SENESCO TECHNOLOGIES INC
Form 10-K
September 28, 2012

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

x ANNUAL REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934.

For the fiscal year ended June 30, 2012

OR

¨ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934.
For the transition period from _____ to _____

Commission file number: **001-31326**

SENESCO TECHNOLOGIES, INC.
(Exact name of registrant as specified in its charter)

Delaware	84-1368850
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
721 Route 202/206, Suite 130, Bridgewater, New Jersey	08807
(Address of principal executive offices)	(Zip Code)

(908) 864-4444
(Registrant's telephone number,

including area code)

Securities registered under Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock, $0.01 par value per share.	NYSE MKT

Securities registered under Section 12(g) of the Act:

None.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ¨ No x

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Exchange Act . Yes ¨ Nox

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes x No¨

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ¨ No ¨

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ¨

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 definitions of "accelerated filer", "large accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ¨ Accelerated filer ¨

Non-accelerated filer ¨ Smaller reporting company x

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ¨ No x

As of December 31, 2011, the aggregate market value of the registrant’s common stock held by non-affiliates of the registrant was $17,813,515, based on the closing sales price as reported on the NYSE MKT on that date.

The number of shares outstanding of each of the registrant's classes of common stock, as of September 15, 2012:

Class	Number of Shares
Common Stock, $0.01 par value	116,753,185
Preferred Stock, $0.01 par value	995

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PART I

Item 1. Business.

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 fruits, flowers, vegetables, agronomic 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 lymplomas. 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 B cell selective promoter, SNS01-T's DNA plasmid up-regulates the apoptotic pathways within cancer cells by preferentially expressing the stable arginine form of the Factor 5A death message in target cells. The siRNA, by silencing the eIF5A gene, reduces expression of the hypusine form of Factor 5A that supports cell survival and proliferation. The silencing of the eIF5A gene by an eIF5A siRNA also down-regulates anti-apoptotic proteins, such as NFkB, 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. Our efficacy studies in severe combined immune-deficient, or SCID, mice with subcutaneous human multiple myeloma tumors tested SNS01 dose ranging from 0.15 mg/kg to 1.5 mg/kg. In these studies, mice treated with a dose of either 0.75 mg/kg or 1.5 mg/kg both showed, compared to relevant controls, a 91% reduction in tumor volume and a decrease in tumor weight of 87% and 95%, respectively. For mice that received smaller doses of either 0.38 mg/kg or 0.15 mg/kg, there was also a reduction in tumor volume of 73% and 61%, respectively, and weight of 74% and 36%, respectively. All SNS01 treated mice survived. This therapeutic dose range study provided the basis for a non-good laboratory practices, or GLP, 8-day maximum tolerated dose study in which normal mice received two intravenous doses of increasing amounts of SNS01 (from 2.2 mg/kg). Body weight, organ weight and serum levels of liver enzymes were used as clinical indices to assess toxicity. A dose between 2.2 mg/kg and 2.9 mg/kg was well tolerated with respect to these clinical indices, and the survival rate at 2.9 mg/kg was 80%. Mice receiving above 2.9 mg/kg of SNS01 showed evidence of morbidity and up to 80% mortality. The 2.9 mg/kg threshold was therefore determined to be the maximum tolerated dose in mice in this study. 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 also 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 are conducting a Phase 1b/2a clinical study with SNS01-T in multiple myeloma patients. 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 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 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 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 and the Randolph Cancer Center at West Virginia University as our clinical sites. The study is open and we have completed our first cohort. The results of the first cohort showed that SNS01-T was safe and well tolerated and met the criteria for Stable Disease in 2 of the 3 evaluable patients. We are now treating patients in the second cohort.

We have demonstrated in human multiple myeloma cell lines that there may be an additional benefit to combining SNS01-T with other approved myeloma drugs, such as bortezomib and lenalidomide. We have shown, in vitro, that these drugs are up to forty (40) times more effective in inhibiting cell growth when used in combination with SNS01-T. These results further reinforce the significance of our target and will guide us in designing future clinical studies. We have demonstrated that a high level of tumor eradication in a mouse model of human multiple myeloma was achieved with a combination of SNS01-T and lenalidomide. While SNS01-T alone performed well by completely eliminating tumors in 40% of the animals, complete tumor eradication was achieved in five out of six or 83% of the treated animals that received SNS01-T combined with the optimal study dose of lenalidomide. This effect lasted throughout 6 weeks of observation after the end of treatment. Neither dose of lenalidomide used alone eliminated tumors in any of the treated mice. Most recently, we have demonstrated the benefits of combining SNS01-T with bortezomib. In a mouse model of human multiple myeloma, SNS01-T as a monotherapy achieved 59% tumor growth inhibition, which exceeded that of bortezomib alone at either the 0.2 mg/kg dose (22% inhibition) or at the 0.5 mg/kg dose (39% inhibition). However, the combination of SNS01-T with 0.5 mg/kg of bortezomib resulted in 89% tumor inhibition, which was significantly more effective than either SNS01-T or bortezomib alone.

SNS01-T for other B-cell cancers

We have demonstrated in mice that we can inhibit the growth of both human mantle cell and diffuse large B-cell lymphoma in a dose-dependent manner.

We have also 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 and are conducting a Phase 1b/2a clinical trial, 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.

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 approximately eleven (11) third party researchers, at our direction, at Criterium, the University of Waterloo and other facilities. Additionally, we outsource certain projects, such as our clinical trial, to other third party research organizations.

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.

Our research and development expenses incurred on human therapeutic applications were approximately $2,083,787, or 79%, of our total research and development expenses for the year ended June 30, 2010.

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 some 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. 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 and University of West Virginia to be our clinical sites. The study opened in September 2011 and we are currently treating patients. We estimate that the study will be completed on or about June 30, 2013.

- Mantle Cell Lymphoma. We expect to evaluate SNS01-T in mantle cell lymphoma.

- Diffuse Large B-Cell Lymphoma. We expect to evaluate SNS01-T in diffuse large B-Cell lymphoma.

- We may consider cancers in other tissues by modifying the structure of SNS01-T to be able to target other tumor types, e.g., liver cancer.

- Other. We may consider other human diseases in which Factor 5A, siRNA against Factor 5A and SNS01-T may have a therapeutic effect.

In order to pursue the above research initiatives, as well as other research initiatives that may arise, we completed private placements of convertible preferred stock and warrants on April 1, 2010 and June 2, 2010. In December 2010, we initiated an at-the-market, or ATM, offering for the issuance of up to $5,500,000 of common stock and completed a public placement of common stock and warrants in January 2012 and March 2012. 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 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}; a 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 Factor 5A gene and 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.

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 multiple myeloma research including Celgene, Inc., 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 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

Effective December 22, 2011, we re-structured our research and development agreement with Rahan Meristem (1998) Ltd (“Rahan”) to reflect the priorities of both companies. The new agreement is an amendment to the original research and development agreement, dated May 1999, that provided Rahan access to our 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 us with a mid- to upper-single digit royalty on incremental revenue, as defined in the agreement, from the sale of Rahan’s banana seedling products containing our

technology without any future payments by us for the costs of development and commercialization. If a product, which incorporates our technology, is commercialized by Rahan, 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.

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.

As of June 30, 2012, we have nine (9) active license agreements with established agricultural biotechnology companies.

Agricultural Research Program

Our agricultural research and development is 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.

The discoverer of our technology, John E. Thompson, Ph.D., is the Associate Vice President, Research and former Dean of Science at the University of Waterloo in Ontario, Canada, and is our Executive Vice President and Chief Scientific Officer. Dr. Thompson is also one of our directors and owns 1.1% of the outstanding shares of our common stock, $0.01 par value, as of June 30, 2012.

On September 1, 1998, we entered into, and have extended through August 31, 2013, 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.

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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	Greenhouse
Canola	Bayer	Field trials
Rice	Bayer	Greenhouse
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.

Intellectual Property

We have twenty-seven (27) issued patents from the United States Patent and Trademark Office, or PTO, and sixty-six (66) issued patents from foreign countries. Of our ninety-three (93) domestic and foreign issued patents, fifty-six (56) are for the use of our technology in agricultural applications and thirty-seven (37) relate to human therapeutics applications.

In addition to our ninety-three (93) 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.

Our agricultural patents are generally set to expire in 2019 in the United States and 2025 outside the United States. 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. To the extent our patents have different expiration dates abroad than in the United States, we are currently developing a strategy to extend the United States expiration dates to the foreign expiration dates.

During our 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 twelve (12) 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 three (3) 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.

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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.

Safe Harbor Statement

The statements contained in this Annual Report on Form 10-K that are not historical facts are forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, and the Private Securities Litigation Reform Act of 1995. Such forward-looking statements may be identified by, among other things, the use of forward-looking terminology such as “believes,” “expects,” “may,” “will,” “should,” or “anticipates” or the negative thereof or other variations thereon or comparable terminology, or by discussions of strategy that involve risks and uncertainties. In particular, our statements regarding the anticipated growth in the markets for our technologies, the continued advancement of our research, the approval of our patent applications, the possibility of governmental approval in order to sell or offer for sale to the general public a genetically engineered plant or plant product, the successful implementation of our commercialization strategy, including the success of our agricultural partners, statements relating to our patent applications, the anticipated long term growth of our business, the results of our preclinical or clinical studies, if any, our ability to comply with the continued listing standards of the NYSE MKT, and the timing of the projects and trends in future operating performance are examples of such forward-looking statements. The forward-looking statements include risks and uncertainties, including, but not limited to, our ability to recruit patients for its clinical trial, our limited operating history, our need for additional capital to fund our operations until we are able to generate a profit, the current economic environment, our dependence on a single principal technology, our outsourcing of our research and development activities, our significant future capital needs, our dependence on our patents and proprietary rights and the enforcement of these rights, the potential for our competitors or third parties to allege that we are infringing upon their intellectual property rights, the potential that our security measures may not adequately protect our unpatented technology, potential difficulty in managing our growth and expanding our operations, our lack of marketing or sales history and dependence on third-party marketing partners, our potential future dependence on joint ventures and strategic alliances to develop and market our technology, the intense competition in the human therapeutic and agricultural biotechnology industries, the various government regulations that our business is subject to, the potential that our preclinical studies and clinical trials of our human therapeutic applications may be unsuccessful, any inability to license from third parties their proprietary technologies or processes which we use in connection with the development of our technology, the length, expense and uncertainty associated with clinical trials for our human therapeutic technology, the potential that, even if we receive regulatory approval, consumers may not accept products containing our technology, our dependence on key personnel, the potential that certain provisions of our charter, by-laws and Delaware law could make a takeover difficult, increasing political and social turmoil, the potential that our management and other affiliates, due to their significant control of our common stock have the ability to significantly influence our actions, the potential that a significant portion of our total outstanding shares of common stock may be sold in the market in the near future, the limited trading market of our common stock, the potential that our common stock may be delisted from the NYSE MKT, fluctuations in the market price of our common stock, our dividend policy and potential for our stockholders to be diluted.

ITEM 1A: Risk Factors

The more prominent risks and uncertainties inherent in our business are described below. However, additional risks and uncertainties may also impair our business operations. If any of the following risks actually occur, our business, financial condition or results of operations may suffer.

Risks Related to Our Business

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, 2012 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 $67,440,295 at June 30, 2012. 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 November 2012. However, we have the ability to raise additional capital through our ATM facility, utilize our unused line of credit and, if necessary, delay certain costs which would provide us with sufficient cash to maintain our present operations through March 2013.

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 June 30, 2012, we had a cash balance of $2,001,325 and working capital of $386,532. Using our available reserves as of June 30, 2012, we believe that we can operate according to our current business plan through November 2012. However, we have the ability to raise additional capital through our ATM facility, utilize our unused line of credit and, if necessary, delay certain costs, which would provide us with sufficient cash to maintain our present operations through March 2013.

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, or more than 20% of the shares of our common stock outstanding, we may 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 June 30, 2012, we had 134,779,878 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 June 30, 2012, we have been issued twenty-seven (27) patents by the PTO and sixty-six (66) 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, Inc.; 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.

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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.

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.

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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, except as may be required by the rules of the NYSE MKT, 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

We currently do not meet the NYSE MKT continued listing standards. If our common stock is delisted from the NYSE MKT, we may not be able to list on any other stock exchange, and our common stock may be subject to the "penny stock" regulations which may affect the ability of our stockholders to sell their shares.

The NYSE MKT requires us to meet minimum financial requirements in order to maintain our listing. Currently, we do not meet the $6,000,000 minimum net worth continued listing requirement of the NYSE MKT and have received a notice of noncompliance from the NYSE MKT. We submitted a plan of compliance on November 17, 2011 to the NYSE MKT discussing how we intend to regain compliance with the continued listing requirements. The NYSE MKT has accepted our plan and granted us an extension until July 20, 2012 to regain compliance with the NYSE MKTs's continuing listing standards. On July 20, 2012, we were still not in compliance with the NYSE MKT's continued listing requirements and requested an extension of time to regain compliance. On August 22, 2012, we received a notice from NYSE Regulation, Inc. on behalf of NYSE MKT providing notification that NYSE MKT has determined not to grant us an extension of time to cure the non-compliance and therefore, the NYSE MKT intends to file a delisting application with the Securities and Exchange Commission striking our common stock from the NYSE MKT. We have requested an appeal to the NYSE MKT's determination and have been granted a hearing with a committee of NYSE MKT in accordance with our rights as set forth in Sections 1203 and 1009(d) of the NYSE MKT Company Guide. The date of the appeal hearing is scheduled for October 24, 2012.

If we are not successful with our appeal, it is likely that we will be delisted. If we are delisted from the NYSE MKT, our common stock likely will become a "penny stock." In general, regulations of the SEC define a "penny stock" to be an equity security that is not listed on a national securities exchange and that has a market price of less than $5.00 per share or with an exercise price of less than $5.00 per share, subject to certain exceptions. If our common stock becomes a penny stock, additional sales practice requirements would be imposed on broker-dealers that sell such securities to persons other than certain qualified investors. For transactions involving a penny stock, unless exempt, a broker-dealer must make a special suitability determination for the purchaser and receive the purchaser's written consent to the transaction prior to the sale. In addition, the rules on penny stocks require delivery, prior to and after any penny stock transaction, of disclosures required by the SEC.

If our stock is not accepted for listing on the NYSE MKT, we will make every possible effort to have it listed on the Over the Counter Bulletin Board, or the OTC Bulletin Board. If our common stock was to be traded on the OTC Bulletin Board, the Securities Exchange Act of 1934, as amended, and related SEC rules would impose additional sales practice requirements on broker-dealers that sell our securities. These rules may adversely affect the ability of stockholders to sell our common stock and otherwise negatively affect the liquidity, trading market and price of our common stock.

We believe that the listing of our common stock on a recognized national trading market, such as the NYSE MKT, is an important part of our business and strategy. Such a listing helps our stockholders by providing a readily available trading market with current quotations. Without that, stockholders may have a difficult time getting a quote for the sale or purchase of our stock, the sale or purchase of our stock would likely be made more difficult and the trading volume and liquidity of our stock would likely decline. The absence of such a listing may adversely affect the acceptance of our common stock as currency or the value accorded it by other parties. In that regard, the absence of a listing on a recognized national trading market will also affect our ability to benefit from the use of our operations and expansion plans, including for use in licensing agreements, joint ventures, the development of strategic relationships and acquisitions, which are critical to our business and strategy and none of which is currently the subject of any agreement, arrangement or understanding, with respect to any future financing or strategic relationship we may undertake. A delisting from the NYSE MKT could result in negative publicity and could negatively impact our ability to raise capital in the future.

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 June 30, 2012, our executive officers and directors together beneficially own approximately 30.8% of the outstanding shares of our common stock, assuming the conversion of preferred stock and exercise of options and warrants which are currently exercisable or will become exercisable within 60 days of June 30, 2012, 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 June 30 2012, we had 94,112,483 shares of our common stock issued and outstanding and 4,579 shares of convertible preferred stock outstanding which can convert into 17,611,538 shares of common stock. Approximately 34,164,431 shares of such shares are registered pursuant to registration statements on Form S-3 and 77,559,590 of which are either eligible to be sold under SEC Rule 144 or are in the public float. In addition, we have registered 35,890,007 shares of our common stock underlying warrants previously issued on Form S-3 registration statements and we registered 25,215,260 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.

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 quoted on the NYSE MKT and currently has a limited trading market. The NYSE MKT requires us to meet minimum financial requirements in order to maintain our listing. Currently, we do not meet the continued listing requirements of the NYSE MKT. If we do not regain compliance with the continued listing standards, we could be delisted. 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 quarter ended June 30, 2012, our common stock traded between $0.16 and $0.31 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 June 30, 2012, we have outstanding 4,579 shares of convertible preferred stock which may convert into 17,611,538 shares of our common stock and warrants to purchase 57,225,981 shares of our common stock. In

addition, as of June 30, 2012, we have reserved 25,215,260 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 16,999,084 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.

Item 1B. Unresolved Staff Comments.

None.

Item 2. 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, 2013 but can be extended at our option for one additional year. 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.

Item 3. 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.

Item 4. Mine Safety Disclosures.

None.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Our common stock trades on the NYSE MKT under the symbol SNT.

The following table sets forth the range of the high and low sales price for our common stock for each of the quarters since the quarter ended September 30, 2010, as reported on the NYSE MKT.

Quarter Ended	Common Stock	
	High	Low
September 30, 2010	$0.42	$0.25
December 31, 2010	$0.33	$0.22
March 31, 2011	$0.36	$0.23
June 30, 2011	$0.32	$0.24
September 30, 2011	$0.31	$0.18
December 31, 2011	$0.29	$0.16
March 31, 2012	$0.28	$0.21
June 30, 2012	$0.31	$0.18

As of September 1, 2012, the approximate number of holders of record of our common stock was 290**.** This number does not include "street name" or beneficial holders, whose shares are held of record by banks, brokers and other financial institutions.

We have neither paid nor declared dividends on our common stock since our inception, and we do not plan to pay dividends on our common stock in the foreseeable future. We expect that any earnings, which we may realize, will be retained to finance the growth of our company.

The following table provides information about the securities authorized for issuance under our equity compensation plans as of June 30, 2012.

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	15,647,742	(1)	$ 0.50	11,588,876	(2)
Equity compensation plans not approved by security holders	—		—	—	
Total	15,647,742	(1)	$ 0.50	11,588,876	(2)

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

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

RECENT SALES OF UNREGISTERED SECURITIES; USE OF PROCEEDS FROM REGISTERED SECURITIES

None, except as previously disclosed on our Quarterly reports on Forms 10-Q and Current Reports on Forms 8-K.

PERFORMANCE GRAPH

The following graph compares the cumulative total stockholder return on our common stock with the cumulative total return on the NYSE Amex Market Value (U.S.) Index and the RDG Microcap Biotechnology Index for the period beginning July 1, 2007 and ending on the last day of our last completed fiscal year. The stock performance shown on the graph below is not indicative of future price performance.

	7/1/07	6/30/08	6/30/09	6/30/10	6/30/11	6/30/12
Senesco Technologies, Inc.	$100.00	$160,87	$72.17	$27.39	$24.35	$18.09
NYSE Amex Composite Index	$100.00	$101.05	$77.20	$91.05	$126.03	$131.42
RDG Microcap Biotechnology Index	$100.00	$56.60	$44.14	$40.01	$34.94	$31.26

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Item 6. Selected Financial Data.

The following Selected Financial Data should be read in conjunction with “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Item 8. Financial Statements and Supplementary Data” included elsewhere in this Annual Report on Form 10-K.

SELECTED FINANCIAL DATA

	Fiscal Year Ended June 30,				
	2012	2011	2010	2009	2008
	(In thousands, except per share data)				
Statement of Operations Data:					
Revenue	$200	$-	$140	$275	$457
Operating expenses:					
General and administrative	2,724	2,610	2,349	2,206	2,291
Research and development	2,566	3,720	2,637	2,354	1,765
Total operating expenses	5,290	6,330	4,986	4,560	4,056
Loss from operations	(5,090)	(6,330)	(4,846)	(4,285)	(3,599)
Grant income	-	244	-	-	-
Fair value – warrant liability	472	609	2,517	-	-
Other noncash expense	-	(116)	-	-	-
Loss on extinguishment of debt	-	-	(362)	-	-
Write off of patents abandoned	(321)	(1,588)	-	-	-
Amortization of debt discount and financing costs	-	-	(10,081)	(478)	(668)
Interest expense – convertible notes	-	-	(587)	(1,007)	(434)
Interest (expense) income, net	(127)	(88)	(24)	43	100
Net loss	(5,066)	(7,269)	(13,383)	(5,727)	(4,601)
Preferred dividends	(1,626)	(2,638)	(6,240)	-	-
Net loss available to common shares	$(6,692)	$(9,907)	$(19,623)	$(5,727)	$(4,601)
Basic and diluted net loss per common share	$(0.08)	$(0.14)	$(0.67)	$(0.30)	$(0.26)
	85,703	69,332	29,113	18,888	17,660

Basic and diluted weighted average number of common shares outstanding					
Balance Sheet Data:					
Cash, cash equivalents and investments	$2,001	$3,610	$8,026	$1,431	$6,176
Working capital	387	1,788	6,002	1,259	5,673
Total assets	6,955	8,597	13,912	7,122	10,643
Accumulated deficit	(67,440)	(60,748)	(50,841)	(35,950)	(30,223)
Total stockholders' equity	3,453	4,517	7,981	5,668	9,836

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

The discussion in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” contains trend analysis, estimates and other forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These forward-looking statements include, without limitation, statements containing the words “believes,” “anticipates,” “expects,” “continue,” and other words of similar import or the negative of those terms or expressions. Such forward-looking statements are subject to known and unknown risks, uncertainties, estimates and other factors that may cause our actual results, performance or achievements, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Actual results could differ materially from those set forth in such forward-looking statements as a result of, but not limited to, the “Risk Factors” described in Part I, Item 1A. You should read the following discussion and analysis along with the “Selected Financial Data” and the financial statements and notes attached to those statements included elsewhere in this report.

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 by approximately twelve (12) 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 performed efficacy, toxicological and dose-finding studies *in vitro* in non-human and human cells and *in-vivo* in mice for SNS01. We have also completed our pivotal GLP toxicology studies in mice and dogs, employing SNS01-T, a slightly modified formulation of SNS01, and have an open IND, with the FDA. We have also 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 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 four-week 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 and West Virginia University as our clinical sites. The study is open and we have begun treating patients.

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

Additionally, we have nine active agricultural license agreements to develop and commercialize our technology in corn, soy, cotton, rice, canola, 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

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 and the estimated volatility of our stock price over the expected term. 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 our short-term and long-term incentive plans, 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.

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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 June 30, 2012, we have determined that market value of our one asset group is in excess of its 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.

Liquidity and Capital Resources

Overview

As of June 30, 2012, our cash balance totaled $2,001,325, and we had working capital of $386,532.

Contractual Obligations

The following table lists our cash contractual obligations as of June 30, 2012:

	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]	$573,676	$468,071	$105,605	$—	$—
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	$703,909	$598,304	$105,605	$—	$—

(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 is estimated to be $289,890 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 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 and is not included in the above table. Research and development expenses under this agreement aggregated USD $573,368 for the year ended June 30, 2012, USD $622,872 for the year ended June 30, 2011, USD $672,693 for the year ended June 30, 2010, and USD $7,149,301 for the cumulative period from inception through June 30, 2012.

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.

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Financing

On December 22, 2010, we initiated an ATM offering pursuant to which we, from time to time, may issue and sell shares of our common stock, par value $0.01 per share, 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 our shelf registration statement on Form S-3 (File No. 333-170140), which became effective on November 9, 2010.

Upon delivery of a placement notice by us, if any, the placement agent may sell the common stock in any method permitted by law deemed to be an “at the market” offering as defined in Rule 415 promulgated under the Securities Act of 1933, as amended, at prices prevailing at the time of sale or at prices related to such prevailing market prices, including sales made directly on the NYSE MKT, or NYSE MKT, or sales made through a market maker other than on an exchange. The placement agent will make all sales using commercially reasonable efforts consistent with its normal sales and trading practices on mutually agreed upon terms between the placement agent and us. We will pay the placement agent a commission of up to 6% of the gross proceeds from the sale of shares of the common stock, depending on the per share sales price. We have agreed to reimburse a portion of the placement agent’s expenses in connection with the offering, up to an aggregate amount of $25,000. In addition, we granted customary indemnification rights to the placement agent.

The ATM will terminate upon the earlier of (1) the sale of all of the common stock subject to the ATM, or (2) upon termination by us or the placement agent. The placement agent may terminate the ATM in certain circumstances, including the occurrence of a material adverse change that, in the placement agent’s reasonable judgment, may impair its ability to sell the common stock, our failure to satisfy any condition under the ATM or a suspension or limitation of trading of the common stock on the NYSE MKT. In addition, either we or the placement agent may terminate the ATM at any time and for any reason upon 10 days prior notice to the other party.

During the fiscal year ended June 30, 2012, we issued 1,834,557 shares of common stock under the ATM for gross proceeds in the amount of $509,670. From July 1, 2012 through September 1, 2012, we issued an additional 117,965 shares of common stock under the ATM for gross proceeds in the amount of $100,571. From inception of the ATM through September 15, 2012, we issued 8,099,909 shares of common stock for gross proceeds in the amount of $2,463,661.

In January 2012 and March 2012, we issued an aggregate of 11,007,739 shares of common stock and 4,926,949 warrants in a public offering for gross proceeds in the amount of $2,862,012.

We anticipate that, based upon our current cash balance at June 30, 2012 and the funds received under the ATM subsequent to June 30, 2012, we will be able to fund our operations through November 2012. However, we have the ability to raise additional capital through our ATM facility, utilize our unused line of credit and, if necessary, delay certain costs which will provide us with enough cash to fund our operations at least through March 31, 2013.

Over the next 12 months, we plan to fund our research and development and commercialization activities by:

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

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

Results of Operations

Fiscal Year ended June 30, 2012

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.

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 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 no 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 of our partners moving through the development process into commercialization is difficult to accurately predict.

Operating expenses

	Fiscal Year Ended June 30,			
	2012	2011	Change	%
General and administrative	$2,724,144	$2,610,222	$113,922	4 %
Research and development	2,566,247	3,720,394	(1,154,147)	(31)%
Total operating expenses	$5,290,391	$6,330,616	$(1,040,225)	(16)%

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.

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General and administrative expenses

General and administrative expenses consist of the following:

	Fiscal Year ended June 30, 2012	2011
Stock-based compensation	$ 721,197	$ 709,207
Payroll and benefits	588,407	568,597
Investor relations	203,871	260.455
Professional fees	518,473	425,640
Depreciation and amortization	258,023	143,274
Other general and administrative expenses	434,173	503,049
Total general and administrative expenses	$ 2,724,144	$ 2,610,222

- 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	5,274,428	4,579,142
Warrants	None	305,000

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.

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

Research and development expenses

	Fiscal Year Ended June 30,			
	2012	2011	Change	%
Stock-based compensation	$ 44,807	$ 41,159	$ 3,648	9 %
Payroll	167,834	176,646	(8,812)	(5)%
Research contract with the University of Waterloo	573,368	622,872	(49,504)	(8)%
Other research and development	1,780,238	2,879,717	(1,099,479)	(38)%
Total research and development	$ 2,566,247	$ 3,720,394	$ (1,154,147)	(31)%

- 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.

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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.

We expect our human therapeutic research program to 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.

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.

Fair value – 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.

Other noncash expense or income

During the fiscal year ended June 30, 2011, the exercise price of 4,088,540 warrants was adjusted from $0.50 to $0.32 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.

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.

Fiscal Year ended June 30, 2011

Revenue

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

During the fiscal year ended June 30, 2010, we earned revenue in the amount of $140,000, which consisted of milestone payments in connection with certain agricultural license agreements.

Operating expenses

	Fiscal Year Ended June 30,			
	2011	2010	Change	%
General and administrative	$2,610,222	$2,349,116	$261,106	11%
Research and development	3,720,394	2,637,407	1,082,987	41%
Total operating expenses	$6,330,616	$4,986,523	$1,344,093	27%

General and administrative expenses

General and administrative expenses consist of the following:

	Fiscal Year ended June 30,	
	2011	2010
Stock-based compensation	$709,207	$433,414
Payroll and benefits	568,597	655,958
Investor relations	260,455	250,893
Professional fees	425,640	509,838
Depreciation and amortization	143,274	126,567
Other general and administrative expenses	503,049	372,446

Total general and administrative expenses	$2,610,222	$2,349,116

- Stock-based compensation in for the fiscal years ended June 30, 2011 and 2010 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, 2011 and 2010, the following options and warrants were granted to such individuals:

	June 30, 2011	June 30, 2010
Options	4,579,142	2,951,760
Warrants	305,000	154,184

Stock-based compensation for the fiscal year ended June 30, 2011 was higher than the fiscal year ended June 30, 2010 primarily due to the greater number of options and warrants granted.

- Payroll and benefits for the fiscal year ended June 30, 2011 was lower than the fiscal year ended June 30, 2010 primarily due to the resignation of the VP-Corporate Development during the fiscal year ended June 30, 2010.

- Investor relations expense for the fiscal year ended June 30, 2011 was higher than the fiscal year ended June 30, 2010 primarily as a result of an increase in investor relations consulting costs.

- Professional fees for the fiscal year ended June 30, 2011 were lower than the fiscal year ended June 30, 2010 primarily as a result of a decrease in legal fees. Legal fees decreased primarily due to discounts negotiated with our law firm and not incurring fees related to the resignation of our former President and CEO and the VP-Corporate Development, the redemption of our convertible notes, the Stanford bankruptcy and other regulatory issues which were during the fiscal year ended June 30, 2010.

- Depreciation and amortization for the fiscal year ended June 30, 2011 was higher than the fiscal year ended June 30, 2010 primarily as a result of an increase in amortization of patent costs.

Research and development expenses

	Fiscal Year Ended June 30,			
	2011	2010	Change	%
Stock-based compensation	$41,159	$7,025	$34,134	486%
Other research and development	3,679,235	2,630,382	1,048,853	40 %
Total research and development	$3,720,394	$2,637,407	$1,082,987	41 %

- Stock-based compensation for the fiscal year ended June 30, 2011 was higher than the fiscal year ended June 30, 2010 primarily because the number of options granted during the fiscal year ended June 30, 2011 was higher than during the fiscal year ended June 30, 2010.

- Other research and development costs for the fiscal year ended June 30, 2011 was higher than the fiscal year ended June 30, 2010 primarily as a result of the expansion of our human therapeutic programs, specifically performing the pivotal toxicology study and submitting the IND for our multiple myeloma project.

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

	Fiscal Year ended June 30,				
	2011	%		2010	%
Agricultural research programs	$467,141	13	%	$553,620	21 %
Human therapeutic research programs	3,253,253	87	%	2,083,787	79 %
Total research and development expenses	$3,720,394	100	%	$2,637,407	100 %

- Agricultural research expenses for the fiscal year ended June 30, 2011 were lower than the fiscal year ended June 30, 2010 primarily as a result of a decrease in the allocation of payroll from agriculture to human therapeutics.

- Human therapeutic research expenses for the fiscal year ended June 30, 2011 were higher than the fiscal year ended June 30, 2010 primarily as a result of the progress of the ongoing multiple myeloma project.

Other non-operating income and expense

Grant income

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.

Fair value – warrant liability

This decrease of $1,782,535 was primarily due to a decrease in the number of warrants that are accounted for as a liability as the terms that gave rise to liability accounting for these warrants were modified by the holders during the fiscal year ended June 30, 2011. Accordingly, $1,173,296 of the decrease was recorded as an increase to capital in excess of par with the balance of the decrease in the amount of $609,239 being recorded as income from the change in the Black-Scholes value of the remaining warrants.

Other noncash expense or income

During the fiscal year ended June 30, 2011, the exercise price of 4,088,540 warrants was adjusted from $0.50 to $0.32 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.

Write-off of patents abandoned

During the fiscal year ended 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 amount of $1,588,087.

Item 7A. **Quantitative and Qualitative Disclosures About Market Risk.**

Foreign Currency Risk

Our financial statements are denominated in United States dollars and, except for our agreement with the University of Waterloo, which is denominated in Canadian dollars, all of our contracts are denominated in United States dollars. Therefore, we believe that fluctuations in foreign currency exchange rates will not result in any material adverse effect on our financial condition or results of operations. In the event we derive a greater portion of our revenues from international operations or in the event a greater portion of our expenses are incurred internationally and denominated in a foreign currency, then changes in foreign currency exchange rates could affect our results of operations and financial condition.

Interest Rate Risk

We invest in high-quality financial instruments, primarily money market funds, with an effective duration of the portfolio of less than one year which we believe are subject to limited credit risk. We currently do not hedge our interest rate exposure. Due to the short-term nature of our investments, which we plan to hold until maturity, we do not believe that we have any material exposure to interest rate risk arising from our investments.

Item 8. **Financial Statements and Supplementary Data.**

The financial statements required to be filed pursuant to this Item 8 are included in this Annual Report on Form 10-K. A list of the financial statements filed herewith is found at "Item 15. Exhibits, Financial Statement Schedules."

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.

Disclosure Controls and Procedures

Our management, with the participation of our chief executive officer and chief financial officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this Annual Report on Form 10-K. Based on this evaluation, our chief executive officer and chief financial officer have concluded that, as of the end of such period, our disclosure controls and procedures were effective.

Internal Control Over Financial Reporting

Management’s Annual Report on Internal Control Over Financial Reporting

Our company’s management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act as a process designed by, or under the supervision of, our company’s principle executive and principal financial officers and effected by our company’s board of directors, management and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles in the U.S. and includes those policies and procedures that:

- Pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of our company;
- Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of our company are being made only in accordance with authorization of management and directors of our company; and
- Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risks that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management assessed the effectiveness of our company's internal control over financial reporting as of June 30, 2012. In making this assessment, management used the criteria established in *Internal Control-Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission, or COSO.

Based on this assessment, management has concluded that, as of June 30, 2012 our company's internal control over financial reporting is effective.

Management's report was not subject to attestation by the company's registered public accounting firm pursuant to applicable law that permits the Company to provide only management's report in this annual report.

Changes in Internal Controls Over Financial Reporting

No change in our internal controls over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) occurred during the fiscal year ended June 30, 2012 that has materially affected, or is reasonably likely to materially affect, our internal controls over financial reporting.

Item 9B. Other Information.

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

The information relating to our directors, nominees for election as directors and executive officers under the headings "Election of Directors" and "Executive Officers" in our definitive proxy statement for the 2013 Annual Meeting of Stockholders is incorporated herein by reference to such proxy statement.

Item 11. Executive Compensation.

The discussion under the heading "Executive Compensation" in our definitive proxy statement for the 2013 Annual Meeting of Stockholders is incorporated herein by reference to such proxy statement.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

The discussion under the heading "Security Ownership of Certain Beneficial Owners and Management" in our definitive proxy statement for the 2013 Annual Meeting of Stockholders is incorporated herein by reference to such proxy statement.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

The discussion under the heading "Certain Relationships and Related Transactions" in our definitive proxy statement for the 2013 Annual Meeting of Stockholders is incorporated herein by reference to such proxy statement.

Item 14. Principal Accounting Fees and Services.

The discussion under the heading "Principal Accountant Fees and Services" in our definitive proxy statement for the 2013 Annual Meeting of Stockholders is incorporated herein by reference to such proxy statement.

PART IV

Item 15. Exhibits and Financial Statement Schedules.

(a)(1) Financial Statements.

Reference is made to the Index to Financial Statements on Page F-1.

(a)(2) Financial Statement Schedules.

None.

(a)(3) Exhibits.

Reference is made to the Exhibit Index on Page 59.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized this 28th day of September 2012.

SENESCO TECHNOLOGIES, INC.

By: /s/ Leslie J. Browne
Leslie J. Browne, Ph.D., President and
Chief Executive Officer
(principal executive officer)

By: /s/ Joel Brooks
Joel Brooks, Chief Financial Officer,
Secretary and Treasurer
(principal financial and accounting officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Harlan W. Waksal, M.D. Harlan W. Waksal, M.D.	Chairman and Director	September 28, 2012
/s/ Leslie J. Browne, Ph.D. Leslie J. Browne, Ph.D.	President, Chief Executive Officer and Director (principal executive officer)	September 28, 2012
/s/ Joel Brooks Joel Brooks	Chief Financial Officer, Secretary and Treasurer (principal financial and accounting officer)	September 28, 2012
/s/ John E. Thompson John E. Thompson	Executive Vice President, Chief Scientific Officer and Director	September 28, 2012
/s/ John Braca John Braca	Director	September 28, 2012
/s/ Christopher Forbes Christopher Forbes	Director	September 28, 2012
/s/ Warren J. Isabelle Warren J. Isabelle	Director	September 28, 2012
/s/ Thomas C. Quick Thomas C. Quick	Director	September 28, 2012
/s/ David Rector David Rector	Director	September 28, 2012
/s/ Rudolf Stalder Rudolf Stalder	Director	September 28, 2012
/s/ Jack Van Hulst Jack Van Hulst	Director	September 28, 2012

EXHIBIT INDEX

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	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.)
3.7	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)
3.8	Certificate of Designations to the Company’s Certificate of Incorporation (Series B)(Incorporated by reference to Exhibit 3.2 to Senesco Technologies, Inc. current report on Form 8-K filed on March 29, 2010)

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Exhibit No.	Description of Exhibit
4.1	Form of Series A Warrant issued to YA Global Investments, L.P. (Incorporated by reference to Exhibit 4.15 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2007.)
4.2	Form of Series A Warrant issued to Stanford Venture Capital Holdings, Inc. (Incorporated by reference to Exhibit 4.16 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2007.)
4.3	Form of Series B Warrant issued to YA Global Investments, L.P. (Incorporated by reference to Exhibit 4.19 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2007.)
4.4	Form of Series B Warrant issued to Stanford Venture Capital Holdings, Inc. (Incorporated by reference to Exhibit 4.20 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2007.)
4.5	Form of Warrant issued to H.C. Wainwright & Co., Inc or its designees. (Incorporated by reference to Exhibit 4.21 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2008.)
4.6	Form of Series A Warrant issued to Partlet Holdings Ltd. (Incorporated by reference to Exhibit 4.1 of Senesco Technologies, Inc. current report on Form 8-K, filed on July 10, 2009.)
4.7	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.)
4.8	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.)
4.9	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.)
4.10	Form of Series A 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.)
4.11	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.)
4.12	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.)

Exhibit No.	Description of Exhibit
4.13	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.)
4.14	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.)
4.15	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.)
4.16 †	Form of Warrant Clarification Letter (filed herewith.)
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.)

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Exhibit No.	Description of Exhibit
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 # 5 to Consulting Agreement of July 12, 1999, as modified, by and between Senesco, Inc. and John E. Thompson, Ph.D., dated June 15, 2007. (Incorporated by reference to Exhibit 10.49 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2007.)
10.14 *	Amendment # 6 to Consulting Agreement of July 12, 1999, as modified, by and between Senesco, Inc. and John E. Thompson, Ph.D., dated June 25, 2009. (Incorporated by reference to Exhibit 10.17 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2009.)
10.15 *	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.
10.16 +	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.)
10.17 +	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.)
10.18 +	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.)
10.19 +	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.)
10.20 +	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.)

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Exhibit No.	Description of Exhibit
10.21 +	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.)
10.22 +	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.)
10.23 +	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.)
10.24 +	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.)
10.25 +	Biofuels Evaluation and License Agreement by and between BioCorp Ventures LLC, Senesco Technologies, Inc. and Senesco, Inc. dated February 8, 2012. (Incorporated by reference Exhibit 10.1 of Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended March 31, 2012.)
10.26+	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.)
10.27	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.)
10.28	Amendment to Research Agreement by and among the University of Waterloo, Senesco, Inc. and Dr. John E. Thompson, Ph.D., dated September 1, 2010. (Incorporated by reference to Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2010.)
10.29	Amendment to Research Agreement by and among the University of Waterloo, Senesco, Inc. and Dr. John E. Thompson, Ph.D., dated December 1, 2010. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended December 31, 2010.)
10.30	Amendment to Research Agreement by and among the University of Waterloo, Senesco, Inc. and Dr. John E. Thompson, Ph.D., dated September 1, 2011. (Incorporated by reference to Exhibit 10.29 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2011.)
10.31 †	Amendment to Research Agreement by and among the University of Waterloo, Senesco, Inc., and Dr. John E. Thompson, Ph.D., dated June 11, 2012. (filed herewith.)

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Exhibit No.	Description of Exhibit
10.32 †	Amendment to Research Agreement by and among the University of Waterloo, Senesco, Inc. and Dr. John E. Thompson, Ph.D., dated September 1, 2012. (filed herewith.)
10.33 +	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.)
10.34	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.)
10.35	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.)
10.36	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.)
10.37	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.)
10.38	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.)
10.39	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.)
10.40	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.)
10.41	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.)

Exhibit No.	Description of Exhibit
10.42	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.)
10.43	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.)
10.44	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.)
10.45	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.)
10.46	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.)
10.47	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.)
10.48	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.)
10.49	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.)
10.50	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.)
10.51	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.)
10.52	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.)
10.53 *	

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.)

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Exhibit No.	Description of Exhibit
10.54*	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.)
10.55*	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.)
10.56*	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.)
10.57*	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.)
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.
31.1 †	Certification of the principal executive officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2 †	Certification of the principal financial and accounting officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1 †	Certification of the principal executive officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2 †	Certification of the principal financial and accounting officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

* 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.

+ The SEC granted Confidential Treatment for portions of this Exhibit.

SENESCO TECHNOLOGIES, INC.

AND SUBSIDIARY

(a development stage company)

CONSOLIDATED FINANCIAL STATEMENTS

JUNE 30, 2012

SENESCO TECHNOLOGIES, INC AND SUBSIDIARY

(a development stage company)

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

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, 2012 and June 30, 2011, and the related consolidated statements of operations, stockholders' equity and cash flows for each of the three years in the period ended June 30, 2012 and cumulative amounts from July 1, 1998 (inception) to June 30, 2012. 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, 2012 and June 30, 2011, and the results of their operations and their cash flows for each of the three years in the period ended June 30, 2012 and cumulative amounts from July 1, 1998 (inception) to June 30, 2012, 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 28, 2012

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

CONDENSED CONSOLIDATED BALANCE SHEETS

	June 30, 2012	June 30, 2011
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$2,001,325	$3,609,954
Prepaid research services and supplies and expenses	1,548,524	1,446,064
Total Current Assets	3,549,849	5,056,018
Equipment, furniture and fixtures, net	5,857	3,782
Intangibles, net	3,393,992	3,524,731
Deferred income tax assets, net	-	-
Security deposit	5,171	12,358
TOTAL ASSETS	$6,954,869	$8,596,889
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accounts payable	$594,514	$559,525
Accrued expenses	369,695	509,806
Line of credit	2,199,108	2,199,108
Total Current Liabilities	3,163,317	3,268,439
Warrant liabilities	238,796	711,259
Grant payable	99,728	99,728
TOTAL LIABILITIES	3,501,841	4,079,426
STOCKHOLDERS' EQUITY:		
Preferred stock, $0.01 par value, authorized 5,000,000 shares		
Series A 10,297 shares issued and 3,379 and 3,690 shares outstanding, respectively (liquidation preference of $3,463,475 and $3,782,250 at June 30, 2012 and June 30, 2011, respectively)	34	37
Series B 1,200 shares issued and outstanding (liquidation preference of $1,230,000 and $1,230,000 at June 30, 2012 and June 30, 2011, respectively)	12	12

Common stock, $0.01 par value, authorized 350,000,000 shares, issued and outstanding 94,112,483 and 77,769,677, respectively	941,125	777,697
Capital in excess of par	69,952,152	64,488,152
Deficit accumulated during the development stage	(67,440,295)	(60,748,435)
Total Stockholders' Equity	3,453,028	4,517,463
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$6,954,869	$8,596,889

See Notes to Consolidated Financial Statements

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

	Fiscal Year Ended June 30,			Cumulative Amounts from
	2012	2011	2010	Inception
Revenue	$200,000	$-	$140,000	$1,790,000
Operating expenses:				
General and administrative	2,724,144	2,610,222	2,349,116	31,614,677
Research and development	2,566,247	3,720,394	2,637,407	21,235,605
Total operating expenses	5,290,391	6,330,616	4,986,523	52,850,282
Loss from operations	(5,090,391)	(6,330,616)	(4,846,523)	(51,060,282)
Other non-operating income (expense)				
Grant income	-	244,479	-	244,479
Fair value – warrant liability	472,463	609,239	2,516,661	8,330,130
Sale of state income tax loss – net	-	-	-	586,442
Other noncash (expense) income, net	-	(115,869)	-	205,390
Loss on extinguishment of debt	-	-	(361,877)	(361,877)
Write-off of patents abandoned	(321,137)	(1,588,087)	-	(1,909,224)
Amortization of debt discount and financing costs	-	-	(10,081,107)	(11,227,870)
Interest expense – convertible notes	-	-	(586,532)	(2,027,930)
Interest (expense) income - net	(127,068)	(88,122)	(24,135)	283,988
Net loss	(5,066,133)	(7,268,976)	(13,383,513)	(56,936,754)
Preferred dividends	(1,625,727)	(2,638,300)	(6,239,514)	(10,503,541)
Loss applicable to common shares	$(6,691,860)	$(9,907,276)	$(19,623,027)	$(67,440,295)
Basic and diluted net loss per common share	$(0.08)	$(0.14)	$(0.67)	

Basic and diluted weighted-average number of common shares outstanding	85,703,291	69,332,477	29,112,976

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, 2012

	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	-	$ -	2,000,462	$20,005	$ (20,005)	$ -	$ -
Contribution of capital	-	-	-	-	85,179	-	85,179
Issuance of common stock in reverse merger on January 22, 1999 at $0.01 per share	-	-	3,400,000	34,000	(34,000)	-	-
Issuance of common stock for cash on May 21, 1999 at $2.63437 per share	-	-	759,194	7,592	1,988,390	-	1,995,982
Issuance of common stock for placement fees on May 21, 1999 at $0.01 per share	-	-	53,144	531	(531)	-	-
Net loss	-	-	-	-	-	(1,168,995)	(1,168,995)
Balance at June 30, 1999	-	-	6,212,800	62,128	2,019,033	(1,168,995)	912,166
Issuance of common stock for cash on January 26, 2000 at $2.867647 per share	-	-	17,436	174	49,826	-	50,000
Issuance of common stock for cash on January 31, 2000 at $2.87875 per share	-	-	34,737	347	99,653	-	100,000

Issuance of common stock for cash on February 4, 2000 at $2.924582 per share	-	-	85,191	852	249,148	-	250,000
Issuance of common stock for cash on March 15, 2000 at $2.527875 per share	-	-	51,428	514	129,486	-	130,000
Issuance of common stock for cash on June 22, 2000 at $1.50 per share	-	-	1,471,700	14,718	2,192,833	-	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	-	-	7,873,292	78,733	5,955,311	(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	-	-	7,873,292	78,733	6,263,930	(6,549,376)	(206,713)

continued

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, 2012

	Preferred Stock		Common Stock		Capital in Excess	Deficit Accumulated During the Development	Stockholders' Equity
	Shares	Amount	Shares	Amount	of Par Value	Stage	(Deficiency)
Issuance of common stock and warrants for cash from November 30, 2001 through April 17, 2002 at $1.75 per unit	-	$ -	3,701,430	$37,014	$ 6,440,486	$-	$6,477,500
Issuance of common stock and warrants associated with bridge loan conversion on December 3, 2001	-	-	305,323	3,053	531,263	-	534,316
Commissions, legal and bank fees associated with issuances during the year ended June 30, 2002	-	-	-	-	(846,444)	-	(846,444)
Fair market value of options and warrants vested during the year ended June 30, 2002	-	-	-	-	1,848,726	-	1,848,726
Net loss	-	-	-	-	-	(3,021,709)	(3,021,709)
Balance at June 30, 2002	-	-	11,880,045	118,800	14,237,961	(9,571,085)	4,785,676
Fair market value of options and warrants vested during the year ended June 30, 2003	-	-	-	-	848,842	-	848,842

Net loss	-	-	-	-	-	(2,778,004)	(2,778,004)
Balance at June 30, 2003	-	-	11,880,045	118,800	15,086,803	(12,349,089)	2,856,514
Issuance of common stock and warrants for cash from January 15, 2004 through February 12, 2004 at $2.37 per unit	-	-	1,536,922	15,369	3,627,131	-	3,642,500
Allocation of proceeds to warrants	-	-	-	-	(2,099,090)	-	(2,099,090)
Reclassification of warrants	-	-	-	-	1,913,463	-	1,913,463
Commissions, legal and bank fees associated with issuances for the year ended June 30, 2004	-	-	-	-	(378,624)	-	(378,624)
Fair market value of options and warrants vested during the year ended June 30, 2004	-	-	-	-	1,826,514	-	1,826,514
Options and warrants exercised during the year ended June 30, 2004 at exercise prices ranging from $1.00 to $3.25	-	-	370,283	3,704	692,945	-	696,649
Net loss	-	-	-	-	-	(3,726,951)	(3,726,951)
Balance at June 30, 2004	-	-	13,787,250	137,873	20,669,142	(16,076,040)	4,730,975

continued

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, 2012

	Preferred Stock		Common Stock		Capital in Excess	Deficit Accumulated During the Development	Stockholders' Equity
	Shares	Amount	Shares	Amount	of Par Value	Stage	(Deficiency)
Issuance of common stock and warrants for cash on May 9, 2005 at $2.11 per unit	-	$ -	1,595,651	$15,957	$ 3,350,872	$-	$3,366,829
Allocation of proceeds to warrants	-	-	-	-	(1,715,347)	-	(1,715,347)
Reclassification of warrants	-	-	-	-	1,579,715	-	1,579,715
Commissions, legal and bank fees associated with the issuance on May 9, 2005	-	-	-	-	(428,863)	-	(428,863)
Options and warrants exercised during the year ended June 30, 2005 at exercise prices ranging from $1.50 to $3.25	-	-	84,487	844	60,281	-	61,125
Fair market value of options and warrants vested during the year ended June 30, 2005	-	-	-	-	974,235	-	974,235
Net loss	-	-	-	-	-	(2,978,918)	(2,978,918)
Balance at June 30, 2005	-	-	15,467,388	154,674	24,490,035	(19,054,958)	5,589,751
	-	-	10,000	100	-	-	100

Warrants exercised during the year ended June 30, 2006 at an exercise price of $0.01							
Fair market value of options and warrants vested during the year ended June 30, 2006	-	-	-	-	677,000	-	677,000
Net loss	-	-	-	-	-	(3,314,885)	(3,314,885)
Balance at June 30, 2006	-	-	15,477,388	154,774	25,167,035	(22,369,843)	2,951,966
Issuance of common stock and warrants for cash on October 10, 2006 at $1.135 per unit	-	-	1,986,306	19,863	2,229,628	-	2,249,491
Commissions, legal and bank fees associated with the issuance on October 10, 2006	-	-	-	-	(230,483)	-	(230,483)
Warrants exercised during the year ended June 30, 2007 at an exercise price of $0.01	-	-	10,000	100	-	-	100
Fair market value of options and warrants vested during the year ended June 30, 2007	-	-	-	-	970,162	-	970,162
Net loss	-	-	-	-	-	(3,251,697)	(3,251,697)
Balance at June 30, 2007	-	-	17,473,694	174,737	28,136,342	(25,621,540)	2,689,539

continued

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, 2012

	Preferred Stock		Common Stock		Capital in Excess	Deficit Accumulated During the Development	Stockholders' Equity
	Shares	Amount	Shares	Amount	of Par Value	Stage	(Deficiency)
Fair market value of options and warrants vested during the year ended June 30, 2008	-	$ -	-	$-	$ 1,536,968	$-	$ 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	-	9,340,000
Convertible notes converted into common stock during the year ended June 30, 2008	-	-	555,556	5,556	430,952	-	436,508
Issuance of common stock in lieu of cash payment for interest during the year ended June 30, 2008	-	-	345,867	3,458	430,696	-	434,154
Net loss	-	-	-	-	-	(4,601,490)	(4,601,490)
Balance at June 30, 2008	-	-	18,375,117	183,751	39,874,958	(30,223,030)	9,835,679
Fair market value of options and warrants vested during the year ended June 30, 2009	-	-	-	-	506,847	-	506,847

Warrants exercised during the year ended June 30, 2009 at an exercise price of $0.01	-	-	2,395	24	(24)	-	-
Issuance of common stock in lieu of cash payment for interest during the year ended June 30, 2009	-	-	1,271,831	12,718	994,526	-	1,007,244
Convertible notes converted into common stock during the year ended June 30, 2009	-	-	50,000	500	44,433	-	44,933
Issuance of common stock in connection with Short-Term Incentive Plan during the year ended June 30, 2009	-	-	112,700	1,127	(1,127)	-	-
Net loss	-	-	-	-	-	(5,726,869)	(5,726,869)
Balance at June 30, 2009	-	-	19,812,043	198,120	41,419,613	(35,949,899)	5,667,834

continued

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, 2012

	Preferred Stock		Common Stock		Capital in Excess	Deficit Accumulated During the Development	Stockholders' Equity
	Shares	Amount	Shares	Amount	of Par Value	Stage	(Deficiency)
Cumulative effect of change in accounting principle-implementation of FASB ASC Topic 815-40	-	$ -	-	$-	$ (7,931,875)	$4,731,767	$(3,200,108)
Issuance of common stock and warrants for cash on July 9, 2009 and September 30, 2009 at $0.90 per unit	-	-	1,700,000	17,000	1,513,000	-	1,530,000
Issuance of common stock and warrants for satisfaction of accounts payable on September 30, 2009	-	-	194,444	1,944	259,588	-	261,532
Legal and regulatory fees associated with the issuances on July 9, 2009 and September 30, 2009	-	-	-	-	(180,862)	-	(180,862)
Issuance of preferred stock and warrants for cash on April 1, 2010 and June 2, 2010	11,497	115	-	-	11,496,885	-	11,497,000

Deemed dividend-Preferred Stock	-	-	-	-	5,330,039	(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)	-	(793,498)
Fair value of warrants issued on April 1, 2010 and June 2, 2010	-	-	-	-	(1,759,008)	-	(1,759,008)
Preferred stock converted into common stock during the year ended June 30, 2010	(2,262)	(23)	7,068,750	70,688	(70,665)	-	-
Warrants exercised during the year ended June 30, 2010 at an exercise price of $0.01	-	-	1,005,000	10,050	-	-	10,050
Issuance of common stock in lieu of cash payment for interest during the year ended June 30, 2010	-	-	1,353,132	13,531	539,142	-	552,673
Issuance of common stock in lieu of cash payment for dividends during the year ended June 30, 2010	-	-	3,029,465	30,295	648,305	(678,600)	-
Convertible notes converted into common stock during the year ended June 30, 2010	-	-	15,659,186	156,592	7,462,768	-	7,619,360
Issuance of common stock in connection with Short-Term Incentive Plan during the year ended June 30, 2010	-	-	116,000	1,160	(1,160)	-	-
Issuance of common stock for services during the year ended	-	-	154,184	1,542	52,258	-	53,800

June 30, 2010							
Fair market value of options and warrants vested during the year ended June 30, 2010	-	-	-	-	386,639	-	386,639
Repurchase of warrants during the year ended June 30, 2010	-	-	-	-	(50,000)	-	(50,000)
Dividends accrued for the period from April 1, 2010 through June 30, 2010	-	-	-	-	-	(230,875)	(230,875)
Net loss	-	-	-	-	-	(13,383,513)	(13,383,513)
Balance at June 30, 2010	9,235	$ 92	50,092,204	$500,922	$ 58,321,169	$(50,841,159)	$7,981,024

continued

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, 2012

	Preferred Stock		Common Stock		Capital in Excess	Deficit Accumulated During the Development	Stockholders'
	Shares	Amount	Shares	Amount	of Par Value	Stage	Equity
Issuance of common stock at prices ranging from $0.30 per share to $0.36 per share	-	-	5,911,457	59,114	1,794,305	-	1,853,419
Commissions and other fees related to the issuance of common stock	-	-	-	-	(197,908)	-	(197,908)
Preferred stock converted into common stock	(4,345)	(43)	13,668,750	136,687	(136,644)	-	-
Warrants converted into common stock			175,000	1,750	-	-	1,750
Issuance of common stock in lieu of cash payment for dividends	-	-	7,912,266	79,124	2,307,066	$(2,155,315)	230,875
Fair market value of options and warrants vested and amended	-	-	-	-	866,235	-	866,235
Reclassification of warrant liability	-	-	-	-	1,173,296	-	1,173,296
	-	-	10,000	100	(100)	-	-

Issuance of common stock under the Company's the Company's long-term incentive plan							
Deemed dividend - Preferred Stock	-	-	-	-	360,733	(360,733)	-
Dividends accrued and unpaid at June 30, 2011	-	-	-	-	-	(122,252)	(122,252)
Net loss	-	-	-	-	-	(7,268,976)	(7,268,976)
Balance at June 30, 2011	4,890	$ 49	77,769,677	$777,697	$ 64,488,152	$(60,748,435)	$4,517,463
Issuance of common stock at prices ranging from $0.26 per share to $0.31 per share	-	-	12,842,296	128,423	3,243,258	-	3,371,681
Commissions and other fees related to the issuance of common stock	-	-	-	-	(143,765)	-	(143,765)
Preferred stock converted into common stock	(311)	(3)	1,178,633	11,786	(11,783)	-	-
Issuance of common stock in lieu of cash payment for dividends	-	-	2,321,877	23,219	533,931	(434,898)	122,252
Deemed dividend - Preferred Stock	-	-	-	-	1,076,355	(1,076,355)	-
Fair market value of options and warrants vested	-	-	-	-	766,004	-	766,004
Dividends accrued and unpaid at June 30, 2012	-	-	-	-	-	(114,474)	(114,474)
Net loss	-	-	-	-	-	(5,066,133)	(5,066,133)
Balance July 1, 1998 (inception) through June 30, 2012	4,579	$ 46	94,112,483	$941,125	$ 69,952,152	$(67,440,295)	$3,453,028

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
	2012	2011	2010	
Cash flows from operating activities:				
Net loss	$(5,066,133)	$(7,268,976)	$(13,383,513)	$(56,936,754)
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	(472,463)	(609,239)	(2,516,661)	(8,651,389)
Noncash charge for change in warrant terms	-	115,869	-	115,869
Issuance of common stock and warrants for interest	-	-	552,673	2,003,386
Issuance of common stock for services	-	-	53,800	53,800
Stock-based compensation expense	766,004	750,366	386,639	12,105,953
Depreciation and amortization	258,023	143,274	126,567	1,100,305
Write-off of intangibles	321,137	1,588,087	-	1,909,224
Deferred rent	-	(8,060)	(7,957)	-
Amortization of convertible note discount	-	-	9,448,783	10,000,000
Amortization of deferred financing costs	-	-	632,324	1,227,869
Loss on extinguishment of debt	-	-	361,877	361,877
(Increase) decrease in operating assets:				
Prepaid expenses and other current assets	(102,460)	(141,269)	(143,447)	(1,548,524)
Security deposit	7,187	(5,171)	-	(5,171)
Increase (decrease) in operating liabilities:				
Accounts payable	34,989	2,105	(419,260)	594,514
Accrued expenses	(132,333)	41,572	165,046	430,222
Net cash used in operating activities	(4,386,049)	(5,391,442)	(4,743,129)	(37,022,390)
Cash flows from investing activities:				
Patent costs	(446,035)	(684,399)	(807,915)	(6,224,712)
Redemption of investments, net	-	-	1,050,000	-
Purchase of equipment, furniture and fixtures	(4,461)	(2,026)	(1,116)	(184,666)
Net cash used in investing activities	(450,496)	(686,425)	240,969	(6,409,378)
Cash flows from financing activities:				
Proceeds from grant	-	-	-	99,728
Proceeds from draw-down on line of credit	-	4,264	2,194,844	2,199,108
Proceeds from issuance of bridge notes	-	-	-	525,000
	-	-	10,754,841	10,754,841

Proceeds from issuance of preferred stock and warrants, net				
Redemption of convertible notes and warrants	-	-	(2,160,986)	(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	3,227,916	1,657,261	1,359,188	25,327,183
Net cash provided by financing activities	3,227,916	1,661,525	12,147,887	45,433,093
Net (decrease) increase in cash and cash equivalents	(1,608,629)	(4,416,342)	7,645,727	2,001,325
Cash and cash equivalents at beginning of period	3,609,954	8,026,296	380,569	-
Cash and cash equivalents at end of period	$2,001,325	$3,609,954	$8,026,296	$2,001,325

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

The Company 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"), 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, 2012 of $67,440,295. 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, 2012, the Company had cash and cash equivalents in the amount of $2,001,325, which consisted of checking accounts and money market funds. In December 2010, the Company entered into an At Market Issuance Sales Agreement ("ATM") whereby it may issue up to $5,500,000 of the Company's common stock, par value $0.01 per share, (the "Common Stock") under this facility. The Company estimates that its cash and cash equivalents and the net proceeds from its ATM facility will cover its expenses through November 2012. The Company has the ability to raise additional capital through its ATM facility, draw down on its unused line of credit and delay certain costs, if

necessary, which will provide the Company with enough cash to fund its operations at least through March 31, 2013. In order to provide the Company with the cash resources necessary to fund operations through at least June 30, 2013, the Company plans on raising additional capital through a private or public placement of its Common Stock in the near future.

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.

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Our 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. Based on our currently available cash, we do not have adequate cash on hand to cover our anticipated expenses for the next 12 months. If we fail to raise a significant amount of capital, we may need to significantly curtail operations, cease operations or seek federal bankruptcy protection in the near future. These conditions have caused our auditors to raise substantial doubt about our ability to continue as a going concern. Consequently, the audit report prepared by our independent public accounting firm relating to our financial statements for the year ended June 30, 2012 includes a going concern explanatory paragraph.

2. Summary of Significant Accounting Policies:

Principles of consolidation

The accompanying consolidated financial statements include the accounts of Senesco Technologies, Inc. ("ST") and its wholly owned subsidiary, SI (collectively, the "Company"). 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 our 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 our 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.

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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 expenses and other current assets, accounts payable, accrued expenses, and line of credit reported in the consolidated balance sheets equal or approximate fair value due to their short maturities.

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 the estimated useful life of each asset, generally four to seven years. 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, 2012. 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;

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

- 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 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, 2012 and 2011, the Company has not recorded any impairment of intangible assets. During the fiscal years ended June 30, 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, 2012 and 2011, the Company wrote off patent costs in the net amount of $321,137 and $1,588,087, respectively.

Net Loss per Common Share

Basic earnings (loss) per share is computed by dividing net income (loss) available to common shareholders by the weighted average number of common shares 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 common shares that would have been outstanding if the potential common shares had been issued and if the additional common shares 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 common shares.

As of June 30, 2012, there were 90,485,261 additional potentially dilutive shares of common stock. These additional shares include 17,611,538 shares issuable upon conversion of the Preferred Stock, and 72,873,723 shares issuable upon the exercise of outstanding options and warrants. As of June 30, 2011, there were 82,949,540 additional potentially dilutive shares of common stock. These additional shares include 16,300,000 shares issuable upon conversion of the Preferred Stock, and 66,649,540 issuable upon the exercise of outstanding options and warrants. As

of June 30, 2010, there were 91,299,773 additional potentially dilutive shares of common stock. These additional shares include 28,859,375 shares issuable upon conversion of the Preferred Stock and 62,440,398 shares issuable upon the exercise of outstanding options and warrants.

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

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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, 2012, 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 the fiscal years ended June 30, 2012, 2011, 2010 and 2009 are 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.

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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, 2012, 2011 and 2010 and from inception to date.

	Fiscal Year Ended June 30,			Cummulative
	2012	2011	2010	From Inception
General and administrative	721,197	709,207	433,414	10,595,114
Research and development	44,807	41,159	7,025	1,564,639
Total	$766,004	$750,366	$440,439	$ 12,159,753

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

	Fiscal Year Ended June 30,		
	2012	2011	2010
Risk-free interest rate (1)	0.4%-1.9%	1.3%-2.9%	2.0%-3.9%
Expected volatility	78-105%	103-104%	100-106%
Dividend yield	None	None	None
Expected life (2)	2.5 - 10.0	5.0 - 10.0	3.5-6.2

(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, par value $0.01, 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.

In September 2011, the Financial Accounting Standards Board issued ASU 2011-08 Intangibles – Goodwill and Other (Topic 350): Testing Goodwill for Impairment. This will be effective for the Company beginning with the fiscal year ending June 30, 2013.

In December 2011, the Financial Accounting Standards Board issued ASU 2011-11 Balance Sheet (Topic 210): Disclosures about Offsetting Assets and Liabilities. This will be effective for the Company beginning with the fiscal year ending June 30, 2014.

In December 2011, The Financial Accounting Standards Board issued ASU 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 Accounting Standards Update No. 2011-05. This will be effective for the Company beginning with the fiscal year ending June 30, 2013.

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In July 2012, the Financial Accounting Standards Board issued ASU 2012-02 Intangibles-Goodwill and Other (Topic 350): Testing Indefinite-Lived Intangible Assets for Impairment. This will be effective for the Company beginning with the fiscal year ending June 30, 2013.

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, 2012 and 2011:

	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

	Carrying	Fair Value Measurement at June 30, 2011		
	Value	Level 1	Level 2	Level 3
Assets:				
Cash and cash equivalents	$3,609,954	$ 3,609,954	$ -	$ -
Liabilities:				
Warrant liabilities	$711,259	$ -	$ -	$ 711,259

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

	Fiscal Year ended June 30,	
	2012	2011

Beginning Balance	$ 711,259	$ 2,493,794
Reclassification to equity due to change in terms of common stock warrants exercisable at $0.35	-	(1,173,296)
Gain due to change in fair value of warrant liabilities, net	(472,463)	(609,239)
Ending Balance	$ 238,796	$ 711,259

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

Equipment, Furniture and Fixtures consist of the following:

	June 30, 2012	2011
Equipment	$31,053	$26,592
Furniture and fixtures	67,674	67,674
	98,727	94,266
Less—Accumulated depreciation	(92,870)	(90,484)
	$5,857	$3,782

Depreciation expense aggregated $2,386, $2,798, $2,548 and $178,809 for the fiscal years ended June 30, 2012, 2011, 2010, and cumulatively from inception through June 30, 2012, respectively.

5. Intangible assets:

Intangible assets consist of the following:

	June 30, 2012	2011
Patents approved	$2,209,286	$2,059,323
Patents pending	1,912,526	1,979,246
	4,121,812	4,038,569
Accumulated amortization	(727,820)	(513,838)
	$3,393,992	