification Agreement by and between Senesco Technologies, Inc. and Ruedi Stalder, dated March 1, 1999. (Incorporated by reference to Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended March 31, 1999.)
10.4	Indemnification Agreement by and between Senesco Technologies, Inc. and Jack Van Hulst, dated January 16, 2007. (Incorporated by reference to Exhibit 10.13 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2007.)

10.5	Indemnification Agreement by and between Senesco Technologies, Inc. and John Braca, dated October 8, 2003. (Incorporated by reference to Exhibit 10.38 of Senesco Technologies, Inc. annual report on Form 10-KSB for the period ended June 30, 2004.)

10.6	Indemnification Agreement by and between Senesco Technologies, Inc. and David Rector dated as of April, 2002. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended September 30, 2004.)
10.7	Indemnification Agreement by and between Senesco Technologies, Inc. and Harlan W. Waksal, M.D. dated as of October 24, 2008. (Incorporated by reference to Exhibit 10.8 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2009.)
10.8	Indemnification Agreement by and between Senesco Technologies, Inc. and Warren Isabelle dated as of June 8, 2009. (Incorporated by reference to Exhibit 10.9 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2009.)
10.9	Indemnification Agreement by and between Senesco Technologies, Inc. and Leslie J. Browne, Ph.D. dated as of May 25, 2010. (Incorporated by reference to Exhibit 10.2 of Senesco Technologies, Inc. current report on Form 8-K filed on May 25, 2010.)
10.10	Nondisclosure, Noncompetition and Invention Assignment Agreement by and between Leslie J. Browne, Ph.D. and Senesco Technologies, Inc. dated May 25, 2010. (Incorporated by reference to Exhibit 10.3 of Senesco Technologies, Inc. current report on Form 8-K filed on May 25, 2010.)
10.11*	Consulting Agreement by and between Senesco Technologies, Inc. and John E. Thompson, Ph.D., dated July 12, 1999. (Incorporated by reference to Senesco Technologies, Inc. annual report on Form 10-KSB for the period ended June 30, 2000.)
10.12*	Amendment to Consulting Agreement of July 12, 1999, as modified on February 8, 2001, by and between Senesco, Inc. and John E. Thompson, Ph.D., dated December 13, 2002. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended December 31, 2002.)
10.13*	Amendment # 7 to Consulting Agreement of July 12, 1999, as modified, by and between Senesco, Inc. and John E. Thompson, Ph.D., dated June 20, 2011. (Incorporated by reference to Exhibit 10.16 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2011.)
10.14*	Amendment # 8 to Consulting Agreement of July 12, 1999, as modified, by and between Senesco, Inc. and John E. Thompson, Ph.D., dated June 20, 2013. (Incorporated by reference to Exhibit 10.14 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2013.)
10.15+	Development Agreement by and between Senesco Technologies, Inc. and ArborGen, LLC, dated June 28, 2002. (Incorporated by reference to Exhibit 10.31 of Senesco Technologies, Inc. annual report on Form 10-KSB for the year ended June 30, 2002.)
10.16+	Commercial License Agreement by and between Senesco Technologies, Inc. and ArborGen, LLC dated as of December 21, 2006. (Incorporated by reference to Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended December 31, 2006.)
10.17+	Development and License Agreement by and between Senesco Technologies, Inc. and Calwest Seeds, dated September 14, 2002. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended September 30, 2002.)

10.18 +	Development and License Agreement by and between Senesco Technologies, Inc. and The Scotts Company, dated March 8, 2004. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended March 31, 2004.)
10.19 +	Development and License Agreement with Broin and Associates, Inc. (currently known as Poet) dated as of October 14, 2004. (Incorporated by reference to Exhibit 10.2 of Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended September 30, 2004.)

10.20+	License Agreement by and between Senesco Technologies, Inc. and Bayer CropScience GmbH, dated as of November 8, 2006. (Incorporated by reference to Senesco Technologies, Inc. quarterly report on Form 10-Q for the quarterly period ended December 31, 2006.)
10.21+	License Agreement with Bayer CropScience AG dated as of July 23, 2007. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended September 30, 2007.)
10.22+	Patent License Agreement with Monsanto Company dated as of August 6, 2007. (Incorporated by reference to Exhibit 10.2 of Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended September 30, 2007.)
10.23+	License Agreement with Bayer CropScience AG dated as of September 17, 2007. (Incorporated by reference to Exhibit 10.3 of Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended September 30, 2007.)
10.24	Biofuels Evaluation and License Agreement by and between BioCorp Ventures LLC, Senesco Technologies, Inc. and Senesco, Inc. dated May 14, 2013. (Incorporated by reference to Exhibit 10.24 of Senesco Technologies, Inc. annual report on Form 10-K/A, for the period ended June 30, 2013.)
10.25+	Amended and Restated Agreement by and between Rahan Meristem (1998) LTD., Senesco Technologies, Inc. and Senesco, Inc. dated December 22, 2011. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended December 31, 2011.)
10.26	Research Agreement by and among Senesco Technologies, Inc., Dr. John E. Thompson and the University of Waterloo, dated September 1, 1998, as amended. (Incorporated by reference to Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended December 31, 1998.)
10.27	Amendment to Research Agreement by and among the University of Waterloo, Senesco, Inc., and Dr. John E. Thompson, Ph.D., dated June 11, 2012. (Incorporated by reference to Exhibit 10.31 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2012.)
10.28	Amendment to Research Agreement by and among the University of Waterloo, Senesco, Inc. and Dr. John E. Thompson, Ph.D., dated September 1, 2012. ((Incorporated by reference to Exhibit 10.32 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2012.)
10.29	Amendment to Research Agreement by and among the University of Waterloo, Senesco, Inc. and Dr. John E. Thompson, Ph.D., dated May 16, 2013. ((Incorporated by reference to Exhibit 10.39 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2013.)
10.30+	Master Product Sale Agreement with VGXI, Inc. dated as of June 27, 2008. (Incorporated by reference to Exhibit 10.29 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2008.)
10.31	Master Product Sale Agreement with Polyplus-transfection dated as of June 30, 2008. (Incorporated by reference to Exhibit 10.30 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2008.)
10.32	

	Proposal for Manufacture and Supply by and between Avecia Biotechnology, Inc. and Senesco Technologies, Inc. dated as of September 4, 2008. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended September 30, 2008.)
10.33	Master Services Agreement by and between Criterium, Inc. and Senesco Technologies, Inc. dated June 20, 2011. (Incorporated by reference to Exhibit 10.35 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2011.)

10.34	Clinical Trial Research Agreement by and between Mayo Clinic and Senesco Technologies, Inc. dated August 15, 2011. (Incorporated by reference to Exhibit 10.36 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2011.)
10.35	Securities Purchase Agreement by and between Senesco Technologies, Inc. and Partlet Holdings Ltd. Dated as of July 9, 2009. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. current report on Form 8-K, filed on July 10, 2009.)
10.36	Securities Purchase Agreement by and between Senesco Technologies, Inc. and each of Robert Forbes, Timothy Forbes, 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 dated as of July 29, 2009. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. current report on Form 8-K , filed on July 30, 2009.)
10.37	Securities Purchase Agreement by and between Senesco Technologies, Inc. and Cato Holding Company dated as of July 29, 2009. (Incorporated by reference to Exhibit 10.2 of Senesco Technologies, Inc. current report on Form 8-K , filed on July 30, 2009.)
10.38	Securities Purchase Agreement by and between Senesco Technologies, Inc. and certain investors (Non-Affiliates). (Incorporated by reference to Exhibit 10.2 of Senesco Technologies, Inc. current report on Form 8-K filed on March 29, 2010.)
10.39	Securities Purchase Agreement by and between Senesco Technologies, Inc. and certain investors (Non-Affiliates). (Incorporated by reference to Exhibit 10.3 of Senesco Technologies, Inc. current report on Form 8-K filed on March 29, 2010.)
10.40	Securities Purchase Agreement by and between Senesco Technologies, Inc. and certain investors (Affiliates). (Incorporated by reference to Exhibit 10.4 of Senesco Technologies, Inc. current report on Form 8-K filed on March 29, 2010.)
10.41	Form of Securities Purchase Agreement (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. current report on Form 8-K filed on January 9, 2012.)
10.42	Form of Securities Purchase Agreement (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. current report on Form 8-K filed on March 2, 2012.)
10.43	Registration Rights Agreement dated March 26, 2010 by and between Senesco Technologies, Inc. and certain investors. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. current report on Form 8-K filed on March 29, 2010.)
10.44	Sublease Agreement, dated as of May 16, 2011 and effective as of May 19, 2011, by and between Norris, McLaughlin & Marcus, P.A., as Sublandlord, and Senesco Technologies, Inc., as Subtenant. (Incorporated by reference to Senesco Technologies, Inc. current report on Form 8-K filed on May 25, 2011.)
10.45	Notice of extension of sublease agreement by and between Norris, McLaughlin & Marcus, P.A., as Sublandlord, and Senesco Technologies, Inc., as Subtenant, dated November 26, 2012. (Incorporated by reference to Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2013.)

10.46	Credit Agreement dated as of February 17, 2010 by and between Senesco Technologies, Inc. and JMP Securities. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended March 31, 2010.)

10.47	Promissory Note by and among J.P. Morgan Clearing Corp. and Senesco Technologies, Inc., dated April 8, 2011. (Incorporated by reference to Exhibit 10.2 of Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended March 31, 2011.)
10.48	At Market Issuance Sales Agreement by and between Senesco Technologies Inc. and McNicoll, Lewis & Vlak LLC dated December 22, 2010. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. current report on Form 8-K filed on December 22, 2010.)
10.49*	1998 Stock Incentive Plan, as amended on December 13, 2002. (Incorporated by reference to Exhibit 10.7 of Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended December 31, 2002.)
10.50*	Senesco Technologies, Inc. 2008 Incentive Compensation Plan. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended December 31, 2008.)
10.51*	Amendment to Senesco Technologies, Inc. 2008 Incentive Compensation Plan. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. current report on Form 8-K filed on May 28, 2010.)
10.52*	Form of Stock Option Agreement under the Senesco Technologies, Inc. 2008 Stock Incentive Plan. (Incorporated by reference to Exhibit 10.5 of Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended September 30, 2009.)
10.53*	Form of Restricted Stock Unit Issuance Agreement under the Senesco Technologies, Inc. 2008 Stock Incentive Plan. (Incorporated by reference to exhibit 10.6 of Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended September 30, 2009.)
10.54*	Retention Policy. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. current report on Form 8-K filed on October 9, 2012.)
10.55	Form of Warrant Exchange Agreement (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. current report on Form 8-K filed on August 10, 2012.)
10.56	Securities Purchase Agreement, dated as of January 4, 2013, by and among the Company and the investors set forth therein. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. current report on Form 8-K filed on January 4, 2013.)
10.57	Form of April 2013 Warrant Exchange Agreement (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. current report on Form 8-K filed on May 1, 2013.)
10.58	Form of Securities Purchase Agreement, dated as of May 9, 2013, by and among the Company and the investors set forth therein (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. current report on Form 8-K filed on May 9, 2013.)
10.59	Placement Agent Agreement, dated as of April 29, 2013, by and between the Company and Chardan Capital Markets, LLC (Incorporated by reference to Exhibit 10.2 of Senesco Technologies, Inc. current report on Form 8-K filed on May 9, 2013.)
10.60	Form of June 2013 Warrant Exchange Agreement (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. current report on Form 8-K filed on June 25, 2013.)

10.61	Form of June 2013 Preferred Stock Exchange Agreement (Incorporated by reference to Exhibit 10.2 of Senesco Technologies, Inc. current report on Form 8-K filed on June 25, 2013.)

10.62	Agreement for Service on Senesco Technologies, Inc. Scientific Advisory Board by and between Senesco Technologies, Inc. and Dr. Charles A. Dinarello, dated February 12, 2002. (Incorporated by reference to Exhibit 10.6 of Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended March 31, 2002.)
10.63	Agreement for Service on Senesco Technologies, Inc. Scientific Advisory Board by and between Senesco Technologies, Inc. and James W. Mier, M.D., dated April 2, 2007. (Incorporated by reference to Exhibit 10.43 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2007.)
10.64	Form of Securities Purchase Agreement, dated as of September 30, 2013, by and among the Company and the investors set forth therein (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. current report on Form 8-K filed on October 1, 2013.)
21	Subsidiaries of the Registrant. (Incorporated by reference to Senesco Technologies, Inc. annual report on Form 10-KSB for the period ended June 30, 1999.)
23.1 †	Consent of McGladrey LLP.
23.2 †	Consent of Morgan, Lewis & Bockius, LLP (included in Exhibit 5.1 above.)
24.1#	Power of Attorney.
101.1	Financial Statements from the (a) Annual Report on Form 10-K of Senesco Technologies, Inc. for the fiscal year ended June 30, 2013 and (b) Quarterly Report on form 10-Q of Senesco Technologies, Inc. for the fiscal quarter ended September 30, 2013, formatted in XBRL (i) the Consolidated Balance Sheets, (ii) the Consolidated Statements of Operations (iii) the Consolidated Statements of Stockholders' Equity (iv) the Consolidated Statements of Cash Flows and (v) the Notes to the Consolidated Financial Statements. (To be filed by amendment)

* A management contract or compensatory plan or arrangement required to be filed as an exhibit pursuant to Item 13(a) of Form 10-K.
† Filed herewith.

Previously filed.
+ The SEC granted Confidential Treatment for portions of this Exhibit.

(a) Financial Statement Schedules

All schedules have been omitted because either they are not required, are not applicable or the information is otherwise set forth in the financial statements and related notes thereto.

Item 17. Undertakings.

The undersigned registrant hereby undertakes:

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes that:

1. For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b) (1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

2. For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act, the Registrant has duly caused this Amendment No. 1 to Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Bridgewater, State of New Jersey, on the 27 day of November, 2013.

SENESCO TECHNOLOGIES, INC.

By: /s/ Leslie J. Browne, Ph.D.
Leslie J. Browne, Ph.D.
President and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	**Title**	**Date**
/s/ **Leslie J. Browne, Ph.D.** **Leslie J. Browne, Ph.D.**	Chief Executive Officer and Director (*Principal Executive Officer*)	November 27, 2013
/s/ **Joel P. Brooks** **Joel P. Brooks**	Chief Financial Officer (*Principal Financial and Accounting Officer*)	November 27, 2013
* **Harlan W. Waksal, M.D.**	Chairman of the Board	November 27, 2013
* **David Rector**	Lead Independent Director	November 27, 2013
* **Christopher Forbes**	Director	November 27, 2013
* **Rudolf Stalder**	Director	November 27, 2013
* **John N. Braca**	Director	November 27, 2013
* **John E. Thompson, Ph.D.**	Director	November 27, 2013

* **Thomas C. Quick**	Director	November 27, 2013
* **Warren Isabelle**	Director	November 27, 2013
* **Jack Van Hulst**	Director	November 27, 2013

. By: /s/ Joel P. Brooks

Joel P. Brooks

Attorney-in-fact

EXHIBIT INDEX

(a) The following exhibits are filed herewith:

Exhibit No.	Description of Exhibit
2.1	Merger Agreement and Plan of Merger by and among Nava Leisure USA, Inc., an Idaho corporation, the Principal Stockholders (as defined therein), Nava Leisure Acquisition Corp., and Senesco, Inc., dated October 9, 1998. (Incorporated by reference to Senesco Technologies, Inc. definitive proxy statement on Schedule 14A dated January 11, 1999.)
2.2	Merger Agreement and Plan of Merger by and between Senesco Technologies, Inc., an Idaho corporation, and Senesco Technologies, Inc., a Delaware corporation, dated September 30, 1999. (Incorporated by reference to Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended September 30, 1999.)
3.1	Amended and Restated Certificate of Incorporation of Senesco Technologies, Inc. filed with the State of Delaware on January 22, 2007. (Incorporated by reference to Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended December 31, 2006.)
3.2	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of Senesco Technologies, Inc. filed with the State of Delaware on January 22, 2008. (Incorporated by reference to Exhibit 3.1 of Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended December 31, 2007.)
3.3	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of Senesco Technologies, Inc. filed with the State of Delaware on September 22, 2009. (Incorporated by reference to Exhibit 3.3 of Senesco Technologies, Inc. annual report on Form 10-K/A for the period ended June 30, 2009.)
3.4	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of Senesco Technologies, Inc. filed with the State of Delaware on May 25, 2010. (Incorporated by reference to Exhibit 3.1 to Senesco Technologies, Inc. current report on Form 8-K filed on May 28, 2010.)
3.5	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of Senesco Technologies, Inc. filed with the State of Delaware on December 22, 2011. (Incorporated by reference to Exhibit 3.1 to Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended December 31, 2011.)
3.6	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of Senesco Technologies, Inc. filed with the State of Delaware on April 1, 2013. (Incorporated by reference to Exhibit 3.1 to Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended March 31, 2013.)
3.7	

	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of Senesco Technologies, Inc. filed with the State of Delaware on October 16, 2013. (Incorporated by reference to Exhibit 3.1 to Senesco Technologies, Inc. current report on Form 8-K filed on October 21, 2013.)
3.8	Amended and Restated By-laws of Senesco Technologies, Inc. as adopted on October 2, 2000. (Incorporated by reference to Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended December 31, 2000.)
3.9	Certificate of Designations to the Company's Certificate of Incorporation (Series A)(Incorporated by reference to Exhibit 3.1 to Senesco Technologies, Inc. current report on Form 8-K filed on March 29, 2010).
4.1	Form of Series B Warrant issued to Partlet Holdings Ltd. (Incorporated by reference to Exhibit 4.2 of Senesco Technologies, Inc. current report on Form 8-K, filed on July 10, 2009.)

4.2	Form of Series A Warrant issued to each of Robert Forbes, Timothy Forbes, 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. (Incorporated by reference to Exhibit 4.1 of Senesco Technologies, Inc. current report on Form 8-K, filed on July 30, 2009.)
4.3	Form of Series B Warrant issued to each of Robert Forbes, Timothy Forbes, 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. (Incorporated by reference to Exhibit 4.1 of Senesco Technologies, Inc. current report on Form 8-K, filed on July 30, 2009.)
4.4	Form of Series B Warrant issued to Cato Holding Company. (Incorporated by reference to Exhibit 4.1 of Senesco Technologies, Inc. current report on Form 8-K, filed on July 30, 2009.)
4.5	Form of Series A Common Stock Purchase Warrant issued to certain accredited investors (Incorporated by reference to Exhibit 4.1 of Senesco Technologies, Inc. current report on Form 8-K filed on March 29, 2010.)
4.6	Form of Series B Common Stock Purchase Warrant issued to certain affiliated investors (Incorporated by reference to Exhibit 4.2 of Senesco Technologies, Inc. current report on Form 8-K filed on March 29, 2010.)
4.7	Form of Warrant (Incorporated by reference to Exhibit 4.1 of Senesco Technologies, Inc. current report on Form 8-K filed on January 9, 2012.)
4.8	Form of Warrant (Incorporated by reference to Exhibit 4.1 of Senesco Technologies, Inc. current report on Form 8-K filed on March 2, 2012.)
4.9	Form of Warrant Clarification Letter (Incorporated by reference to Exhibit 4.16 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2012.)
4.10	Form of January 2013 Warrant (Incorporated by reference to Exhibit 4.1 of Senesco Technologies, Inc. current report on Form 8-K filed on January 4, 2013.)
5.1 †	Opinion of Morgan, Lewis & Bockius, LLP regarding the validity of the shares being registered.
10.1	Indemnification Agreement by and between Senesco Technologies, Inc. and Christopher Forbes, dated January 21, 1999. (Incorporated by reference to Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended December 31, 1998.)
10.2	Indemnification Agreement by and between Senesco Technologies, Inc. and Thomas C. Quick, dated February 23, 1999. (Incorporated by reference to Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended March 31, 1999.)
10.3	Indemnification Agreement by and between Senesco Technologies, Inc. and Ruedi Stalder, dated March 1, 1999. (Incorporated by reference to Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended March 31, 1999.)
10.4	Indemnification Agreement by and between Senesco Technologies, Inc. and Jack Van Hulst, dated January 16, 2007. (Incorporated by reference to Exhibit 10.13 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2007.)

10.5	Indemnification Agreement by and between Senesco Technologies, Inc. and John Braca, dated October 8, 2003. (Incorporated by reference to Exhibit 10.38 of Senesco Technologies, Inc. annual report on Form 10-KSB for the period ended June 30, 2004.)

10.6	Indemnification Agreement by and between Senesco Technologies, Inc. and David Rector dated as of April, 2002. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended September 30, 2004.)
10.7	Indemnification Agreement by and between Senesco Technologies, Inc. and Harlan W. Waksal, M.D. dated as of October 24, 2008. (Incorporated by reference to Exhibit 10.8 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2009.)
10.8	Indemnification Agreement by and between Senesco Technologies, Inc. and Warren Isabelle dated as of June 8, 2009. (Incorporated by reference to Exhibit 10.9 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2009.)
10.9	Indemnification Agreement by and between Senesco Technologies, Inc. and Leslie J. Browne, Ph.D. dated as of May 25, 2010. (Incorporated by reference to Exhibit 10.2 of Senesco Technologies, Inc. current report on Form 8-K filed on May 25, 2010.)
10.10	Nondisclosure, Noncompetition and Invention Assignment Agreement by and between Leslie J. Browne, Ph.D. and Senesco Technologies, Inc. dated May 25, 2010. (Incorporated by reference to Exhibit 10.3 of Senesco Technologies, Inc. current report on Form 8-K filed on May 25, 2010.)
10.11*	Consulting Agreement by and between Senesco Technologies, Inc. and John E. Thompson, Ph.D., dated July 12, 1999. (Incorporated by reference to Senesco Technologies, Inc. annual report on Form 10-KSB for the period ended June 30, 2000.)
10.12*	Amendment to Consulting Agreement of July 12, 1999, as modified on February 8, 2001, by and between Senesco, Inc. and John E. Thompson, Ph.D., dated December 13, 2002. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended December 31, 2002.)
10.13*	Amendment # 7 to Consulting Agreement of July 12, 1999, as modified, by and between Senesco, Inc. and John E. Thompson, Ph.D., dated June 20, 2011. (Incorporated by reference to Exhibit 10.16 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2011.)
10.14*	Amendment # 8 to Consulting Agreement of July 12, 1999, as modified, by and between Senesco, Inc. and John E. Thompson, Ph.D., dated June 20, 2013. (Incorporated by reference to Exhibit 10.14 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2013.)
10.15+	Development Agreement by and between Senesco Technologies, Inc. and ArborGen, LLC, dated June 28, 2002. (Incorporated by reference to Exhibit 10.31 of Senesco Technologies, Inc. annual report on Form 10-KSB for the year ended June 30, 2002.)
10.16+	Commercial License Agreement by and between Senesco Technologies, Inc. and ArborGen, LLC dated as of December 21, 2006. (Incorporated by reference to Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended December 31, 2006.)
10.17+	Development and License Agreement by and between Senesco Technologies, Inc. and Calwest Seeds, dated September 14, 2002. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended September 30, 2002.)

10.18 +	Development and License Agreement by and between Senesco Technologies, Inc. and The Scotts Company, dated March 8, 2004. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended March 31, 2004.)
10.19 +	Development and License Agreement with Broin and Associates, Inc. (currently known as Poet) dated as of October 14, 2004. (Incorporated by reference to Exhibit 10.2 of Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended September 30, 2004.)

10.20+	License Agreement by and between Senesco Technologies, Inc. and Bayer CropScience GmbH, dated as of November 8, 2006. (Incorporated by reference to Senesco Technologies, Inc. quarterly report on Form 10-Q for the quarterly period ended December 31, 2006.)
10.21+	License Agreement with Bayer CropScience AG dated as of July 23, 2007. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended September 30, 2007.)
10.22+	Patent License Agreement with Monsanto Company dated as of August 6, 2007. (Incorporated by reference to Exhibit 10.2 of Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended September 30, 2007.)
10.23+	License Agreement with Bayer CropScience AG dated as of September 17, 2007. (Incorporated by reference to Exhibit 10.3 of Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended September 30, 2007.)
10.24	Biofuels Evaluation and License Agreement by and between BioCorp Ventures LLC, Senesco Technologies, Inc. and Senesco, Inc. dated May 14, 2013. (Incorporated by reference to Exhibit 10.24 of Senesco Technologies, Inc. annual report on Form 10-K/A, for the period ended June 30, 2013.)
10.25+	Amended and Restated Agreement by and between Rahan Meristem (1998) LTD., Senesco Technologies, Inc. and Senesco, Inc. dated December 22, 2011. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended December 31, 2011.)
10.26	Research Agreement by and among Senesco Technologies, Inc., Dr. John E. Thompson and the University of Waterloo, dated September 1, 1998, as amended. (Incorporated by reference to Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended December 31, 1998.)
10.27	Amendment to Research Agreement by and among the University of Waterloo, Senesco, Inc., and Dr. John E. Thompson, Ph.D., dated June 11, 2012. (Incorporated by reference to Exhibit 10.31 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2012.)
10.28	Amendment to Research Agreement by and among the University of Waterloo, Senesco, Inc. and Dr. John E. Thompson, Ph.D., dated September 1, 2012. ((Incorporated by reference to Exhibit 10.32 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2012.)
10.29	Amendment to Research Agreement by and among the University of Waterloo, Senesco, Inc. and Dr. John E. Thompson, Ph.D., dated May 16, 2013. ((Incorporated by reference to Exhibit 10.39 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2013.)
10.30+	Master Product Sale Agreement with VGXI, Inc. dated as of June 27, 2008. (Incorporated by reference to Exhibit 10.29 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2008.)
10.31	Master Product Sale Agreement with Polyplus-transfection dated as of June 30, 2008. (Incorporated by reference to Exhibit 10.30 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2008.)
10.32	

	Proposal for Manufacture and Supply by and between Avecia Biotechnology, Inc. and Senesco Technologies, Inc. dated as of September 4, 2008. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended September 30, 2008.)
10.33	Master Services Agreement by and between Criterium, Inc. and Senesco Technologies, Inc. dated June 20, 2011. (Incorporated by reference to Exhibit 10.35 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2011.)

10.34	Clinical Trial Research Agreement by and between Mayo Clinic and Senesco Technologies, Inc. dated August 15, 2011. (Incorporated by reference to Exhibit 10.36 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2011.)
10.35	Securities Purchase Agreement by and between Senesco Technologies, Inc. and Partlet Holdings Ltd. Dated as of July 9, 2009. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. current report on Form 8-K, filed on July 10, 2009.)
10.36	Securities Purchase Agreement by and between Senesco Technologies, Inc. and each of Robert Forbes, Timothy Forbes, 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 dated as of July 29, 2009. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. current report on Form 8-K , filed on July 30, 2009.)
10.37	Securities Purchase Agreement by and between Senesco Technologies, Inc. and Cato Holding Company dated as of July 29, 2009. (Incorporated by reference to Exhibit 10.2 of Senesco Technologies, Inc. current report on Form 8-K , filed on July 30, 2009.)
10.38	Securities Purchase Agreement by and between Senesco Technologies, Inc. and certain investors (Non-Affiliates). (Incorporated by reference to Exhibit 10.2 of Senesco Technologies, Inc. current report on Form 8-K filed on March 29, 2010.)
10.39	Securities Purchase Agreement by and between Senesco Technologies, Inc. and certain investors (Non-Affiliates). (Incorporated by reference to Exhibit 10.3 of Senesco Technologies, Inc. current report on Form 8-K filed on March 29, 2010.)
10.40	Securities Purchase Agreement by and between Senesco Technologies, Inc. and certain investors (Affiliates). (Incorporated by reference to Exhibit 10.4 of Senesco Technologies, Inc. current report on Form 8-K filed on March 29, 2010.)
10.41	Form of Securities Purchase Agreement (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. current report on Form 8-K filed on January 9, 2012.)
10.42	Form of Securities Purchase Agreement (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. current report on Form 8-K filed on March 2, 2012.)
10.43	Registration Rights Agreement dated March 26, 2010 by and between Senesco Technologies, Inc. and certain investors. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. current report on Form 8-K filed on March 29, 2010.)
10.44	Sublease Agreement, dated as of May 16, 2011 and effective as of May 19, 2011, by and between Norris, McLaughlin & Marcus, P.A., as Sublandlord, and Senesco Technologies, Inc., as Subtenant. (Incorporated by reference to Senesco Technologies, Inc. current report on Form 8-K filed on May 25, 2011.)
10.45	Notice of extension of sublease agreement by and between Norris, McLaughlin & Marcus, P.A., as Sublandlord, and Senesco Technologies, Inc., as Subtenant, dated November 26, 2012. (Incorporated by reference to Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2013.)

10.46 Credit Agreement dated as of February 17, 2010 by and between Senesco Technologies, Inc. and JMP Securities. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended March 31, 2010.)

10.47 Promissory Note by and among J.P. Morgan Clearing Corp. and Senesco Technologies, Inc., dated April 8, 2011. (Incorporated by reference to Exhibit 10.2 of Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended March 31, 2011.)

10.48	At Market Issuance Sales Agreement by and between Senesco Technologies Inc. and McNicoll, Lewis & Vlak LLC dated December 22, 2010. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. current report on Form 8-K filed on December 22, 2010.)
10.49*	1998 Stock Incentive Plan, as amended on December 13, 2002. (Incorporated by reference to Exhibit 10.7 of Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended December 31, 2002.)
10.50*	Senesco Technologies, Inc. 2008 Incentive Compensation Plan. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended December 31, 2008.)
10.51*	Amendment to Senesco Technologies, Inc. 2008 Incentive Compensation Plan. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. current report on Form 8-K filed on May 28, 2010.)
10.52*	Form of Stock Option Agreement under the Senesco Technologies, Inc. 2008 Stock Incentive Plan. (Incorporated by reference to Exhibit 10.5 of Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended September 30, 2009.)
10.53*	Form of Restricted Stock Unit Issuance Agreement under the Senesco Technologies, Inc. 2008 Stock Incentive Plan. (Incorporated by reference to exhibit 10.6 of Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended September 30, 2009.)
10.54*	Retention Policy. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. current report on Form 8-K filed on October 9, 2012.)
10.55	Form of Warrant Exchange Agreement (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. current report on Form 8-K filed on August 10, 2012.)
10.56	Securities Purchase Agreement, dated as of January 4, 2013, by and among the Company and the investors set forth therein. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. current report on Form 8-K filed on January 4, 2013.)
10.57	Form of April 2013 Warrant Exchange Agreement (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. current report on Form 8-K filed on May 1, 2013.)
10.58	Form of Securities Purchase Agreement, dated as of May 9, 2013, by and among the Company and the investors set forth therein (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. current report on Form 8-K filed on May 9, 2013.)
10.59	Placement Agent Agreement, dated as of April 29, 2013, by and between the Company and Chardan Capital Markets, LLC (Incorporated by reference to Exhibit 10.2 of Senesco Technologies, Inc. current report on Form 8-K filed on May 9, 2013.)
10.60	Form of June 2013 Warrant Exchange Agreement (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. current report on Form 8-K filed on June 25, 2013.)
10.61	Form of June 2013 Preferred Stock Exchange Agreement (Incorporated by reference to Exhibit 10.2 of Senesco Technologies, Inc. current report on Form 8-K filed on June 25, 2013.)

10.62	Agreement for Service on Senesco Technologies, Inc. Scientific Advisory Board by and between Senesco Technologies, Inc. and Dr. Charles A. Dinarello, dated February 12, 2002. (Incorporated by reference to Exhibit 10.6 of Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended March 31, 2002.)

10.63	Agreement for Service on Senesco Technologies, Inc. Scientific Advisory Board by and between Senesco Technologies, Inc. and James W. Mier, M.D., dated April 2, 2007. (Incorporated by reference to Exhibit 10.43 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2007.)
10.64	Form of Securities Purchase Agreement, dated as of September 30, 2013, by and among the Company and the investors set forth therein (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. current report on Form 8-K filed on October 1, 2013.)
21	Subsidiaries of the Registrant. (Incorporated by reference to Senesco Technologies, Inc. annual report on Form 10-KSB for the period ended June 30, 1999.)
23.1 †	Consent of McGladrey LLP.
23.2 †	Consent of Morgan, Lewis & Bockius, LLP (included in Exhibit 5.1 above.)
24.1#	Power of Attorney.
101.1	Financial Statements from the (a) Annual Report on Form 10-K of Senesco Technologies, Inc. for the fiscal year ended June 30, 2013 and (b) Quarterly Report on Form 10-Q of Senesco Technologies, Inc. for the fiscal quarter ended September 30, 2013, formatted in XBRL (i) the Consolidated Balance Sheets, (ii) the Consolidated Statements of Operations (iii) the Consolidated Statements of Stockholders' Equity (iv) the Consolidated Statements of Cash Flows and (v) the Notes to the Consolidated Financial Statements. (To be filed by amendment)

* A management contract or compensatory plan or arrangement required to be filed as an exhibit pursuant to Item 13(a) of Form 10-K.
#Previously filed.

†Filed herewith.
+The SEC granted Confidential Treatment for portions of this Exhibit.

(b) Financial Statement Schedules

All schedules have been omitted because either they are not required, are not applicable or the information is otherwise set forth in the financial statements and related notes thereto.