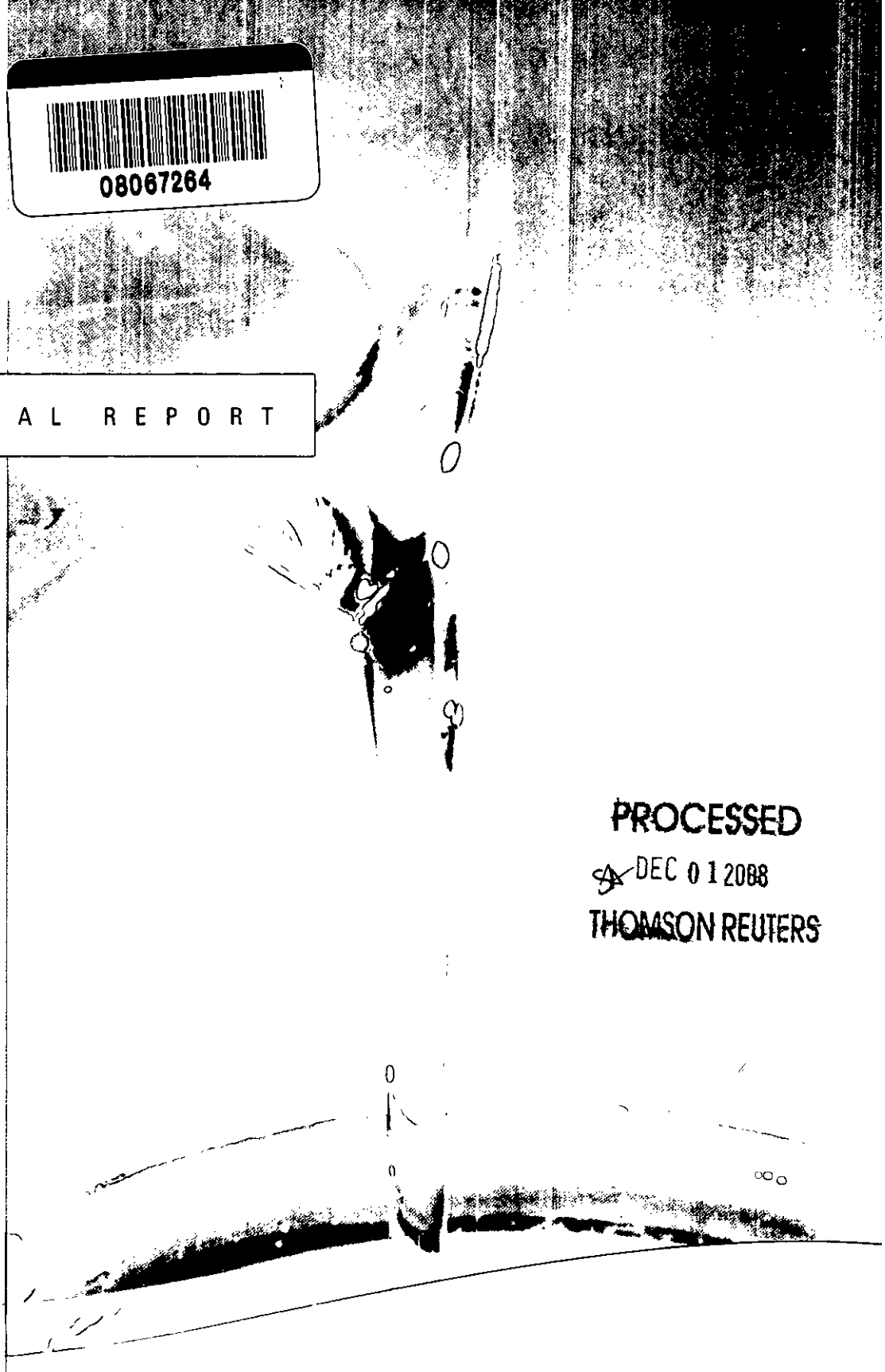

2008 ANNUAL REPORT

SENESCO

TO OUR STOCKHOLDERS:

It is our pleasure to report on Senesco's progress during the last year. Our business model, which remains balanced between furthering our human health research and licensing our technology for agricultural uses, enabled the accomplishment of several important objectives.

All of the necessary milestones related to the private placements with YA Global Investments, LP and Stanford Venture Capital Holdings, Inc. were met. As a result, Senesco received the full $10 million gross proceeds under the terms of the securities purchase agreements.

The receipt of these proceeds is vitally important as we continue to move our preclinical multiple myeloma program forward. In our most recently reported preclinical mouse studies we obtained positive results by using a combination therapy of our siRNA against Factor 5A coupled with a plasmid of the Factor 5A gene encapsulated in a nanoparticle. Whether injected intratumorally or into the bloodstream, this combination therapy reduced human multiple myeloma tumors grown in the flanks of immunodeficient mice by 95%, on average, relative to untreated mice. Additionally, for those mice in which there had been complete tumor regression, the tumors did not regenerate for up to three weeks after the last therapeutic injection.

We look forward to building on these results as we move toward filing an Investigational New Drug (IND) Application with the FDA, which we anticipate will take place over the next 12 months. The next step in this process is performing our planned multiple myeloma toxicology study which will take place shortly.

In addition to these advances in human health, our agricultural programs have also had a successful year. We entered into our second and third license agreements with Bayer CropScience AG for exclusive use of our technology in cotton and rice, while Bayer CropScience also completed the first R&D milestone related to the use of our technology in Brassica oilseeds (canola). We also entered into a license agreement with Monsanto for development and commercialization of our technology in corn and soy.

We believe our employees and consultants have done an excellent job over the past year and would like to thank them for their diligence. In addition, we would like to thank our stockholders for their continued interest and support. We look forward to keeping you updated with news of our progress during the new year.

Regards,

Bruce Galton
President & CEO

Dr. John E. Thompson
Executive Vice President & CSO

2008 ANNUAL REPORT

United States Securities and Exchange Commission

Washington, D.C. 20549

FORM 10-K

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

For the fiscal year ended June 30, 2008

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

(State or Other Jurisdiction of Incorporation or Organization)

84-1368850

(I.R.S. Employer Identification No.)

303 George Street, Suite 420, New Brunswick, New Jersey

(Address of Principal Executive Offices)

08901

(Zip Code)

(732) 296-8400

(Registrant's Telephone Number, Including Area Code)

None

(Former name, former address and former fiscal year, if changed since last report)

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

Title of each class

Common Stock, $0.01 par value per share.

Name of each exchange on which registered

American Stock Exchange

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** ☑

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 ☐ **no** ☑

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 ☑ **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** ☑

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).
yes ☐ **no** ☑

As of September 15, 2008, the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was $20,858,486, based on the closing sales price as reported on the American Stock Exchange on that date.

Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of September 15, 2008:

Class	Number of Shares
Common Stock, $0.01 par value	18,377,512

The following documents are incorporated by reference into the Annual Report on Form 10-K: Portions of the registrant's definitive Proxy Statement for its 2008 Annual Meeting of Stockholders are incorporated by reference into Part III of this Report.

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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 genes, primarily eucaryotic translation initiation Factor 5A, or Factor 5A, and deoxyhypusine synthase, or DHS, and related technologies for inhibition in human health applications to develop novel approaches to treat inflammatory diseases and cancer.

In agricultural applications we are developing and licensing Factor 5A, DHS and Lipase to enhance the quality and productivity of fruits, flowers, and vegetables and agronomic crops through the control of cell death, referred to herein as senescence, and growth in plants.

Human Health Applications

We believe that our gene technology could have broad applicability in the human health field, by either inhibiting or inducing apoptosis. Inhibiting apoptosis may be useful in preventing or treating a wide range of inflammatory and ischemic diseases attributed to premature apoptosis. Inducing apoptosis may be useful in treating certain forms of cancer because the cancerous cells have failed to initiate apoptosis on their own due to damaged or inhibited apoptotic pathways.

We have commenced preclinical in-vivo and in-vitro research to determine the ability of Factor 5A to regulate key execution genes, pro-inflammatory cytokines, receptors, and transcription factors, which are implicated in numerous apoptotic diseases.

Certain preclinical human health results to date include:

- demonstrated significant tumor regression and diminished rate of tumor growth of multiple myeloma tumors in SCID mice treated with Factor 5A technology encapsulated in nanoparticles;
- increased median survival by approximately 250% in a tumor model of mice injected with melanoma cancer cells;
- induced apoptosis in both human cancer cell lines derived from tumors and in lung tumors in mice;
- induced apoptosis of cancer cells in a human multiple myeloma cell line;
- measured VEGF reduction in mouse lung tumors as a result of treatment with our genes;
- reduced HIV-1 replication by approximately 50% as evidenced by an equal decrease in HIV replication markers p24 and IL-8 in an HIV-1 infected human cell line;
- increased the survival, while maintaining functionality, of mouse pancreatic islet cells isolated for transplantation, using intraperitaneal administration of our technology. Initial animal studies have shown that our technology administered prior to harvesting beta islet cells from a mouse, has a significant impact not only on the survival of the beta islet cells, but also on the retention of the cells' functionality when compared to the untreated beta islet cells. Additional studies have shown that the treated beta islet cells survive a pro-inflammatory cytokine challenge, while maintaining

their functionality with respect to insulin production. These further studies also revealed eIF-5A's involvement in the modulation of inducible nitric oxide synthase (iNOS), an important indicator of inflammation;

- demonstrated that the efficacy of our technology is comparable to that of existing approved anti-inflammatory prescription drugs in reducing certain inflammatory cytokines in mice; and
- increased the survival rate of mice in a lethal challenge sepsis model. Additionally, a broad spectrum of systemic pro-inflammatory cytokines were down-regulated, while not affecting the anti-inflammatory cytokine IL-10.

Accelerating Apoptosis

The data from our pre-clinical studies indicate that the up-regulation of Factor 5A induces cell death in cancer cells through both the p53 (intrinsic) and cell death receptor (extrinsic) apoptotic pathways. Tumors arise when abnormal cells fail to undergo apoptosis due to an inability to activate their apoptotic pathways. Just as the Factor 5A gene appears to facilitate expression of the entire suite of genes required for programmed cell death in plants, the Factor 5A gene appears to regulate expression of a suite of genes required for programmed cell death in human cells. Because the Factor 5A gene appears to function at the initiation point of the apoptotic pathways, both intrinsic and extrinsic, we believe that our gene technology has potential application as a means of combating a broad range of cancers. Based on the results obtained through our in-vitro studies, we have found that up-regulating Factor 5A results in: (i) the up-regulation of p53; (ii) increased inflammatory cytokine production; (iii) increased cell death receptor formation; and (iv) increased caspase activity. These features, coupled with a simultaneous down-regulation Bcl-2, result in apoptosis of cancer cells. In addition, our in-vitro studies have shown that the up-regulation of Factor 5A also down-regulates VEGF, a growth factor which allows tumors to develop additional vascularization needed for growth beyond a small mass of cells.

Inhibiting Apoptosis

Our preclinical studies indicate that down-regulation of our proprietary Factor 5A gene may have potential application as a means for controlling the effects of a broad range of diseases that are attributable to premature cell death, ischemia, or inflammation. Such inflammatory diseases include glaucoma, heart disease, and certain inflammatory diseases such as Crohn's disease, sepsis and diabetic retinopathy, among many others. We are engaged in preclinical research on certain inflammatory diseases. Using small inhibitory RNA's, or siRNA's, against Factor 5A to inhibit its expression, the results of our studies have indicated a reduction in pro-inflammatory cytokine formation and the formation of receptors for lipopolysaccharide, or LPS, interferon-gamma and TNF-alpha. Our studies have also indicated that by inhibiting Factor 5A iNOS, MAPK, NFkB, JAK1 and ICAM are down-regulated, which decreases the inflammatory cytokines formed through these pathways. Additionally, a mouse study has indicated that our siRNA is comparable to a steroid and to a prescription anti-TNF drug in its ability to reduce cytokine response to LPS. Other mouse studies have also indicated that the siRNA against Factor 5A (i) protects thymocyte cells from apoptosis and decreases formation of myeloperoxidase, or MPO, TNF-a, MIP-1alpha, and IL-1 in the lungs of mice challenged with LPS and (ii) increases the survival rate in which sepsis was induced by a lethal injection of LPS and reduced blood serum levels of inflammatory proteins, such as IL-1, IL-2, IL-6, IL-12, TNF-a, IFNg and MIP-1alpha, while not affecting IL-10, an anti-inflammatory cytokine. Other experiments utilizing siRNA to Factor 5A include inhibition of or apoptosis during the processing of mouse pancreatic beta islet cells for transplantation, the inhibition of early inflammatory changes associated with type-1 diabetes in an in-vivo rat model and the inhibition of viral replication in a human cell line infected with HIV-1.

Proteins required for cell death include p53, interleukins, TNF-a and other cytokines and caspases. Expression of these cell death proteins is required for the execution of apoptosis. Based on our studies, we believe that down-regulating Factor 5A by treatment with siRNA inhibits the expression of p53, a major cell death transcription factor that in turn controls the formation of a suite of other cell death proteins. In addition, we believe that the down-regulation of Factor 5A up-regulates Bcl-2, a suppressor of apoptosis.

Human Health Target Markets

We believe that our gene technology could have broad applicability in the human health field, by either inhibiting or accelerating 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, among others. Accelerating apoptosis may be useful in treating certain forms of cancer because the body's immune system is not able to force cancerous cells to undergo apoptosis.

Our preclinical research has yielded data that we have presented to various biopharmaceutical companies that may be prospective licensees for the development and marketing of potential applications of our technology. Additionally, we plan on using the proceeds of our recent financing to advance our research in multiple myeloma with the goal of initiating a Phase I clinical trial, and may select additional human health indications, to bring into clinical trials on our own. We believe that the success of our future operations will likely depend on our ability to transform our research and development activities into a commercially feasible technology.

Human Health Research Program

Our human health research program, which has consisted of 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 being performed by thirteen third party researchers, at our direction, at Mayo Clinic, the University of Virginia, and the University of Waterloo.

Our research and development expenses incurred on human health applications were approximately 56% and 42% of our total research and development expenses for the fiscal years ended June 30, 2008 and 2007, respectively. Since inception, the proportion of our research and development expenses on human health 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 health has increased and some of our research costs for plant applications have shifted to our license partners.

Our planned future pre-clinical research and development initiatives for human health include:

- Multiple Myeloma. Our objective is to advance our technology for the potential treatment of multiple myeloma with the goal of initiating a clinical trial. In connection with the potential clinical trial, we have engaged a clinical research organization, or CRO, to assist us through the process. We have also determined the delivery system for our technology, contracted for the supply of pharmaceutical grade materials to be used in toxicology and human studies and have contracted with a third party laboratory to conduct toxicology studies, Together with the assistance of our CRO, we will have the toxicology studies performed with the goal of filing an investigational new drug application, or IND application, with the U.S. Food and Drug Administration, or FDA, for the review

and consideration in order to initiate a clinical trial. We estimate that it will take less than eighteen months from June 30, 2008 to complete these objectives.

- HIV-1. We are currently reviewing our HIV-1 project to determine the direction of our future pre-clinical experiments.

- Lung Inflammation. The objective of our planned future lung inflammation experiments is to optimize the delivery and dose of the siRNA to Factor 5A to the lungs. A mouse model system is currently being conducted to illustrate the siRNA to Factor 5A's ability to reduce morbidity and mortality of lung inflammation, caused by the up-regulation of pro-inflammatory cytokines induced by a pathogen.

- Other. We may continue to look at other disease states in order to determine the role of Factor 5A.

In order to pursue the above research initiatives, as well as other research initiatives that may arise, we completed private placements of $10 million of convertible notes and warrants.

However, it may be necessary for us to raise a significant amount of additional working capital in the future to continue to pursue some of the above and new initiatives. 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 research centers.

Human Health Competition

Our competitors in human health 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 research including: Amgen; Centocor; Genzyme; OSI Pharmaceuticals, Inc.; Novartis; Introgen Therapeutics, Inc.; Genta, Inc.; and Vertex Pharmaceuticals, Inc., amongst others.

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. To date, we have isolated and characterized the senescence-induced Lipase gene, DHS, and Factor 5A in certain species of plants. Our goal is to modulate the expression of these genes in order to achieve such traits as extended shelf life, increased biomass, increased yield and increased resistance to environmental stresses and disease, thereby demonstrating proof of concept in each category of crop.

Certain agricultural results to date include:

- longer shelf life of perishable produce;
- increased biomass and seed yield;
- greater tolerance to environmental stresses, such as drought and soil salinity;
- greater tolerance to certain fungal and bacterial pathogens;
- more efficient use of fertilizer; and
- advancement to field trials in banana, lettuce, and trees.

The technology presently utilized by the industry for increasing the shelf life in certain flowers, fruits and vegetables relies primarily on reducing ethylene biosynthesis, and therefore only has application to the crops that are ethylene-sensitive. Because Factor 5A, DHS and Lipase are already present in all plant cells, our technology may be incorporated into crops by using either conventional breeding methods (non-genetically modified) or biotechnology techniques.

We have licensed this technology to various strategic partners and have entered into a joint venture. We may continue to license this technology, as the opportunities present themselves, to additional strategic partners and/or enter into additional joint ventures. Our commercial partners have licensed our technology for use in lettuce, turfgrass, canola, corn, soybean, cotton, banana, alfalfa, rice and certain species of trees and bedding plants, and we have obtained proof of concept for enhanced post harvest shelf life, seed yield, biomass, and resistance to disease in several of these plant species.

We have ongoing field trials of certain trees and bananas with our respective partners. The initial field trials conducted with ArborGen over a three year period in certain species of trees have concluded and the trees have been harvested for wood quality assessment. Preliminary data from our joint field trials show significantly enhanced growth rates in some of the trees relative to controls.

To date, banana field trials have indicated that our technology extends the shelf life of banana fruit by 100%. In addition to the post harvest shelf life benefits, an additional field trial generated encouraging disease tolerance data specific to Black Sigatoka (Black Leaf Streak Disease), for banana plants. Additional field trials for banana plants are ongoing for Black Sigatoka.

Commercialization by our partners may require a combination of traits in a crop, such as both post harvest shelf life and disease resistance, or other traits. Our near-term research and development initiatives include modulating the expression of DHS and Factor 5A genes in these plants and then propagation and phenotype testing of such plants.

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

- further develop and implement the DHS and Factor 5A gene technology in lettuce, melon, banana, canola, cotton, turfgrass, bedding plants, 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, which are described in the Agricultural Development and License Agreements section of this Form 10-K, upon our 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

Through September 15, 2008, we have entered into nine license agreements and one joint collaboration with established agricultural biotechnology companies or, in the case of Poet, as more fully described below, an established ethanol company, as follows:

- In November 2001, we entered into a worldwide exclusive development and license agreement with the Harris Moran Seed Company, referred to herein as the Harris Moran License, to commercialize our technology in lettuce and certain melons for an indefinite term, unless terminated by either party pursuant to the terms of the agreement. To date, the development steps performed by Harris Moran and us have all been completed in accordance with the protocol set forth in the Harris Moran License. There has been extensive characterization of our genes in lettuce in a laboratory setting. The initial lab work has produced genetically modified seed under greenhouse containment, which has been followed by substantial field trials for evaluation. These field trials represent a vital step in the process necessary to develop a commercial product. Together with Harris Moran, we will evaluate all results to date to determine the direction of further research necessary for our work in lettuce and melon. Under the Harris Moran License, we have received an upfront payment and we may receive benchmark payments upon achievement of certain research and marketing milestones.

- In June 2002, we entered into a three-year worldwide exclusive development and option agreement with ArborGen, LLC to develop our technology in certain species of trees. In June 2006, ArborGen exercised their option to license our technology and in December 2006, converted the development and option agreement into a license agreement, referred to herein as the ArborGen Agreement. To date, the research being conducted by ArborGen has proceeded according to schedule. ArborGen has seen promising positive growth responses in greenhouse-grown seedlings. These initial greenhouse data led to the initiation of field trials by ArborGen in the second half of calendar 2004. At the end of the 2005 growing season, certain trees which were enhanced by our technology had approximately double the increase in volume relative to control trees. Further field trials are ongoing to support these data and to analyze the growth rates of trees which incorporate our technology. Under the ArborGen Agreement, we have received an upfront payment and benchmark payments and we may receive additional benchmark payments upon achievement of certain development milestones and royalties upon commercialization.

- In September 2002, we entered into an exclusive development and license agreement with Cal/West Seeds, referred to herein as the Cal/West License, to commercialize our technology in certain varieties of alfalfa. The Cal/West License will continue until the expiration of the patents set forth in the agreement, unless terminated earlier by either party pursuant to the terms of the agreement. The Cal/West License also grants Cal/West an exclusive option to develop our technology in various other forage crops. The Cal/West development effort successfully incorporated our technology into their alfalfa seed as of July 2004. Seed transformation and greenhouse trait analysis is ongoing. Under the Cal/West License, we have received an upfront payment and we may receive benchmark payments as certain development milestones are achieved and a royalty upon commercialization based upon the volume of alfalfa seed sold that contains our technology.

- In March 2004, we entered into an exclusive development and license agreement with The Scotts Company, referred to herein as the Scotts Agreement, to commercialize our technology in turfgrass and certain species of bedding plants. Scotts is working on incorporating our technology to enhance a variety of traits in these plants, including environmental stress resistance, disease resistance and enhanced bloom properties. We are collaborating with Scotts in the areas of ornamental bedding plants and turfgrass. A large-scale greenhouse evaluation of bedding plants was being conducted and additional greenhouse testing is planned. Transformation and initial tissue culture screening of events have been undertaken in turfgrass. In tissue culture, turfgrass containing our technology has grown more successfully than control turfgrass without our technology. Greenhouse testing of the grass containing our technology is the next planned development step. Under the Scotts Agreement, we have received an upfront payment and benchmark payments. In January 2006, the development and license agreement with The Scotts Company was amended. Due to a change in the corporate financial policy at Scotts, Scotts requested to defer certain milestone payments, which were to be made on a calendar basis. We agreed and these payments have now been deferred and incorporated in the amount to be paid to us upon commercialization. Additionally, the commercialization fee has been increased. All other aspects of the agreement remain unchanged, and the project continues to move forward without interruption. We may also receive royalties upon commercialization from the net sales of turfgrass seed and bedding plants containing our technology.

- In October 2005, we entered into an agreement with Poet to license our proprietary gene technology to Poet to improve aspects of Poet's ethanol production capabilities. We are currently revising our work plan to incorporate our technology into those aspects of Poet's ethanol production. We will receive an annual payment for each Poet facility that incorporates our technology. If Poet incorporates our technology into each of its facilities, we would be entitled to receive an annual payment in excess of $1,000,000.

- On November 8, 2006, we entered into a license agreement with Bayer CropScience GmbH for the development and commercialization of canola. Under the terms of the agreement, we received an upfront payment, will receive milestone payments upon the achievement of certain development milestones and will receive commercialization fees based upon specified benchmarks. In August, 2008, Bayer CropScience GmbH successfully completed the first development milestone related to this license.

- On July 17, 2007 we entered into a license agreement with Bayer CropScience AG for the development and commercialization of cotton. Under the terms of the agreement, we received an upfront payment, will receive milestone payments upon the achievement of certain development milestones, and additionally, upon commercialization, and a royalty on net sales.

- On August 6, 2007 we entered into a license agreement with Monsanto for the development and commercialization of corn and soy. Under the terms of the agreement, we received an upfront payment, will receive milestone payments upon the achievement of certain development milestones, and additionally, upon commercialization, and a royalty on net sales.

- On September 11, 2007 we entered into a license agreement with Bayer CropScience AG for the development and commercialization of rice. Under the terms of the agreement, we received an upfront payment, will receive milestone payments upon the achievement of certain development milestones, and additionally, upon commercialization, and a royalty on net sales.

Joint Venture

On May 14, 1999, we entered into a agreement with Rahan Meristem Ltd., or Rahan Meristem, an Israeli company engaged in the worldwide export marketing of banana germplasm, referred to herein as the Rahan Joint Venture. In general, bananas are grown either for local domestic consumption or grown for export. According to the Food and Agriculture Organization of the United Nations, there were approximately 16 million metric tons of bananas exported in 2004. The level of production equates to the fruit of approximately 480 million banana plants. A percentage of these plants are replaced each year with new banana seedlings. Rahan Meristem accounts for approximately 10% of the worldwide export of enhanced banana seedlings.

We have contributed, by way of a limited, exclusive, worldwide license to the Rahan Joint Venture, access to our technology, discoveries, inventions and know-how, whether patentable or otherwise, pertaining to plant genes and their cognate expressed proteins that are induced during senescence for the purpose of developing, on a joint basis, genetically enhanced banana plants which will result in a banana that has a longer shelf life. Rahan Meristem has contributed its technology, inventions and know-how with respect to banana plants. Rahan Meristem and Senesco have equally shared the expense of field trials.

The Rahan Joint Venture applied for and received a conditional grant that totals approximately $340,000, which constituted 50% of the Rahan Joint Venture's research and development budget over the five-year period, ending on May 31, 2005, from the Israel - U.S. Binational Research and Development Foundation, or BIRD Foundation, referred to herein as the BIRD Grant. Such grant, along with certain royalty payments, shall only be repaid to the BIRD Foundation upon the commercial success of the Rahan Joint Venture's technology. The commercial success is measured based upon certain benchmarks and/or milestones achieved by the Rahan Joint Venture. The Rahan Joint Venture reports these benchmarks periodically to the BIRD Foundation.

All aspects of the Rahan Joint Venture's research and development initiative are proceeding on time. Both the DHS and lipase genes have been identified and isolated in banana, and the Rahan Joint Venture is currently in the process of silencing these genes. Two Israeli field trials indicated that Senesco's proprietary technology extends the shelf life of the banana fruit up to 100%, while allowing the banana fruit to ripen normally. Later field trials have indicated what we believe are promising disease tolerance results and we are currently performing additional field trials to further assess disease tolerance. However, as the banana modified with our technology may be considered a genetically modified organism, or GMO, shelf life extension may have to be combined with disease tolerance to gain acceptance by the growers.

Agricultural Research Program

Our agricultural research and development is performed by three researchers, at our direction, at the University of Waterloo, in Ontario, Canada, where the technology was developed. Additional agricultural research and development is performed by our partners in connection with the Harris Moran License, the Scotts Agreement, the ArborGen Agreement, the Cal/West License, the Bayer Licenses, the Monsanto License and through the Rahan Joint Venture.

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, and is our Executive Vice President and Chief Scientific Officer. Dr. Thompson is also one of our directors and owns 3.1% of the outstanding shares of our common stock, $0.01 par value, as of June 30, 2008. On September 1, 1998, we entered into, and have extended through August 31, 2009, 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.

Agricultural Competition

Our competitors in both human health and 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: Icora (formerly Paradigm Genetics); Mendel Biotechnology; Renessen LLC; Exelixis Plant Sciences, Inc.; Syngenta International AG; and Eden Bioscience, among others.

Agricultural Development Program

Generally, projects with our licensee's and joint venture partner 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 development of our technology with Poet is different than our other licenses in that we are modifying certain production inputs for ethanol. That process involves modifying the inputs, testing such inputs in Poet's production process and if successful, implementing such inputs in Poet's production process on a plant by plant basis.

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
Lettuce	Harris Moran	Field trial data under evaluation
Melon	Harris Moran	Seed transformation
Trees	ArborGen	
- Growth		Field trials
Alfalfa	Cal/West	Greenhouse
Cotton	Bayer	Recently initiated
Canola	Bayer	Seed transformation
Rice	Bayer	Recently initiated
Corn	Monsanto	Recently initiated
Soybean	Monsanto	Recently initiated
Turfgrass	The Scotts Company	Greenhouse
Bedding Plants	The Scotts Company	Greenhouse
Ethanol	Poet	Modify inputs

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. Thus, we have not begun to actively market our technology directly to consumers, but rather, we have sought to establish ourselves within the industry through presentations at industry conferences, our website and direct communication with prospective licensees.

Consistent with our commercialization strategy, we intend to attract other companies interested in strategic partnerships or licensing our technology, which may result in additional license fees, revenues from contract research and other related revenues. Successful future operations will depend on our ability to transform our research and development activities into a commercially feasible technology.

Intellectual Property

We have nineteen issued patents from the United States Patent and Trademark Office, or PTO, and twenty-three issued patents from foreign countries, thirty-one of which are for the use of our technology in agricultural applications and eleven of which relate to human health applications.

In addition to our forty-two 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 they are collected.

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 marketplace.

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, if developed for human health applications, will also be 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 health 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.

We believe that our current 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, or our licensees, may be required to obtain such licensing or approval from governmental regulatory agencies prior to the commercialization of our genetically transformed plants and the application of our human health technology.

Employees

In addition to the thirteen scientists performing funded research for us at Mayo Clinic, the University of Virginia, and the University of Waterloo, we have five employees and one consultant, four of whom are executive officers and are involved in our management. We do not anticipate hiring any additional employees over the next twelve months.

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

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

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

- James E. Meier, M.D., 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. Meier'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. John E. Thompson, our Executive Vice President and Chief Scientific Officer. We utilize the University's research staff including graduate and post-graduate researchers.

We have also undertaken preclinical apoptosis research at the University of Colorado under the supervision of Dr. Dinarello. In addition to the research being conducted at the University of Colorado, we have also undertaken preclinical apoptosis research at Mayo Clinic, and the University of Virginia. This research is performed pursuant to specific project proposals that have agreed-upon research outlines, timelines and budgets. 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 the Harris Moran License, the ArborGen Agreement, the Cal/West License, The Scotts Agreement, the Poet License, the Bayer Licenses, the Monsanto License, and the Research and Development Agreements, the successful implementation of the Rahan Joint Venture, statements relating to our patent applications, the anticipated longer term growth of our business, the results of our preclinical studies, our ability to comply with the continued listing standards of the AMEX, 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, the timing of revenues due to the variability in size, scope and duration of research projects, regulatory delays, research study results which lead to cancellations of research projects, and other factors, including general economic conditions and regulatory developments, not within our control. The factors discussed herein and expressed from time to time in our filings with the Securities and Exchange Commission could cause actual results and developments to be materially different from those expressed in or implied by such statements. The forward-looking statements are made only as of the date of this filing, and we undertake no obligation to publicly update such forward-looking statements to reflect subsequent events or circumstances.

Factors That May Affect Our Business, Future Operating Results and Financial Condition

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.

Item 1A. Risk Factors.

Risks Related to Our Business

We have a limited operating history and have incurred substantial losses and expect 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 $30,223,030 at June 30, 2008. 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 may 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.

In addition, the recent financings with YA Global Investments, L.P., referred to herein as YA Global, and Stanford Venture Capital Holdings, Inc., referred to herein as Stanford, are secured by all of our assets. If we default under the convertible notes, the investors may foreclose on our assets and our business. As a result, we may 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;
- license 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 and investments to maintain our present operations for the next 13 months as of June 30, 2008.

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 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 health 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 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, the University of Colorado, Mayo Clinic, the University of Virginia, and with our commercial partners. At this time, we do not have the internal capabilities to perform our 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, 2008, we had cash and highly-liquid investments of $6,176,985 and working capital of $5,673,107. Using our available reserves as of June 30, 2008, we believe that we can operate according to our current business plan for the next 13 months from June 30, 2008. 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 according to 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;
- license 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 notes into common stock, as of June 30, 2008, we had 7,957,957 shares of common stock authorized but unissued and unreserved, which may be issued from time to time by our board of directors without stockholder approval. The total number of shares that may be issued under the financing is subject to certain caps as more fully described in this Form 10-K. 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 private 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, 2008, we have been issued nineteen patents by the PTO and twenty-three 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 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 that 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 require licensing and the payment of significant 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 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.

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, we require all employees to agree to a confidentiality provision in their employment agreement that prohibits the disclosure of confidential information to anyone outside of our company, during the term of employment and thereafter. 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 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 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 health 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 health 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 health 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: Icoria (formerly Paradigm Genetics); Mendel Biotechnology; Renessen LLC; Exelixis Plant Sciences, Inc.; Syngenta International AG; and Eden Bioscience, among others. Some of our competitors that are involved in apoptosis research include: Amgen; Centocor; Genzyme; OSI Pharmaceuticals, Inc.; Novartis; Introgen Therapeutics, Inc.; Genta, Inc.; and Vertex Pharmaceuticals, 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 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 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 EPA regulates activity related to the invention of plant pesticides and herbicides, which may include certain kinds of transgenic plants; and
- the FDA regulates foods derived from new plant varieties.

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

Use of our technology, if developed for human health applications, will also be 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 U.S., any products resulting from the application of our human health 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.

We believe that our current 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 planning on performing clinical trials, which would be subject to FDA approval. Additionally, federal, state and foreign regulations relating to crop protection products and human health 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 health 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 and clinical trials of our human health applications may be unsuccessful, which could delay or prevent regulatory approval.

Preclinical studies may reveal that our human health technology is ineffective or harmful, and/or clinical trials may be unsuccessful in demonstrating efficacy and safety of our human health 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. 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.

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.

Clinical trials for our human health 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 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.

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 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 employment agreements with all of our key employees and a research agreement with Dr. Thompson, these agreements may be terminated upon short or no notice. 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 and Delaware law 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 American Stock Exchange, 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. Similarly, our by-laws do not restrict our board of directors from issuing preferred stock without stockholder approval.

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 outstanding options or issue equivalent options, our board of directors is required to provide accelerated vesting of outstanding options.

Increasing political and social turmoil, such as terrorist and military actions, increase the difficulty for us and our strategic partners to forecast accurately and plan future business activities.
Recent political and social turmoil, can be expected to put further pressure on economic conditions in the United States and worldwide. These political, social and economic conditions may make it difficult for us to plan future business activities.

Risks Related to Our Common Stock

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, 2008, our executive officers, directors and affiliated entities together beneficially own approximately 70.7% of the outstanding shares of our common stock, assuming the exercise of options and warrants which are currently exercisable or will become exercisable within 60 days of June 30, 2008, 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, 2008, we had 18,375,117 shares of our common stock issued and outstanding, of which approximately 5,319,639 shares are registered pursuant to a registration statement on Form S-3 and the remainder of which are either eligible to be sold under SEC Rule 144 or are in the public float. In addition, we have registered 2,632,194 shares of our common stock underlying warrants previously issued on the Form S-3 registration statement and we registered 6,000,000 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 American Stock Exchange and currently has a limited trading market. The American Stock Exchange requires us to meet minimum financial requirements in order to maintain

our listing. We currently believe that we meet the continued listing requirements of the American Stock Exchange. However, we cannot assure you that we will continue to meet such standards. If we do not meet 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.

If our common stock is delisted from the American Stock Exchange, 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 American Stock Exchange requires us to meet minimum financial requirements in order to maintain our listing. We have previously received notices from the American Stock Exchange that we did not meet each of Section 1003(a)(ii) of the American Stock Exchange Company Guide with shareholders' equity of less than $4,000,000 and losses from continuing operations and/or net losses in three out of our four most recent fiscal years and Section 1003(a)(iii) of the American Stock Exchange Company Guide with shareholders' equity less than $6,000,000 and losses from continuing operations and/or net losses in the five most recent fiscal years. We had submitted a plan to the American Stock Exchange discussing how we intended to regain compliance with the continued listing requirements. The American Stock Exchange had accepted our plan and had given us until March 1, 2008 to effectuate the plan and regain compliance with the continued listing requirements. On March 12, 2008, the American Stock Exchange notified us that we have regained compliance with the continued listing requirements. As of June 30, 2008, we believe that we continue to be in compliance with the American Stock Exchange's continued listing requirements. However, if we are unable to continue to be in compliance with the continued listing requirements, it is possible that we will be delisted. If we are delisted from the American Stock Exchange, 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 or the NASDAQ Stock Market 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 American Stock Exchange, 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 were 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 American Stock Exchange, 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 it may undertake. The delisting from the American Stock Exchange would result in negative publicity and would negatively impact our ability to raise capital in the future.

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.

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 outstanding convertible debentures, or the exercise of options and warrants to purchase our common stock.
As of June 30, 2008, we have granted options outside of our stock option plan to purchase 10,000 shares of our common stock and outstanding warrants to purchase 19,796,926 shares of our common stock. In addition, as of June 30, 2008, we have reserved 6,000,000 shares of our common stock for issuance upon the exercise of options granted pursuant to our stock option plan, 3,805,600 of which have been granted, 90,000 of which have been exercised since inception, 3,715,600 of which are outstanding, and 2,194,400 of which may be granted in the future. 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. In addition, any shares issued in con-

nection with the YA Global financing or Stanford financing, as further discussed elsewhere in this Form 10-Q, can also have a dilutive effect and a possible material adverse effect on our stock price. The conversion price of the warrants are also subject to certain anti-dilution adjustments. The agreements with YA Global and Stanford provide for the potential issuance of up to an additional 61,833,332 shares of our common stock.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

We lease office space in New Brunswick, New Jersey for a current monthly rental fee of $6,460, subject to certain escalations for our proportionate share of increases, over the base year of 2001, in the building's operating costs. The monthly rental fee will continue to increase by 1% each year through the expiration date of the lease. The lease expires in May 2011. 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. Submission of Matters to a Vote of Security Holders.

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 American Stock Exchange 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, 2006, as reported on the American Stock Exchange.

Quarter Ended	Common Stock	
	High	Low
September 30, 2006	$1.83	$1.08
December 31, 2006	$1.40	$0.90
March 31, 2007	$1.33	$0.97
June 30, 2007	$1.69	$0.80
September 30, 2007	$1.25	$0.78
December 31, 2007	$1.05	$0.38
March 31, 2008	$1.28	$0.29
June 30, 2008	$1.99	$1.00

As of September 15, 2008, the approximate number of holders of record of our common stock was 275. 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, 2008.

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	4,053,300 (1)	$1.95	1,856,700 (2)
Equity compensation plans not approved by security holders	-	-	-
Total	4,053,300 (1)	$1.95	1,856,700 (2)

(1) Issued pursuant to our 1998 Stock Plan.
(2) Available for future issuance pursuant to our 1998 Stock Plan.

RECENT SALES OF UNREGISTERED SECURITIES

On August 1, 2007 and August 29, 2007, we entered into binding Securities Purchase Agreements with YA Global and Stanford to sell to each of YA Global and Stanford up to $5,000,000 of secured convertible notes and accompanying warrants for an aggregate gross proceeds of $10,000,000. The convertible notes convert into our common stock at a fixed price of $0.90 per share subject to certain adjustments, referred to herein as the Fixed Conversion Price, for a period of two years immediately following the signing date. After the second anniversary of the signing date, the convertible notes may convert into shares of our common stock at the lower of the fixed conversion price or 80% of the lowest daily volume-weighted average price, referred to herein as the VWAP, of our common stock during the five trading days prior to the conversion date. The maturity date of each of the convertible notes for YA Global is December 30, 2010. The maturity date of each of the convertible notes for Stanford is December 31, 2010. At the fixed conversion price, the number of shares of common stock issuable upon conversion of the $10,000,000 of convertible notes and shares of common stock to be issued upon exercise of the warrants represents, in the aggregate, 24,994,444 shares, plus an estimated additional 2,000,000 shares for the payment of interest in stock under the convertible notes.

The convertible notes accrue interest on their outstanding principal balances at an annual rate of 8%. We have the option to pay interest in cash or, upon certain conditions, common stock. If we pay interest in our common stock, the stock will be valued at a 10% discount to the average daily VWAP for the five day trading period prior to the interest payment date, referred to herein as the Interest Shares.

At our option, we can redeem a portion of, or all of, the principal owed under the convertible notes by providing the investors with at least 30 business days' written notice, provided that, at the time of receipt of the notice, either: (A)(i) the VWAP of our common stock exceeds 130% of the Fixed Conversion Price for at least 20 of 30 prior trading days and (ii) there is an effective registration statement for the resale of our common stock that will be issued under the redemption or (B) we redeem a portion, or all, of the principal owed at a 20% premium above the principal then outstanding and any accrued interest thereupon. If we redeem all or any of the principal outstanding under the convertible notes, we will pay an amount equal to the principal being redeemed plus accrued interest.

If there is an effective registration statement for the resale of the shares underlying the convertible notes or if such shares become freely tradable under rule 144, we will have the option to force the investors to convert 50% and 100% of our then-outstanding convertible notes if our common stock price exceeds 150% and 175% of the Fixed Conversion Price, respectively, for any 20 out of 30 trading days; provided that such forced conversion meets certain conditions, referred to herein as the Call Option. If we exercise our Call Option prior to the third anniversary of the signing date, we will issue additional warrants to the investors equal to 50% of the number of shares underlying the convertible notes subject to the forced conversion. These warrants will be exercisable at the fixed conversion price and will have the same maturity as the other warrants issued under the YA Global financing.

Our obligations under the convertible notes are secured by all of our and our subsidiary's assets and intellectual property, as evidenced by the Security Agreements and the Patent Security Agreements. Pursuant to a subordination agreement, YA Global is the senior secured creditor.

We have issued warrants to purchase an aggregate of 5,550,000 shares of our common stock to YA Global and warrants to purchase an aggregate of 8,333,333 of our common stock to Stanford. Such warrants are exercisable six months and one day from the date of issuance until their expiration on the date that is five years from the date of issuance. The warrants have been issued in two series. The exercise price of the Series A warrants is $1.01 per share, and the exercise price of the Series B warrants is $0.90 per share, subject to certain adjustments. The warrants provide a right of cashless exercise if, at the time of exercise, there is no effective registration statement registering the resale of the shares underlying the warrants.

The conversion rate of each convertible note and the exercise price of the Series B warrants are subject to adjustment for certain events, including dividends, stock splits, combinations and the sale of our common stock or securities convertible into or exercisable for our common stock at a price less than the then applicable conversion or exercise price.

The investors have a right of first refusal on any future funding that involves the issuance of our capital stock for so long as a portion of the convertible notes are outstanding.

The total gross proceeds from the issuance of the convertible notes and warrants is $10,000,000 before payment of 3.25% of the purchase price in commissions to Wainwright & Co., Inc., referred to herein as the Placement Agent. We have issued to the Placement Agent warrants to purchase 7% of the purchase price, or 777,777 shares, of our common stock with similar terms to the warrants that have been and will be issued to the investors. We have paid YA Global and Stanford a non-refundable structuring/due diligence fee of $30,000 each. We have also paid YA Global a commitment fee of 5% and Stanford a commitment fee of 7% of their respective purchase prices.

Specifics of YA Global Financing

Pursuant to the YA Global Securities Purchase Agreement, we have issued three convertible notes in the aggregate amount of $5,000,000 and two Series A warrants in the amount of 1,387,500 shares each on September 21, 2007 and October 16, 2007 and a Series B warrant in the amount of 2,775,000 shares on December 20, 2007. On April 29, 2008, YA Global converted $500,000 of the convertible notes into 555,556 shares of our common stock.

The convertible notes and warrants issued to YA Global are subject to a maximum cap of 30,500,000 on the number of shares of our common stock that can be issued upon the conversion of the convertible notes and the exercise of the warrants.

Specifics of Stanford Financing

Pursuant to the Stanford Securities Purchase Agreement, we have issued three convertible notes in the aggregate amount of $5,000,000 and Series A warrants in the aggregate amount of 4,166,666 shares and Series B warrants in the aggregate amount of 4,166,667 shares each on December 20, 2007 and June 30, 2008.

The convertible notes and warrants issued to Stanford will be subject to a maximum cap of 31,888,888 on the number of shares of our common stock that can be issued upon the conversion of the convertible notes and the exercise of the warrants.

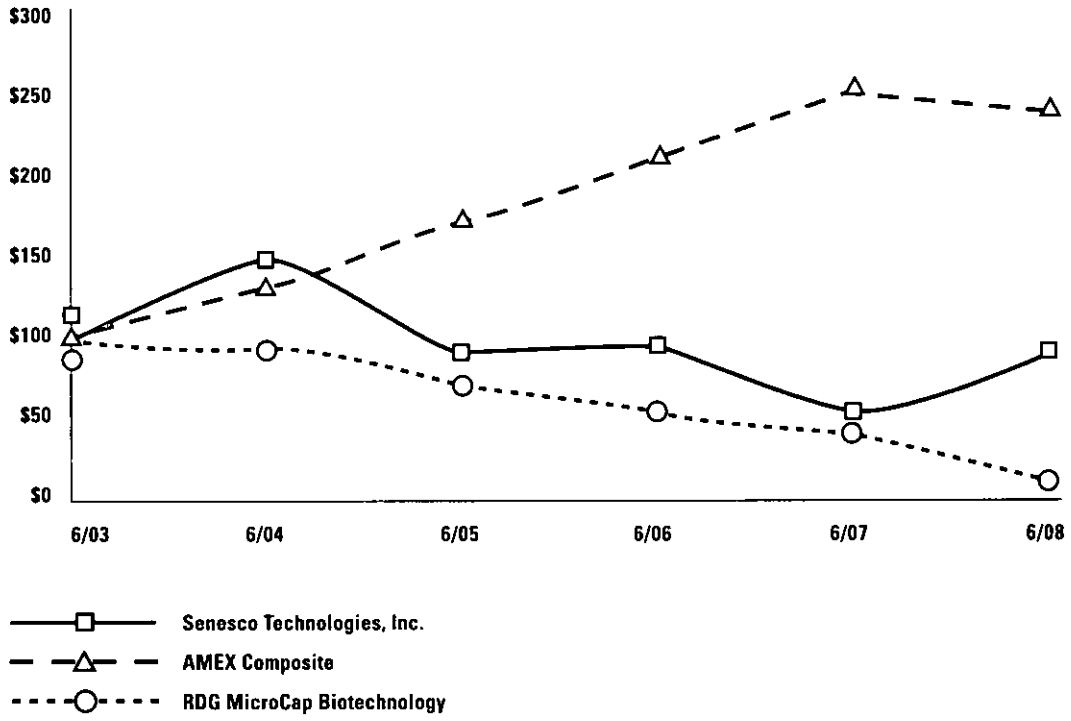
The costs associated with the issuances to YA Global and Stanford in the amount of $1,291,427, $639,645 of which represent the Black-Scholes value of the warrants issued to the placement agent, have been recorded as deferred financing costs and are being amortized ratably over the term of the convertible notes.

PERFORMANCE GRAPH

The following graph compares the cumulative total stockholder return on our common stock with the cumulative total return on the AMEX Market Value (U.S.) Index and the RDG MicroCap Biotechnology Index for the period beginning July 1, 2003 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.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*

Among Senesco Technologies, Inc., The AMEX Composite Index and The RDG MicroCap Biotechnology Index



***$100 invested on 6/30/03 in stock & index-including reinvestment of dividends. Fiscal year ending June 30.**

	7/1/03	6/30/04	6/30/05	6/30/06	6/30/07	6/30/08
Senesco Technologies, Inc.	$100.00	$148.58	$ 84.43	$ 89.62	$ 54.25	$ 87.26
AMEX Market Value (U.S.) Index	$100.00	$128.79	$165.82	$204.19	$253.70	$243.41
RDG MicroCap Biotechnology Index	$100.00	$ 97.45	$ 71.24	$ 59.29	$ 40.60	$ 19.01

The information in the performance graph is not deemed to be "soliciting material" or to be "filed" with the Securities and Exchange Commission, nor shall such information be incorporated by reference into any future filing under the Securities Act of 1933 or Securities Exchange Act of 1934, each as amended, except to the extent that we specifically incorporate it by reference into such filing.

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 amended and restated Annual Report on Form 10-K/A.

SELECTED FINANCIAL DATA

	Year ended June 30,				
	2008	2007	2006	2005	2004
	(In thousands, except per share data)				
Statement of Operations Data:					
Revenue	$ 457	$ 300	$ 67	$ 125	$ 17
Operating expenses:					
General and administrative	2,291	2,413	1,920	2,030	2,907
Research and development	1,765	1,208	1,566	1,417	1,147
Total operating expenses	4,056	3,621	3,486	3,447	4,054
Loss from operations	(3,599)	(3,321)	(3,419)	(3,322)	(4,037)
Noncash income	-	-	-	136	186
Sale of state income tax loss – net	-	-	-	153	91
Amortization of debt discount and financing costs	(668)	-	-	-	-
Interest expense – convertible notes	(434)	-	-	-	-
Interest income, net	100	69	104	54	33
Net loss	$(4,601)	$(3,252)	$(3,315)	$(2,979)	$(3,727)
Basic and diluted net loss per common share	$ (.26)	$ (.19)	$ (.21)	$ (.21)	$ (.29)
Basic and diluted weighted average number of common shares outstanding	17,660	16,917	15,469	14,054	12,668

	Year ended June 30,				
	2008	2007	2006	2005	2004
	(In thousands, except per share data)				
Balance Sheet Data:					
Cash, cash equivalents and investments	$ 6,176	$ 658	$ 1,168	$4,481	$4,136
Working capital	5,673	259	859	3,959	3,840
Total assets	10,643	3,322	3,535	6,113	5,211
Accumulated deficit	(30,223)	(25,622)	(22,370)	(19,055)	(16,076)
Total stockholders' equity	9,836	2,690	2,952	5,590	4,731

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 approximately the next one to three years, during which time we will engage in significant research and development efforts. However, we have entered into nine agricultural license agreements to develop and commercialize our technology in corn, soy, cotton, rice, canola, lettuce, melons, trees, alfalfa, bedding plants, turf grass, and ethanol. Eight of the licenses provide for upfront payments, milestone payments and royalty payments to us upon commercial introduction. The ethanol license provides for annual payments for each of the licensee's ethanol production facilities that incorporates our technology. We also have entered into a joint venture to develop and commercialize our technology in banana plants. In connection with the joint venture, we will receive 50% of the profits from the sale of enhanced banana plants.

Consistent with our commercialization strategy, we intend to license our technology 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.

We plan to employ the same partnering strategy in both the human health and agricultural target markets.

Our human health research program, which has consisted of 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 thirteen third party researchers at our direction, at the University of Waterloo, Mayo Clinic and the University of Virginia.

Our primary human health initiative is to advance our technology for the potential treatment of multiple myeloma with the goal of initiating a clinical trial. In connection with the potential clinical trial, we have engaged a CRO to assist us through the process. We have also determined the delivery system for our technology, contracted for the supply of pharmaceutical grade materials to be used in toxicology and human studies and have contracted with a third party laboratory to conduct toxicology studies. Together with the assistance of our CRO, we will have the toxicology studies performed with the goal of filing an investigational new drug application, or IND application, with the U.S. Food and Drug Administration, or FDA, for the review and consideration in order to initiate a clinical trial. We estimate that it will take less than eighteen months to complete these objectives.

Our preclinical human health research has yielded data that we have presented to various biopharmaceutical companies that may be prospective licensees for the development and marketing of potential applications for our 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. 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.

Valuation Allowances and Carrying Values

We have recorded valuation allowances against our entire deferred tax assets of $9,152,000 at June 30, 2008 and $7,719,000 at June 30, 2007. The valuation allowances relate primarily to the net operating loss carry-forward deferred tax asset where the tax benefit of such asset is not assured.

As of June 30, 2008 and 2007, we have determined that the estimated future discounted cash flows related to our patent applications will be sufficient to recover their carrying value.

We have determined that we are receiving the economic benefit of the agricultural patent applications as well as all of the issued patents and are amortizing the agricultural patent application costs and all of the issued patents over seventeen years on a straight-line basis.

We do not have any off-balance sheet arrangements.

Stock-Based Compensation

We adopted FAS No. 123R, "Share-Based Payments," effective July 1, 2005, using the modified-retrospective method. The adoption of this standard requires the recognition of stock-based compensation expense in the consolidated financial statements. Prior to July 1, 2005, we followed Accounting Principles Board Opinion 25, "Accounting for Stock Issued to Employees," and related interpretations.

The fair value of each stock option and warrant is estimated on the date of grant using the Black-Scholes option-pricing model. Expected volatility is based on the historical volatility of our stock and of similar companies. The expected term of stock options and warrants granted is based upon the simplified method whereby expected term is calculated using the weighted average term of the vesting period of such options and warrants. The expected term is calculated for and applied to all groups of stock options and warrants as we do not expect substantially different exercise or post-vesting termination behavior amongst our employee population. The risk-free rate of stock options is based on the U.S. Treasury rate in effect at the time of grant for the expected term of the stock options and warrants. Expected forfeitures are based on historical data.

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.

Convertible Notes

During the year we issued convertible notes and warrants for gross proceeds in the amount of $10,000,000. The proceeds have been allocated between convertible notes and warrants based upon their fair values, whereby the fair value of the warrants have been determined using the Black-Scholes model. The remaining amounts were allocated to the beneficial conversion feature based upon the effective conversion price compared to the fair value of the common stock on the date of issuance of the convertible notes and warrants. As such, all of the proceeds of the convertible notes and warrants were recorded as equity. The convertible notes are being amortized to interest expense using the effective yield method over the term of the notes.

Research Program

We do not expect to generate significant revenues for approximately the next one to three years, during which time we will engage in significant research and development efforts. We expect to spend significant amounts on the research and development of our technology. We also expect our research and development costs to increase as we continue to develop and ultimately commercialize our technology. However, the successful development and commercialization of our technology is highly uncertain. We cannot reasonably estimate or know the nature, timing and expenses of the efforts necessary to complete the development of our technology, or the period in which material net cash inflows may commence from the commercialization of our technology, including the uncertainty of:

- the scope, rate of progress and expense of our research activities;
- the interim results of our research;
- the expense of additional research that may be required after review of the interim results;
- the terms and timing of any collaborative, licensing and other arrangements that we may establish;
- the expense and timing of regulatory approvals;
- the effect of competing technological and market developments; and
- the expense of filing, prosecuting, defending and enforcing any patent claims or other intellectual property rights.

Liquidity and Capital Resources

Overview

As of June 30, 2008, our cash balance and investments totaled $6,176,985, and we had working capital of $5,673,107. As of June 30, 2008, we had a federal tax loss carryforward of approximately $19,924,000 and a state tax loss carry-forward of approximately $12,565,000 to offset future taxable income. We cannot assure you that we will be able to take advantage of any or all of such tax loss carryforwards, if at all, in future fiscal years.

Contractual Obligations

The following table lists our cash contractual obligations as of June 30, 2008:

Contractual Obligations	Total	Payments Due by Period: Less than 1 year	1 - 3 years	4 - 5 years	More than 5 years
Research and Development Agreements [1]	$ 1,103,707	$ 1,103,707	$ -	$ -	$ -
Facility, Rent and Operating Leases [2]	$ 231,496	$ 78,508	$ 152,988	$ -	$ -
Employment, Consulting and Scientific Advisory Board Agreements [3]	$ 817,040	$ 752,846	$ 64,194	$ -	$ -
Total Contractual Cash Obligations	$ 2,152,243	$ 1,935,061	$ 217,182	$ -	$ -

(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 New Brunswick, New Jersey is subject to certain escalations for our proportionate share of increases in the building's operating costs.

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

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.

Effective September 1, 2008, we extended our research and development agreement with the University of Waterloo for an additional one-year period through August 31, 2009, in the amount of CAD $735,000 or approximately USD $735,000, which is not included in the above table of contractual obligations. Research and development expenses under this agreement aggregated $730,960 for the year ended June 30, 2008 and USD $568,872 for the year ended June 30, 2007 and USD $4,627,264 for the cumulative period from inception through June 30, 2008. Total research and development expenses aggregated $1,764,426 for the year ended June 30, 2008 and $1,208,321 for the year ended June 30, 2007 and $9,957,595 for the cumulative period from inception through June 30, 2008.

Capital Resources

Since inception, we have generated revenues of $1,175,000 in connection with the initial fees and milestone payments received under our license and development agreements. 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 at least the next one to three 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.

License Agreements

On July 17, 2007 we entered into a license agreement with Bayer CropScience AG for the development and commercialization of cotton. Under the terms of the license agreement, we received an upfront payment, will receive milestone payments upon the achievement of certain development milestones, and additionally, upon commercialization, a royalty on net sales.

On August 6, 2007 we entered into a license agreement with Monsanto for the development and commercialization of corn and soy. Under the terms of the license agreement, we received an upfront payment, will receive milestone payments upon the achievement of certain development milestones, and additionally, upon commercialization, a royalty on net sales.

On September 11, 2007 we entered into a license agreement with Bayer CropScience AG for the development and commercialization of rice. Under the terms of the agreement, we received an upfront payment, will receive milestone payments upon the achievement of certain development milestones, and additionally, upon commercialization, a royalty on net sales.

Financing

As discussed in Part II, Item 5, Recent Sales of Unregistered Securities, in this Annual Report on Form 10-K, on August 1, 2007 and August 29, 2007, we entered into binding Securities Purchase Agreements with YA Global and Stanford and have sold to each of YA Global and Stanford $5,000,000 of secured convertible notes and accompanying warrants for aggregate gross proceeds in the amount of $10,000,000.

We anticipate that, based upon our current cash and investments, we will be able to fund our operations for the next thirteen months from June 30, 2008. Over the next twelve months from June 30, 2008, 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;
- the execution of additional licensing agreements for our technology, and
- 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 Years ended June 30, 2008, 2007 and 2006

Revenue

Total revenues consisted of initial fees and milestone payments on our agricultural development and license agreements. During the year ended June 30, 2008, we earned revenue in the amount of $456,667 and during the year ended June 30, 2007, we earned revenue in the amount of $300,000. Such revenue consisted of initial payments, current milestone payments, and the amortized portion of previous milestone payments in connection with certain license agreements. During the year ended June 30, 2006, we earned revenue in the amount of $66,666 which consisted of current milestone payments and the amortized portion of previous milestone payments in connection with certain license agreements.

We anticipate that we will continue to receive milestone payments in connection with our current agricultural development and license agreements while we continue to pursue our goal of attracting other companies to license our technologies in various other crops. Additionally, we anticipate that we will receive 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. As such, 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

	Year ended June 30,							
	2008	2007	Change	%	2007	2006	Change	%
	(In thousands, except % values)							
General and administrative	$ 2,291	$ 2,413	$ (122)	(5)%	$ 2,413	$ 1,920	$ 493	26%
Research and development	1,765	1,208	557	46%	1,208	1,566	(358)	(23)%
Total operating expenses	$ 4,056	$ 3,621	$ 435	12%	$ 3,621	$ 3,486	$ 135	4%

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

General and Administrative Expenses

General and administrative expenses consist of the following:

	Year ended June 30,		
	2008	2007	2006
	(In thousands)		
Stock-based compensation	$ 749	$ 910	$ 488
Payroll and benefits	669	616	607
Investor relations	305	278	341
Professional fees	261	217	211
Depreciation and amortization	97	166	40
Other general and administrative expenses	210	226	233
Total general and administrative expenses	$ 2,291	$ 2,413	$ 1,920

- Stock-based compensation consists primarily of the amortized portion of the Black-Scholes value of options and warrants granted to consultants, directors and employees as well as the value of restricted stock units granted to employees. During Fiscal 2008 and 2007, there were 1,069,600 and 240,000 options granted

to such directors, employees and consultants and 1,000 and 2,500 warrants granted to a consultant.

- Additionally, during Fiscal 2008 and Fiscal 2007, 1,500,000 warrants were extended and repriced in connection with a financial advisory agreement. Also, during Fiscal 2008 there were 337,700 restricted stock units granted to employees under our short-term and long-term stock incentive programs, of which, 112,700 restricted stock units have been issued under the short-term incentive plan.

Stock-based compensation was lower in Fiscal 2008 due to the extension and repricing of warrants in connection with a financial advisory agreement, The Black-Scholes value of the extension and repricing of warrants amounted to $385 in Fiscal 2008 compared with $683 in Fiscal 2007. This was partially offset by an increase in the Black-Scholes value of the options and warrants granted during Fiscal 2008 compared to the Black-Scholes value of the options and warrants granted during Fiscal 2007 because we granted more options during Fiscal 2008.

Stock-based compensation was higher in Fiscal 2007 due to the extension and repricing of warrants in connection with a financial advisory agreement, which had a Black-Scholes value of $683. This was partially offset by a decrease in the Black-Scholes value of the options and warrants granted during Fiscal 2007 compared to the Black-Scholes value of the options and warrants granted during Fiscal 2006 because the market price of the common stock on the date of grant in Fiscal 2007 was lower than the market price of the common stock on the date of grant in Fiscal 2006.

- Payroll and benefits increased primarily as a result of salary and health insurance rate increases.

- Investor relations expense for Fiscal 2008 is higher than Fiscal 2007 primarily as a result of an increase in the cost of the annual report due to the inclusion of additional disclosure and the services of a proxy solicitor.

  Investor relations expense for Fiscal 2007 is lower than Fiscal 2006 primarily as a result of a decrease in the amount of consulting fees incurred.

- Professional fees increased during Fiscal 2008 compared to Fiscal 2007 primarily as a result of an increase in accounting and legal fees in connection with the additional disclosure included in the annual report.

  Professional fees increased during Fiscal 2007 compared to Fiscal 2006 primarily as a result of an increase in accounting fees which was partially offset by a decrease in legal fees.

- Depreciation and amortization decreased during Fiscal 2008 compared to Fiscal 2007 primarily as a result of a decrease in amortization of patent costs. During Fiscal 2008, we did not amortize the cost of our human health pending patent applications.

  Depreciation and amortization increased during Fiscal 2007 compared to Fiscal 2006 primarily as a result of an increase in amortization of patent costs. During Fiscal 2007, we began amortizing the cost of our pending patent applications.

  We expect general and administrative expenses to modestly increase over the next twelve months primarily due to general price increases in the cost of services.

Research and Development Expenses

	Year ended June 30,							
	2008	2007	Change	%	2007	2006	Change	%
	(In thousands, except % values)							
Stock-based compensation	$ 148	$ 60	$ 88	147%	$ 60	$ 18	$ (129)	(68)%
Other research and development	1,617	1,148	469	41%	1,148	1,377	(229)	(17)%
Total research and development	$ 1,765	$ 1,208	$ 557	46%	$ 1,208	$ 1,566	$ (358)	(23)%

- Stock-based compensation increased during Fiscal 2008 compared to Fiscal 2007 primarily because the Black-Scholes calculated fair value of the options and warrants granted during Fiscal 2008 were higher than Fiscal 2007 because the number of options granted were higher in Fiscal 2008.

  Stock-based compensation decreased during Fiscal 2007 compared to Fiscal 2006 primarily because the Black-Scholes calculated fair value of the options and warrants granted during Fiscal 2007 were lower than Fiscal 2006 because the market price of the common stock on the date of grant in Fiscal 2007 was lower than the market price of the common stock on the date of grant in Fiscal 2006.

- Other research and development costs increased during Fiscal 2008 compared to Fiscal 2007 primarily as a result of the initiation of our multiple myeloma project during Fiscal 2008. Additionally, the budget in connection with the research agreement with the University of Waterloo was increased and the U.S. dollar was weaker against the Canadian dollar.

  Other research and development costs decreased during Fiscal 2007 compared to Fiscal 2006 primarily as a result of a reduction of the budget in connection with the research agreement with the University of Waterloo as well as the completion of certain human health research programs being performed at certain universities.

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

	Year ended June 30,					
	2008	%	2007	%	2006	%
	(In thousands, except % values)					
Agricultural research programs	$ 771	44%	$ 701	58%	$ 813	52%
Human health research programs	$ 994	56%	$ 507	42%	$ 753	48%
Total research and development expenses	$ 1,765	100%	$ 1,208	100%	$ 1,566	100%

- Agricultural research expenses increased during Fiscal 2008 compared to Fiscal 2007 primarily as a result of an increase in the budget in connection with our research agreement at the University of Waterloo, an increase in stock-based compensation, and the U.S. dollar was weaker against the Canadian dollar.

Agricultural research expenses decreased during Fiscal 2007 compared to Fiscal 2006 primarily as a result of a decrease in the budget in connection with our research agreement at the University of Waterloo and a decrease in stock-based compensation.

- Human health research expenses increased during Fiscal 2008 compared to Fiscal 2007 primarily as a result of the initiation of the multiple myeloma project.

Human health research expenses increased during Fiscal 2007 compared to Fiscal 2006 primarily as a result of the completion of certain human health research programs being performed at certain universities.

We expect the percentage of human health research programs to increase as a percentage of the total research and development expenses as we continue to expand our human health initiatives.

Amortization of Debt Discount and Financing Costs

During Fiscal 2008, we issued $10,000,000 in convertible notes and warrants. The net proceeds of those notes and warrants were recorded as equity. The discount on the convertible notes is being amortized using the effective yield method over the term of the convertible notes. The related costs of issuance were recorded as deferred financing costs and are amortized on a straight line basis over the term of the convertible notes.

Interest Expense – Convertible Notes

Interest expense – convertible notes represents the fair value of the common stock issued in lieu of paying cash for the 8% coupon rate of interest related to the convertible notes issued during Fiscal 2008.

Interest Income

	Year ended June 30,							
	2008	2007	Change	%	2007	2006	Change	%
	(In thousands, except % values)							
Interest income	$ 100	$ 69	$ 31	45%	$ 69	$ 105	$ (36)	(34)%

The increase in interest income for Fiscal 2008 compared to Fiscal 2007 is due to a higher average cash and investments balance during the year.

The decrease in interest income for Fiscal 2007 compared to fiscal 2006 is due to a lower average cash and investments balance during the year, which was partially offset by higher interest rates.

From Inception on July 1, 1998 through June 30, 2008

From inception of operations on July 1, 1998 through June 30, 2008, we earned revenues in the amount of $1,175,000, which consisted of the initial license fees and milestone payments in connection with our various development and license agreements. We do not expect to generate significant revenues for at least the next one to three years, during which time we will engage in significant research and development efforts.

We have incurred losses each year since inception and have an accumulated deficit of $30,223,030 at June 30, 2008. We expect to continue to incur losses as a result of expenditures on research, product development and administrative activities.

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 effect our results of operations and financial condition.

Interest Rate Risk

We invest in high-quality financial instruments, primarily money market funds, federal agency notes, corporate debt securities and United States treasury notes, with an effective duration of the portfolio of less than nine months, and no security with an effective duration in excess of 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 adequate and effective.

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, 2008. 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, 2008 our company's internal control over financial reporting is effective.

This report does not include an attestation report of the Company's registered public accounting firm regarding internal control over financial reporting, pursuant to temporary rules of the Securities and Exchange Commission that permit the Company to provide only management's report in this annual report.

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, 2008 that has materially affected, or is reasonably likely to materially affect, our internal controls over financial reporting.

Limitations on the Effectiveness of Control

Our company's management, including its chief executive officer and chief financial officer, does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent all error and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within an organization have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake.

Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the control. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving our stated goals under all potential future conditions. Over time, controls may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements, due to error or fraud may occur and not be detected.

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 2008 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 2008 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 and Related Stockholder Matters" in our definitive proxy statement for the 2008 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 and Director Independence" in our definitive proxy statement for the 2008 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 2008 Annual Meeting of Stockholders is incorporated herein by reference to such proxy statement.

Item 15. Exhibits, Financial Statement Schedules.

(a) (1) Financial Statements.
Reference is made to the Index to Financial Consolidated Statements on Page 61.

(a) (2) Financial Statement Schedules.
None.

(a) (3) Exhibits.
Reference is made to the Exhibit Index on Page 51.

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 26th day of September 2008.

SENESCO TECHNOLOGIES, INC.

By: Bruce C. Galton,
President and Chief Executive Officer
(principal executive officer)

By: Joel Brooks,
Chief Financial Officer
(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/ Ruedi Stalder Ruedi Stalder	Chairman and Director	Sept. 26, 2008
/s/ Bruce C. Galton Bruce C. Galton	President and Chief Executive Officer (principal executive officer) and Director	Sept. 26, 2008
/s/ Joel Brooks Joel Brooks	Chief Financial Officer and Treasurer (principal financial and accounting officer)	Sept. 26, 2008
/s/ John E. Thompson John E. Thompson	Executive Vice President, Chief Scientific Officer and Director	Sept. 26, 2008
/s/ Christopher Forbes Christopher Forbes	Director	Sept. 26, 2008
/s/ Thomas C. Quick Thomas C. Quick	Director	Sept. 26, 2008
/s/ David Rector David Rector	Director	Sept. 26, 2008
/s/ Jack Van Hulst Jack Van Hulst	Director	Sept. 26, 2008
/s/ John Braca John Braca	Director	Sept. 26, 2008

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	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.)
4.1	Form of Warrant with Forbes, Inc. (Incorporated by reference to Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended September 30, 1999.)
4.2	Form of Option Agreement with Kenyon & Kenyon. (Incorporated by reference to Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended September 30, 1999.)
4.3	Form of Warrant with Parenteau Corporation. (Incorporated by reference to Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended December 31, 1999.)
4.4	Form of Warrant with Strategic Growth International, Inc. (Incorporated by reference to Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended December 31, 1999.)
4.5	Form of Warrant issued to Stanford Venture Capital Holdings, Inc. and certain officers of Stanford Venture Capital Holdings, Inc. (with attached schedule of parties and terms thereto). (Incorporated by reference to Exhibit 4.1 of Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended December 31, 2001.)
4.6	Form of Warrant issued to certain accredited investors (with attached schedule of parties and terms thereto). (Incorporated by reference to Exhibit 4.2 of Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended December 31, 2002.)
4.7	Form of Warrant issued to certain third parties for services rendered (with attached schedule of parties and terms thereto). (Incorporated by reference to Exhibit 4.3 of Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended December 31, 2002.)
4.8	Warrant issued to Sands Brothers International Ltd. dated September 25, 2003. (Incorporated by reference to Exhibit 4.1 of Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended September 30, 2003.)
4.9	Warrant issued to Sands Brothers International Ltd. Dated September 25, 2003. (Incorporated by reference to Exhibit 4.1 of Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended September 30, 2003.)
4.10	Form of Warrant issued to certain accredited investors (with attached schedule of parties and terms thereto). (Incorporated by reference to Exhibit 4.1 of Senesco Technologies, Inc. Current Report on Form 8-K, filed on February 3, 2004.)

4.11	Form of Warrant issued to certain accredited investors (with attached schedule of parties and terms thereto). (Incorporated by reference to Exhibit 4.1 of Senesco Technologies, Inc. Current Report on Form 8-K, filed on May 4, 2005.)
4.12	Form of Warrant issued to Oppenheimer & Co. Inc. or its designees, dated as of May 9, 2005. (Incorporated by reference to Exhibit 4.2 of Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended March 31, 2005.)
4.13	Form of Warrant issued to H.C. Wainwright & Co., Inc., or its designees, dated as of October 10, 2006 (Incorporated by reference to Exhibit 10.42 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2006.)
4.14	Form or Warrant issued to certain accredited investors dated October 10, 2006 (with attached schedule of parties and terms thereto). (Incorporated by reference to Exhibit 10.40 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2006.)
4.15	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.)
4.16	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.)
4.17	Form of Debenture issued to YA Global Investments, L.P. (Incorporated by reference to Exhibit 4.17 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2007.)
4.18	Form of Debenture issued to Stanford Venture Capital Holdings, Inc. (Incorporated by reference to Exhibit 4.18 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2007.)
4.19	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.)
4.20	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.)
4.21 †	Form of Warrant issued to H.C. Wainwright & Co., Inc or its designees.
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.) (Incorporated by reference to Exhibit 4.1 of Senesco Technologies, Inc. Current Report on Form 8-K, filed on February 3, 2004.)
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 Bruce C. Galton, dated October 4, 2001. (Incorporated by reference to Exhibit 10.10 of Senesco Technologies, Inc. quarterly report on Form 10-QSB for the quarterly period ended December 31, 2001.)
10.5	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)
10.6	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.)
10.7	Indemnification Agreement with 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.)

10.8*	Employment Agreement by and between Senesco, Inc. and Sascha P. Fedyszyn, dated January 21, 1999. (Incorporated by reference to Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended December 31, 1998.)
10.9*	Employment Agreement by and between Senesco Technologies, Inc. and Bruce C. Galton, dated October 4, 2001. (Incorporated by reference to Exhibit 10.9 of Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended December 31, 2001.)
10.10*	Employment Agreement by and between Senesco Technologies, Inc. and Joel Brooks, dated July 1, 2003. (Incorporated by reference to Exhibit 10.29 of Senesco Technologies, Inc. annual report on Form 10-KSB for the period ended June 30, 2003.)
10.11*	Employment Agreement by and between Senesco Technologies, Inc. and Richard Dondero, dated July 19, 2004. (Incorporated by reference to Exhibit 10.39 of Senesco Technologies, Inc. annual report on Form 10-KSB for the period ended June 30, 2004.)
10.12*	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.)
10.13*	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.)
10.14 *	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.)
10.15 +	License Agreement by and between Senesco Technologies, Inc. and Harris Moran Seed Company, dated November 19, 2001. (Incorporated by reference to Exhibit 10.8 of Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended December 31, 2001.)
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 Cal/West 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.)
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	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.)
10.26	Research Agreement by and among Senesco Technologies, Inc., Dr. John E. Thompson and the University of Waterloo, dated May 1, 2002. (Incorporated by reference to Exhibit 10.29 of Senesco Technologies, Inc. annual report on Form 10-KSB for the year ended June 30, 2002.)
10.27	Amendment to Research Agreement by and among the University of Waterloo, Senesco, Inc., and Dr. John E. Thompson, Ph.D., dated August 1, 2007. (Incorporated by reference to Exhibit 10.42 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2007.)
10.28 †	Amendment to Research Agreement by and among the University of Waterloo, Senesco, Inc. and Dr. John E. Thompson, Ph.D., dated August 25, 2008.
10.29 † +	Master Product Sale Agreement with VGXI, Inc. dated as of June 27, 2008.
10.30 †	Master Product Sale Agreement with Polyplus-transfection dated as of June 30, 2008.
10.31	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.)
10.32	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.)
10.33	Financial Advisory Agreement by and among Senesco Technologies, Inc., Stanford Group Company, Stanford Venture Capital Holdings, Inc., Stanford International Bank, Ltd., Ronald Stein, Daniel Bogar, Osvaldo Pi and William Fusselmann dated October 11, 2006. (Incorporated by reference to Exhibit 10.35 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2006.)
10.34	Amendment No. 1 to the financial advisory agreement by and between Stanford Group Company and Senesco Technologies, Inc., dated February 14, 2008. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. quarterly report on Form 10-Q for the period ended December 31, 2007.)
10.35	Form of Securities Purchase Agreement by and between Senesco Technologies, Inc. and certain accredited investors (with attached schedule of parties and terms thereto). (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. Current Report on Form 8-K, filed on February 3, 2004.)
10.36	Form of Registration Rights Agreement by and between Senesco Technologies, Inc. and certain accredited investors (with attached schedule of parties and terms thereto). (Incorporated by reference to Exhibit 10.2 of Senesco Technologies, Inc. Current Report on Form 8-K, filed on February 3, 2004.)
10.37	Amendment No. 1 to the Securities Purchase Agreement by and between Senesco Technologies, Inc. and Crestview Capital Master, L.L.C. (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. Current Report on Form 8-K, filed on February 13, 2004.)

10.38	Amendment No. 1 to the Registration Rights Agreement by and between Senesco Technologies, Inc. and Crestview Capital Master, L.L.C. (Incorporated by reference to Exhibit 10.2 of Senesco Technologies, Inc. Current Report on Form 8-K, filed on February 13, 2004.)
10.39	Form of Securities Purchase Agreement by and between the Company and certain accredited investors (with schedule of parties and terms thereto). (Incorporated by reference to Exhibit 10.1 of Senesco Technologies, Inc. Current Report on Form 8-K filed on May 4, 2005.)
10.40	Registration Rights Agreement by and among Senesco Technologies, Inc., Stanford Group Company, Stanford Venture Capital Holdings, Inc., Stanford International Bank, Ltd., Ronald Stein, Daniel Bogar, Osvaldo Pi and William Fusselmann dated October 11, 2006. (Incorporated by reference to Exhibit 10.36 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2006.)
10.41	Form of Securities Purchase Agreement by and between Senesco Technologies, Inc. and certain accredited investors dated October 10, 2006 (with attached schedule of parties and terms thereto). (Incorporated by reference to Exhibit 10.38 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2006.)
10.42	Form of Registration Rights Agreement by and between Senesco Technologies, Inc and certain accredited investors dated October 10, 2006 (with attached schedule of parties and terms thereto). (Incorporated by reference to Exhibit 10.39 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2006.)
10.43	Placement Agent Agreement by and between Senesco Technologies, Inc. and H.C. Wainwright & Co., Inc., dated May 1, 2006. (Incorporated by reference to Exhibit 10.41 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2006.)
10.44	Amendment to Placement Agent Agreement by and between Senesco Technologies, Inc. and H.C. Wainwright & Co., Inc. dated August 3, 2007. (Incorporated by reference to Exhibit 10.41 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2007.)
10.45	Securities Purchase Agreement by and between Senesco Technologies, Inc. and YA Global Investments, L.P. (Incorporated by reference to Exhibit 10.44 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2007.)
10.46	Registration Rights Agreement by and between Senesco Technologies, Inc. and YA Global Investments, L.P. (Incorporated by reference to Exhibit 10.45 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2007.)
10.47	Securities Purchase Agreement by and between Senesco Technologies, Inc. and Stanford Venture Capital Holdings, Inc. (Incorporated by reference to Exhibit 10.46 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2007.)
10.48	Registration Rights Agreement by and between Senesco Technologies, Inc. and Stanford Venture Capital Holdings, Inc. (Incorporated by reference to Exhibit 10.47 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2007.)
10.49	Security Agreement dated as of September 21, 2007 by and between Senesco Technologies, Inc. and its subsidiaries and YA Global Investments, L.P. (Incorporated by reference to Exhibit 10.48 of Senesco Technologies, Inc. annual report on Form 10-K for the period ended June 30, 2007.)
10.50 †	Security Agreement dated as of December 20, 2007 by and between Senesco Technologies, Inc. and its subsidiaries and Stanford Venture Capital Holdings, Inc.
10.51	Office lease by and between Senesco Technologies, Inc. and Matrix/AEW NB, LLC, dated March 16, 2001. (Incorporated by reference to Senesco Technologies, Inc. quarterly report on Form 10-QSB for the period ended March 31, 2001.)

10.52	First amendment of office lease by and between Senesco Technologies, Inc. and Matrix/AEW NB, LLC, dated May 13, 2005 (Incorporated by reference to Exhibit 10.8 of Senesco Technologies, Inc annual report on Form 10-KSB for the period ended June 30, 2005.)
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.)
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 Goldstein Golub Kessler LLP.
23.2 †	Consent of McGladrey Pullen, 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.

EXHIBIT 31.1

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Bruce C. Galton, President and Chief Executive Officer of Senesco Technologies, Inc., certify that:

1. I have reviewed this Annual Report on Form 10-K of Senesco Technologies, Inc.

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;

   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: September 26, 2008
/s/ Bruce C. Galton
Bruce C. Galton
President and Chief Executive Officer
(*principal executive officer*)

EXHIBIT 31.2

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Joel Brooks, Chief Financial Officer and Treasurer of Senesco Technologies, Inc., certify that:

1. I have reviewed this Annual Report on Form 10-K of Senesco Technologies, Inc.

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;

   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: September 26, 2008
/s/ Joel Brooks
Joel Brooks
Chief Financial Officer and Treasurer
(*principal financial and accounting officer*)

EXHIBIT 32.1

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,

AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K of Senesco Technologies, Inc. for the year ended June 30, 2008 as filed with the Securities and Exchange Commission on the date hereof, the undersigned, Bruce C. Galton, President and Chief Executive Officer, hereby certifies, pursuant to 18 U.S.C. Section 1350, that:

(1) The Annual Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Annual Report fairly presents, in all material respects, the financial condition and results of operations of Senesco Technologies, Inc.

Date: September 26, 2008
/s/ Bruce C. Galton*
Bruce C. Galton
President and Chief Executive Officer
(*principal executive officer*)

* A signed original of this written statement required by Section 906 has been provided to us and will be retained by us and furnished to the Securities and Exchange Commission or its staff upon request.

EXHIBIT 32.2

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,

AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K of Senesco Technologies, Inc. for the year ended June 30, 2008 as filed with the Securities and Exchange Commission on the date hereof, the undersigned, Joel Brooks, Chief Financial Officer and Treasurer, hereby certifies, pursuant to 18 U.S.C. Section 1350, that:

(1) The Annual Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Annual Report fairly presents, in all material respects, the financial condition and results of operations of Senesco Technologies, Inc.

Date: September 26, 2008
/s/ Joel Brooks*
Joel Brooks
Chief Financial Officer and Treasurer
(*principal financial and accounting officer*)

* A signed original of this written statement required by Section 906 has been provided to us and will be retained by us and furnished to the Securities and Exchange Commission or its staff upon request.

Senesco Technologies, Inc. and Subsidiary
(a development stage company)

CONSOLIDATED FINANCIAL STATEMENTS

June 30, 2008

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

To the Board of Directors and Stockholders of Senesco Technologies, Inc.

We have audited the accompanying consolidated balance sheet of Senesco Technologies, Inc. and Subsidiary (a development stage company) as of June 30, 2008, and the related consolidated statements of operations, stockholders' equity and cash flows for the year then ended and cumulative amounts from July 1, 1998 (inception) to June 30, 2008. 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 audit. The financial statements for the period from July 1, 1998 (inception) to June 30, 2007 were audited by other auditors and our opinion, insofar as it relates to cumulative amounts included for such periods, is based solely on the reports of such auditors.

We conducted our audit 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. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, based on our audit and the reports of other auditors, 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, 2008, and the results of their operations and their cash flows for the year then ended and cumulative amounts from July 1, 1998 (inception) to June 30, 2008, in conformity with U.S. generally accepted accounting principles.

We were not engaged to examine management's assertion about the effectiveness of Senesco Technologies, Inc.'s internal control over financial reporting as of June 30, 2008, included in the accompanying Item 9A. Report on Internal Control Over Financial Reporting and, accordingly, we do not express an opinion thereon.

/s/ MCGLADREY & PULLEN, LLP
New York, New York

September 26, 2008

To the Board of Directors of 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, 2007, and the related consolidated statements of operations, stockholders' equity, and cash flows for each of the two years in the period ended June 30, 2007 and cumulative amounts from July 1, 1998 (inception) to June 30, 2007. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated 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 consolidated financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall consolidated 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 consolidated financial position of Senesco Technologies, Inc. and Subsidiary as of June 30, 2007, and the results of their operations and their cash flows for each of the two years in the period ended June 30, 2007 and cumulative amounts from July 1, 1998 (inception) to June 30, 2007 in conformity with United States generally accepted accounting principles.

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. The Company is a development stage company and has incurred recurring losses from operations that raise substantial doubt about its ability to continue as a going concern.

Goldstein Golub Kessler LLP

GOLDSTEIN GOLUB KESSLER LLP
New York, New York

September 26, 2007

Consolidated Balance Sheet

	June 30, 2008	2007
ASSETS		
Current Assets:		
Cash and cash equivalents	$ 5,676,985	$ 408,061
Short-term investments	500,000	250,000
Prepaid expenses and other current assets	180,556	104,526
Total current assets	**6,357,541**	**762,587**
Property and Equipment, net	5,459	7,526
Intangibles, net	3,213,543	2,544,447
Deferred Financing Costs, net of amortization of $168,706	1,059,230	-
Deferred Income Tax Asset, net of valuation allowance of $9,152,000 and $7,719,000, respectively	-	-
Security Deposit	7,187	7,187
Total assets	**$ 10,642,960**	**$ 3,321,747**
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Accounts payable	$ 370,167	$ 109,258
Accrued expenses	314,267	377,359
Deferred revenue	-	16,667
Total current liabilities	**684,434**	**503,284**
Convertible Notes Payable, net of discount of $9,499,943	57	-
Grant Payable	99,728	99,728
Other Liability	23,062	29,196
Total liabilities	**807,281**	**632,208**
Commitments		
Stockholders' Equity:		
Preferred stock - $0.01 par value; authorized 5,000,000 shares, no shares issued	-	-
Common stock - $0.01 par value; authorized 100,000,000 and 60,000,000 shares, respectively, issued and outstanding 18,375,117 and 17,473,694, respectively	183,751	174,737
Capital in excess of par	39,874,958	28,136,342
Deficit accumulated during the development stage	(30,223,030)	(25,621,540)
Stockholders' equity	**9,835,679**	**2,689,539**
Total Liabilities and Stockolders' Equity	**$ 10,642,960**	**$ 3,321,747**

See Notes to Consolidated Financial Statements

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY
(a development stage company)

Consolidated Statement of Operations

Period from July 1, 1998 (date of inception) to June 30, 2008

	Year ended June 30			Cumulative Amounts
	2008	2007	2006	from Inception
Revenue	$ 456,667	$ 300,000	$ 66,666	$ 1,175,000
Operating expenses:				
General and administrative	2,291,263	2,412,679	1,919,740	21,725,456
Research and development	1,764,426	1,208,321	1,566,267	9,957,595
Total operating expenses	**4,055,689**	**3,621,000**	**3,486,007**	**31,683,051**
Loss from operations	(3,599,022)	(3,321,000)	(3,419,341)	(30,508,051)
Noncash income	-	-	-	321,259
Sale of state income tax loss - net	-	-	-	586,442
Amortization of debt discount and financing costs	(668,763)	-	-	(668,763)
Interest expense – convertible notes	(434,154)	-	-	(434,154)
Interest income - net	100,449	69,303	104,456	480,237
Net loss	**$ (4,601,490)**	**$(3,251,697)**	**$(3,314,885)**	**$(30,223,030)**
Basic and diluted loss per common share	**$ (.26)**	**$ (.19)**	**$ (.21)**	-
Basic and diluted weighted-average number of common shares outstanding	17,660,466	16,916,918	15,469,881	-

See Notes to Consolidated Financial Statements

Consolidated Statement of Stockholders' Equity

Period from July 1, 1998 (date of inception) to June 30, 2008	Common Stock Number of Shares	Common Stock Amount	Capital in Excess of Par	Deficit Accumulated During the Development Stage	Total Stockholders' Equity (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 for $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 for $2.867647 per share	17,436	174	49,826	-	50,000
Issuance of common stock for cash on January 31, 2000 for $2.87875 per share	34,737	347	99,653	-	100,000
Issuance of common stock for cash on February 4, 2000 for $2.924582 per share	85,191	852	249,148	-	250,000
Issuance of common stock for cash on March 15, 2000 for $2.527875 per share	51,428	514	129,486	-	130,000
Issuance of common stock for cash on June 22, 2000 for $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 granted and 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**

Consolidated Statement of Stockholders' Equity

Period from July 1, 1998 (date of inception) to June 30, 2008	Common Stock Number of Shares	Common Stock Amount	Capital in Excess of Par	Deficit Accumulated During the Development Stage	Total Stockholders' Equity (Deficiency)
Fair market value of options and warrants granted and 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)**
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 for the year ended June 30, 2002	-	-	(846,444)	-	(846,444)
Fair market value of options and warrants granted and 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 granted and 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 from January 15, 2004 through February 12, 2004	-	-	(378,624)	-	(378,624)

(continued)

Consolidated Statement of Stockholders' Equity

Period from July 1, 1998 (date of inception) to June 30, 2008	Common Stock Number of Shares	Common Stock Amount	Capital in Excess of Par	Deficit Accumulated During the Development Stage	Deferred Compensation Related to Issuance of Options and Warrants	Total Stockholders' Equity (Deficiency)
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 - $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**
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 issuance on May 9, 2005	-	-	(428,863)	-		(428,863)
Fair market value of options and warrants vested during the year ended June 30, 2005	-	-	974,235	-		974,235
Options and warrants exercised during the year ended June 30, 2005 at exercise prices ranging from $1.50 - $3.25	84,487	844	60,281	-		61,125
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**
Fair market value of options and warrants vested during the year ended June 30, 2006	-	-	677,000	-		677,000
Warrants exercised during the year ended June 30, 2006 at an exercise price of $0.01	10,000	100	-	-		100
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**

(continued)

See Notes to Consolidated Financial Statements

Consolidated Statement of Stockholders' Equity

	Common Stock Number of Shares	Common Stock Amount	Capital in Excess of Par	Deficit Accumulated During the Development Stage	Total Stockholders' Equity (Deficiency)
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 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**
Allocation of proceeds, net of fees paid to holder, from issuance of convertible notes and warrants during the year ended June 30, 2008	-	-	9,340,000	-	9,340,000
Convertible notes converted into common stock during the year ended June 30, 2008, net of deferred financing costs	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
Fair market value of options and warrants vested during the year ended June 30, 2008	-	-	1,536,968	-	1,536,968
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**

See Notes to Consolidated Financial Statements

Consolidated Statement of Cash Flows

	Year ended June 30,			Cumulative Amounts from
	2008	2007	2006	Inception
Cash flows from operating activities:				
Net loss	$(4,601,490)	$(3,251,697)	$(3,314,885)	$(30,223,030)
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	-	-	-	(321,259)
Issuance of common stock and warrants for interest	434,154	-	-	443,469
Share-based compensation expense	897,321	970,162	677,000	9,696,097
Depreciation and amortization	96,847	166,172	40,112	460,688
Amortization of convertible note discount	500,057	-	-	500,057
Amortization of deferred financing costs	168,706	-	-	168,706
(Increase) decrease in operating assets:				
Prepaid expenses and other current assets	(76,030)	35,058	16,960	(180,556)
Security deposit	-	-	-	(7,187)
Increase (decrease) in operating liabilities:				
Accounts payable	260,909	31,563	(139,874)	370,167
Accrued expenses	(63,092)	47,475	149,882	314,267
Deferred revenue	(16,667)	(25,000)	8,334	-
Other liability	(6,134)	(5,222)	32,082	23,062
Net cash used in operating activities	**(2,405,419)**	**(2,031,489)**	**(2,530,389)**	**(18,539,090)**
Cash flows from investing activities:				
Patent costs	(761,093)	(495,852)	(792,069)	(3,506,800)
Redemption (purchase) of investments, net	(250,000)	600,000	3,339,395	(500,000)
Purchase of property and equipment	(2,783)	(2,179)	-	(172,890)
Net cash provided by (used in) investing activities	**(1,013,876)**	**101,969**	**2,547,326**	**(4,179,690)**
Cash flows from financing activities:				
Proceeds from grant	-	-	9,578	99,728
Proceeds from issuance of bridge notes	-	-	-	525,000
Proceeds from issuance of convertible notes	9,340,000	-	-	9,340,000
Deferred financing costs	(651,781)	-	-	(651,781)
Proceeds from issuance of common stock and warrants, net and exercise of warrants and options	-	2,019,108	100	19,082,818
Net cash provided by financing activities	**8,688,219**	**2,019,108**	**9,678**	**28,395,765**
Net increase in cash and cash equivalents	5,268,924	89,588	26,615	5,676,985
Cash and cash equivalents at beginning of period	408,061	318,473	291,858	-
Cash and cash equivalents at end of period	$ 5,676,985	$ 408,061	$ 318,473	$ 5,676,985

See Notes to Consolidated Financial Statements

Consolidated Statement of Cash Flows

	Year ended June 30,			Cumulative Amounts from
	2008	2007	2006	Inception
Supplemental disclosure of cash flow information:				
Cash paid during the period for interest	$ -	$ -	$ -	$ 22,317
Supplemental schedule of noncash financing activity:				
Conversion of bridge notes into common stock	$ -	$ -	$ -	$ 534,316
Conversion of convertible note into common stock, net of unamortized financing costs of $63,492	$ 500,000	$ -	$ -	$ 500,000
Allocation of convertible debt proceeds to warrants and beneficial conversion feature	$ 9,340,000	$ -	$ -	$ 9,340,000
Warrants issued for financing costs	$ 639,645	$ -	$ -	$ 639,645
Issuance of common stock for interest payments on convertible notes	$ 434,154	$ -	$ -	$ 443,469

See Notes to Consolidated Financial Statements

1. PRINCIPAL BUSINESS ACTIVITY AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES:

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

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).

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

The Company has a limited operating history and limited assets and capital and has incurred losses each year since inception. 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.

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

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.

Cash, Cash Equivalents and Investments

Cash equivalents consist of investments which are readily convertible into cash with original maturities of three months or less. The Company maintains its cash in money market and bank deposit accounts which, at times, may exceed federally insured limits. The Company believes that there is no significant credit risk with respect to these accounts.

The Company invests in United States treasury notes and high-grade corporate debt instruments. Based on the Company's intentions regarding these instruments, the Company has classified all marketable debt securities as held-to-maturity and has accounted for these investments at amortized cost. Marketable securities maturing in one year or less are classified as current assets.

Property and Equipment

Property and equipment are stated at cost, less accumulated depreciation. Depreciation of property and equipment is provided for by the straight-line method over the estimated useful lives of the assets.

Intangibles

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, 2008. 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, the expected economic life of the patent.

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

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

If the Company's review determines that the future discounted cash flows related to 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, the Company has not recorded any impairment of intangible assets.

Deferred Financing Costs

Deferred financing costs represent the costs related to the placement of convertible notes during the year ended June 30, 2008. Such costs are being amortized ratably over the term of the convertible notes, (see Note 7).

Deferred Income Tax Asset

Deferred income tax assets and liabilities are recognized for the future tax consequences attributable to differences between financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets are reduced by a valuation allowance when, in the opinion of management, it is more likely than not that some portion or all of the deferred tax assets will not be realized. Deferred tax assets and liabilities are measured using enacted rates expected to apply when the differences are expected to be realized.

Deferred Revenue and Revenue Recognition

The Company receives certain nonrefundable upfront fees in exchange for the transfer of its technology to licensees. Upon delivery of the technology, the Company has no further obligations to the licensee with respect to the basic technology transferred and, accordingly, recognizes revenue at that time. The Company may, however, receive additional payments from its licensees in the event such licensees achieve certain development or commercialization milestones in their particular field of use. Other nonrefundable upfront fees and milestone payments, where the milestone payments are a function of time as opposed to achievement of specific achievement-based milestones, are deferred and amortized ratably over the estimated research period of the license.

Convertible Notes

During the year ended June 30, 2008, the Company issued $10,000,000 of convertible notes and warrants. The proceeds of the convertible notes and warrants have been allocated between the convertible notes and warrants based upon their fair values whereby the fair value for the warrants have been determined using the Black-Scholes model. Additional amounts were allocated to the beneficial conversion feature based upon the effective conversion price compared to the fair value of the common stock on the date of issuance of the convertible notes and warrants. Debt discount associated with the Convertible Notes is amortized to interest expense, using the effective yield method, over the remaining life of the Convertible Notes. Upon conversion of the Convertible Notes into Common Stock, any unamortized debt discount relating to the portion converted will be charged to interest for amortization of debt discount and equity.

Fair Value of Financial Instruments

The carrying value of cash and cash equivalents, short-term investments, prepaid and other current assets, accounts payable and accrued expenses reported in the consolidated balance sheets equal or approximate fair value due to their short maturities. The fair value of the convertible notes approximates the amortized portion of the principal amount as such instruments are at market rates currently available to the Company.

Common Stock

On December 12, 2002, the stockholders approved a proposal to increase the authorized Common Stock of the Company from 20,000,000 shares to 30,000,000 shares. On December 14, 2006, the stockholders approved a proposal to increase the authorized Common Stock of the Company from 30,000,000 shares to 60,000,000 shares. On December 13, 2007, the stockholders approved a proposal to increase the authorized Common Stock of the Company from 60,000,000 shares to 100,000,000 shares.

Share Based Payments

As further discussed in Note 7, the Company adopted FAS No. 123R, "Share-Based Payment" ("FAS No. 123R") effective July 1, 2005 using the modified-retrospective method. The adoption of this standard requires the recognition of stock-based compensation expense in the consolidated financial statements. Prior to July 1, 2005, the Company followed Accounting Principles Board Opinion 25, "Accounting for Stock Issued to Employees" ("APB No. 25"), and related interpretations.

Loss Per Common Share

Loss per common share is computed by dividing the loss by the weighted-average number of common shares outstanding during the period. Shares to be issued upon the exercise of the outstanding options and warrants aggregating 23,522,526 and 7,790,315 as of June 30, 2008 and 2007, respectively, are not included in the computation of loss per share as their effect is anti-dilutive. Additionally, as of June 30, 2008, 10,555,556 shares to be issued upon the conversion of convertible notes at a fixed conversion price of $0.90 are not included in the computation of diluted loss per share as the effect is anti-dilutive.

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, and the valuation allowance on deferred tax assets. Actual results experienced by the Company may differ from management's estimates.

Recent Accounting Pronouncements Applicable to the Company

EITF Issue No. 07-1 – Accounting for Collaborative Arrangements

This pronouncement defines a collaborative arrangement as a contractual arrangement that involves a joint operating activity that involves two or more parties who are both active participants in the activity and exposed to significant risks and rewards dependent on the commercial success of the activity. The pronouncement also defines how the costs incurred and revenues

generated from transactions with third parties should be recorded and presented in each entity's income statement. This pronouncement is effective for financial statements issued for fiscal years beginning after December 15, 2008, and interim periods within those fiscal years, and shall be applied retrospectively to all prior periods presented for all collaborative arrangements existing as of the effective date. The Company does not believe that this pronouncement will have any material effect on its financial statements.

EITF Issue No. 07-3 – Accounting for Nonrefundable Advance Payments for Goods or Services Received for Use in Future Research and Development Activities.

This pronouncement states that nonrefundable advance payments for future research and development activities should be deferred and capitalized. This pronouncement is effective for financial statements issued for fiscal years beginning after December 15, 2007, and interim periods within those fiscal years. Early application is not permitted. The Company does not believe that this pronouncement will have any material effect on its financial statements.

SFAS No. 157 – Fair Value Measurements

In September 2006, the FASB issued SFAS No. 157, "Fair Value Measurements"("SFAS No. 157"). SFAS No. 157 defines fair value, establishes a framework for measuring fair value in generally accepted accounting principles, and expands disclosures about fair value measurements. SFAS No. 157 applies under other accounting standards that require or permit fair value measurements. Accordingly, SFAS No. 157 does not require any new fair value measurement. SFAS No. 157 emphasizes that fair value is a market-based measurement that should be determined based on the assumptions that market participants would use in pricing an asset or liability. Companies will be required to disclose the extent to which fair value is used to measure assets and liabilities, the inputs used to develop the measurements and the effect of certain of the measurements on earnings (or changes in net assets) for the period. SFAS No. 157 is effective for financial statements issued for fiscal years beginning after November 15, 2007, and interim periods within those fiscal years. The Company is currently evaluating the effect, if any, that SFAS No. 157 will have on its consolidated financial position or results of operations.

SFAS No. 159 – The Fair Value Option for Financial Assets and Financial Liabilities—Including an Amendment of FASB Statement No. 115

In February 2007, the FASB issued SFAS No. 159, "The Fair Value Option for Financial Assets and Financial Liabilities--Including an Amendment of FASB Statement No. 115" ("SFAS No. 159"). SFAS No. 159 permits entities to choose to measure many financial instruments and certain other items at fair value that are not currently required to be measured at fair value. SFAS No. 159 is effective for fiscal years beginning after November 15, 2007. The Company is currently evaluating the effect, if any, that SFAS No. 159 will have on its consolidated financial position or results of operations.

FASB Interpretation No. 48 – Accounting for Uncertainty in Income Taxes

In July 2006, the Financial Accounting Standards Board issued FASB Interpretation No. 48, "Accounting for Uncertainty in Income Taxes – An Interpretation of FASB Statement No. 109" ("FIN 48"). FIN 48 clarifies the accounting for uncertainty in income taxes recognized in an entity's financial statements in accordance with FASB Statement No. 109, "Accounting for Income Taxes". FIN 48 prescribes a recognition threshold and measurement attribute for financial statement disclosure of tax positions taken or expected to be taken on a tax return. Additionally, FIN 48 provides guidance on derecognition, classification, interest and penalties, accounting in interim periods, disclosure and transition. The Company adopted FIN 48 effective July 1, 2007 and there was no material effect on our results of operations or financial position.

FASB Staff Position No. EITF 00-19-2

In December 2006, the FASB issued FASB Staff Position No. EITF 00-19-2. This FSP addresses an issuer's accounting for registration payment arrangements and specifies that the contingent obligation to make future payments or otherwise transfer consideration under a registration payment arrangement should be separately recognized and measured in accordance with FASB No. 5. The guidance in this FSP amends FASB Statements 133 and 150 and FASB Interpretation No. 45 to include

scope exceptions for registration payment arrangements. This FSP further clarifies that a financial instrument subject to a registration payment arrangement should be accounted for without regard to the contingent obligation to transfer consideration pursuant to the registration payment arrangement. This guidance is effective for financial statements issued for fiscal years beginning after December 15, 2006 and for transactions entered on or after December 22, 2006. The standard did not impact the Company's consolidated financial position or results of operations for the year ended June 30, 2008.

Management does not believe that any other recently issued, but not yet effective, accounting standards if currently adopted would have a material effect on the accompanying financial statements.

2. INVESTMENTS:

At June 30, 2008 and 2007, the amortized cost basis, aggregate fair value, gross unrealized gains and maturity by majority security type were as follows:

	Gross Unrealized Gain/(Loss)	Aggregate Fair Value	Amortized Cost Basis
June 30, 2008			
Held-to-maturity securities:			
Corporate debt securities (maturing within one year)	$ 0	$ 500,000	$ 500,000
June 30, 2007			
Held-to-maturity securities:			
Corporate debt securities (maturing within one year)	$ 0	$ 250,000	$ 250,000

Realized gains and losses are determined based on the specific-identification method.

3. PREPAID EXPENSES AND OTHER CURRENT ASSETS:

The following are included in prepaid expenses and other current assets at:

	June 30, 2008	2007
Prepaid insurance	$ 37,117	$ 34,361
Prepaid research and research supplies	119,153	11,796
Prepaid legal	-	41,051
Prepaid other	24,286	17,318
	$ 180,556	$104,526

4. PROPERTY AND EQUIPMENT:

Property and equipment, at cost, consists of the following:

	June 30, 2008	June 30, 2007	Estimated Useful Life
Equipment	$ 35,736	$ 32,953	4 years
Furniture and fixtures	67,674	67,674	7 years
	103,410	100,627	
Accumulated depreciation	(97,951)	(93,101)	
	$ 5,459	$ 7,526	

Depreciation expense aggregated $4,850, $4,971, $19,720 and $167,431 for the years ended June 30, 2008, 2007, 2006, and cumulatively from inception through June 30, 2008, respectively.

5. INTANGIBLE ASSETS:

Intangible assets, at cost, consist of the following:

	June 30, 2008	June 30, 2007
Patents approved	$ 809,863	$ 473,847
Patents pending	2,696,937	2,271,860
	3,506,800	2,745,707
Accumulated amortization	(293,257)	(201,260)
	$3,213,543	$2,544,447

Amortization expense amounted to $91,997, $161,201, $20,392 and $293,257 for the years ended June 30, 2008, 2007, 2006, and cumulatively from inception through June 30, 2008, respectively.

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

Year ending June 30,	
2009	$102,000
2010	102,000
2011	102,000
2012	102,000
2013	102,000

6. ACCRUED EXPENSES:

The following are included in accrued expenses at:

	June 30, 2008	2007
Accrued research	$149,154	$ 271,000
Accrued deferred financing costs	96,962	-
Accrued accounting	-	40,000
Accrued patent costs	50,000	45,000
Accrued legal	9,489	10,186
Accrued other	8,662	11,173
	$314,267	$ 377,359

7. STOCKHOLDERS' EQUITY AND CONVERTIBLE NOTES:

2005 Private Placement of Common Stock and Warrants

In May 2005, the Company completed a private placement to certain accredited investors (the "2005 Accredited Investor Private Placement") for an aggregate amount of 1,595,651 shares of Common Stock and warrants to purchase 797,836 shares of Common Stock for the aggregate cash consideration of $3,366,829. The 2005 Accredited Investor Private Placement offered units of one share of Common Stock and a five-year warrant to purchase 0.50 shares of Common Stock at a price equal to $2.11 per unit. The warrants were issued at an exercise price equal to $3.38 per share, with such warrants vesting on the date of grant. The costs associated with the 2005 Accredited Investor Private Placement totaled $428,863. In addition, the Company has caused its directors and officers to enter into Lock-up Agreements for a period of six months from the Closing Date with the Placement Agent for the benefit of the Purchasers.

On May 27, 2005, the Company filed a registration statement with the SEC on Form S-3 to register all of the shares and the shares underlying the warrants acquired by the purchasers and placement agent (see below) in the 2005 Accredited Investor Private Placement. The registration statement was declared effective by the SEC on June 17, 2005, and remained in effect until May 9, 2007.

Due to the Company's obligation to file a registration statement to register for resale the shares underlying the warrants under the Securities Act of 1933, as amended, in accordance with EITF 00-19, "Accounting for Derivative Financial Instruments Indexed To, and Potentially Settled In a Company's Own Common Stock," the value of the warrants amounting to $1,715,347 was recorded as a liability until the filing was declared effective. The decrease in market value of the Common Stock from the closing of its financing to June 17, 2005, the effective date of the registration statement, resulted in noncash other income to reflect the decrease in Black-Scholes value of the warrants between those two dates. As a result, the Company incurred a decrease in liability and other noncash income of $135,632 as of June 17, 2005. Upon the Company meeting its obligation to file a registration statement, the fair value of the warrants amounting to $1,579,715, was reclassified to equity.

Oppenheimer and Co. Inc. ("Oppenheimer") acted as the placement agent for the 2005 Accredited Investor Private Placement, As consideration for their services to the Company, Oppenheimer was issued warrants to purchase an aggregate of 167,544 shares of Common Stock, on the same terms and conditions as the warrants issued to the purchasers in the 2005 Accredited Investor Private Placement.

2006 Private Placement of Common Stock and Warrants

On October 11, 2006, the Company completed a private placement to certain members of the Company's board of directors, institutional and accredited investors (the "Private Placement") for an aggregate amount of 1,986,306 shares of Common Stock and warrants to purchase 993,153 shares of Common Stock for the aggregate cash consideration of $2,249,491. The Private Placement offered units of one share of Common Stock and a five-year warrant to purchase 0.50 shares of Common Stock at a price equal to $1.1325 per unit. The warrants were issued at an exercise price equal to $1.18 per share, with such warrants vesting on the date of grant, but not exercisable for a six-month period from the date of closing. The costs associated with the Private Placement totaled $230,483. In addition, the Company entered into a Registration Rights Agreement with these purchasers. The Registration Rights Agreement required the Company to file a registration statement for the shares within 30 days of the closing date (the "Filing Date"), and to have such registration statement declared effective within 120 days of the closing date (the "Effective Date"). If the Company failed to file a registration statement on or before the Filing Date, it was required to pay to each purchaser in the Private Placement 1.0% of the aggregate purchase price for each 30 day period that such registration statement had not been filed. If the registration statement was not declared effective on or before the Effective Date, the Company was required to pay to each purchaser in the Private Placement 2.0% of the aggregate purchase price paid by such purchaser for the first thirty day period following the Effective Date and 1.0% for each thirty day period thereafter, with all payments subject to a maximum of 10.0% of the purchase price. The Company filed the registration statement on November 3, 2006 and the registration statement was declared effective by the SEC on November 27, 2006, and will remain in effect, subject to the Company being in compliance with all the applicable rules and regulations, until October 10, 2011. Accordingly, the Company was not required to pay any liquidated damages to any of the purchasers.

H.C. Wainwright and Co., Inc. ("Wainwright") acted as the placement agent for the Private Placement. As consideration for their services to the Company, Wainwright was issued a five-year warrant to purchase 139,041 shares of Common Stock, at a strike price equal to $1.07. Such warrant is immediately exercisable.

2007 Private Placement of Convertible Notes and Warrants

On August 1, 2007 and August 29, 2007, the Company entered into binding Securities Purchase Agreements with YA Global Investments L.P. ("YA Global") and Stanford Venture Capital Holdings, Inc. ("Stanford"), respectively, to sell to each of YA Global and Stanford up to $5,000,000 of secured convertible notes and accompanying warrants for an aggregate gross proceeds of $10,000,000. The convertible notes convert into the Company's common stock at a fixed price of $0.90 per share subject to certain adjustments (the "Fixed Conversion Price"), for a period of two years immediately following the signing date, provided that the Company has achieved the following milestones by January 31, 2008: (i) successful completion of animal studies, other than toxicology studies, necessary for the advancement of Factor 5A1 in human clinical trials, (ii) the engagement of a contract research organization for human clinical studies of Factor 5A1, and (iii) the signing of at least one (1) corporate partnership or license agreement after August 1, 2007 with an agricultural company utilizing the Company's proprietary platform. As of January 31, 2008, the Company has completed all of the three required milestones. After the second anniversary of the signing date, the convertible notes may convert into shares of the Company's common stock at the lower of the fixed conversion price or 80% of the lowest daily volume-weighted average price (the "VWAP"), of the common stock during the five trading days prior to the conversion date. The maturity date of each of the convertible notes for YA Global and Stanford is December 30, 2010 and December 31, 2010, respectively. Currently, at the fixed conversion price, the number of shares of common stock issuable upon conversion of the remaining $9,500,000 (during the year ended June 30, 2008, YA Global converted $500,000 of convertible notes into 555,556 shares of common stock) of convertible notes outstanding and shares of common stock to be issued upon exercise of the warrants outstanding at June 30, 2008 represents, in the aggregate, 24,438,888 shares, plus an estimated additional 1,400,000 shares for the payment of interest in stock under the convertible notes.

The convertible notes accrue interest on their outstanding principal balances at an annual rate of 8%. The Company has the option to pay interest in cash or, upon certain conditions, common stock. If the Company pays interest in common stock, the stock will be valued at a 10% discount to the average daily VWAP for the five day trading period prior to the interest payment date (the "Interest Shares").

At the Company's option, it can redeem a portion of, or all of, the principal owed under the convertible notes by providing the investors with at least 30 business days' written notice, provided that, at the time of receipt of the notice, either: (A)(i) the VWAP of the common stock exceeds 130% of the Fixed Conversion Price for at least 20 of 30 prior trading days and (ii) there is an effective registration statement for the resale of the common stock that will be issued under the redemption or (B) it redeems a portion, or all, of the principal owed at a 20% premium above the principal then outstanding and any accrued interest thereupon. If the Company redeems all or any of the principal outstanding under the convertible notes, it will pay an amount equal to the principal being redeemed plus accrued interest.

If there is an effective registration statement for the resale of the shares underlying the convertible notes or if such shares become 144(k) eligible, the Company will have the option to force the investors to convert 50% and 100% of its then-outstanding convertible notes if its common stock price exceeds 150% and 175% of the Fixed Conversion Price, respectively, for any 20 out of 30 trading days; provided that such forced conversion meets certain conditions (the "Call Option"). If the Company exercises its Call Option prior to the third anniversary of the signing date, it will issue additional warrants to the investor equal to 50% of the number of shares underlying the convertible note subject to the forced conversion. These warrants will be exercisable at the fixed conversion price and will have the same maturity as the other warrants issued under the YA Global financing.

The Company's obligations under the convertible notes are secured by all of its and its subsidiary's assets and intellectual property, as evidenced by certain Security Agreements and certain Patent Security Agreements by and between the Company and each of YA Global and Stanford. Pursuant to a subordination agreement, YA Global is the senior secured creditor.

The agreements with YA Global and Stanford provide for the issuance of warrants to purchase an aggregate of 5,550,000 and 8,333,333, respectively, of the Company's Common Stock, exercisable six months and one day from the date of issuance until their expiration on the date that is five years from the date of issuance. The warrants have been issued in two series. The exercise price of the Series A warrants is $1.01 per share, and the exercise price of the Series B warrants is $0.90 per share, subject to certain adjustments. The warrants provide a right of cashless exercise if, at the time of exercise, there is no effective registration statement registering the resale of the shares underlying the warrants.

The conversion rate of each convertible note and the exercise price of the Series B warrants are subject to adjustment for certain events, including dividends, stock splits, combinations and the sale of the Company's Common Stock or securities convertible into or exercisable for the Company's Common Stock at a price less than the then applicable conversion or exercise price.

The investors have a right of first refusal on any future funding that involves the issuance of the Company's capital stock for so long as a portion of the convertible notes is outstanding.

Both YA Global and Stanford entered into Registration Rights Agreements. Generally Stanford's registration rights do not become effective until all of YA Global's registration rights have been fulfilled. Pursuant to YA Global's Registration Rights Agreement, the Company filed an initial registration statement on October 12, 2007 to register 3,333,333 shares of common stock, underlying the convertible notes, issuable to YA Global, and such registration statement became effective on November 1, 2007. The Company was required to register an additional 891,667 shares of common stock issuable to YA Global. However, YA Global has amended its Registration Rights Agreement

deferring its right to have such additional shares registered. If the shares issuable to YA Global remain outstanding after all shares under the registration statements have been sold, the Company may be required to file additional registration statements for those shares. These registration rights for YA Global will cease once the shares issuable to YA Global on December 20, 2007 are eligible for sale by the investor without restriction under Rule 144(k), which is December 20, 2008. The registration rights for Stanford will cease once the shares issuable to Stanford on June 30, 2008 are eligible for sale by the investor without restriction under Rule 144(k), which is June 30, 2009. Upon certain events, the Company has agreed to pay as partial liquidated damages an amount equal to 1.0% of the aggregate purchase price paid by the investors for any convertible debentures then held by the investors, but these payments may not exceed 12% of the aggregate purchase price paid by the investors. The maximum liquidated damages payable under the Registration Rights Agreement was $600,000. The Company did not record an estimated registration rights liability as the Company anticipated that it would fulfill its obligations under the Registration Rights Agreement.

The total gross proceeds from the issuance of the convertible notes and warrants was $10,000,000 before a payment of 3.25% of the purchase price in commissions to Wainwright & Co., Inc. (the "Placement Agent"). On April 29, 2008, YA Global converted $500,000 of the Convertible Notes into 555,556 shares of the Company's common stock.

The Company has issued to the Placement Agent warrants to purchase 7% of the purchase price, or 777,777 shares, of the Company's Common Stock with similar terms to the warrants that will be issued to the investors. The Company paid YA Global and Stanford a non-refundable structuring/due diligence fee of $30,000 each. The Company has also paid YA Global and Stanford a commitment fee of 5% and 7%, respectively, of its purchase price, which was paid proportionately at each closing.

Specifics of YA Global Financing

Pursuant to the YA Global Securities Purchase Agreement, the Company has issued three convertible notes in the aggregate amount of $5,000,000 and two Series A warrants in the amount of 1,387,500 shares each on September 21, 2007 and October 16, 2007 and a Series B warrant in the amount of 2,775,000 shares on December 20, 2007.

The gross proceeds, less $280,000 paid to YA Global, of $4,720,000 from the issuance of convertible notes and warrants have been allocated between the convertible notes and warrants based upon their fair values, whereby the fair value for the warrants has been determined using the Black-Scholes model. Additional amounts were allocated to the beneficial conversion feature based upon the effective conversion price compared to the fair value of the common stock on the date of issuance of the convertible notes and warrants. The material factors incorporated in the Black-Scholes model in estimating the value of the warrants include the following:

Estimated life in years	5
Risk-free interest rate	3.5% - 4.4%
Volatility	100%
Dividend paid	None

As of June 30, 2008, net proceeds of $4,720,000 were allocated to the warrants and beneficial conversion feature and recorded as equity.

The convertible notes and warrants issued to YA Global are subject to a maximum cap of 30,500,000 on the number of shares of common stock that can be issued upon the conversion of the convertible notes and the exercise of the warrants.

Specifics of Stanford Financing

Pursuant to the Stanford Securities Purchase Agreement, on December 20, 2007 and June 30, 2008, the Company issued an aggregate of three convertible notes in the aggregate amount of $5,000,000 and three Series A and three Series B warrants in the aggregate amount of 8,333,333 shares

The gross proceeds, less $380,000 paid to Stanford, of $4,620,000 from the issuance of the convertible notes and warrants have been allocated between the convertible notes and warrants based upon their fair values, whereby the fair value for the warrants has been determined using the Black-Scholes model. Additional amounts were allocated to the beneficial conversion feature based upon the effective conversion price compared to the fair value of the common stock on the date of issuance of the convertible notes and warrants. The material factors incorporated in the Black-Scholes model in estimating the value of the warrants include the following:

Estimated life in years	5
Risk-free interest rate	3.4% - 3.5%
Volatility	100%
Dividend paid	None

The convertible notes and warrants issued to Stanford are subject to a maximum cap of 31,888,888 on the number of shares of common stock that can be issued upon the conversion of the convertible notes and the exercise of the warrants.

As of June 30, 2008, the outstanding balance of the Convertible Notes were $57, which is comprised of notes with an aggregate face amount of $9,500,000 less unamortized debt discount of $9,499,943.

Debt discount associated with the Convertible Notes is amortized to interest expense, using the effective yield method, over the remaining life of the Convertible Notes. Upon conversion of the Convertible Notes into Common Stock, any unamortized debt discount relating to the portion converted will be charged to interest. Total charges to interest for amortization of debt discount were $500,057 for the year ended June 30, 2008 and from inception through June 30, 2008.

The costs associated with the issuances in the amount of $1,291,427 have been recorded as deferred financing costs and are being amortized ratably over the term of the convertible notes. The balance of deferred financing costs as of June 30, 2008 amounted to $1,059,230.

Stock Option Plan

In 1999, the Company adopted the 1998 Stock Incentive Plan, as amended (the "Plan"), which provides for the grant of stock options and stock purchase rights to certain designated employees and certain other persons performing services for the Company, as designated by the board of directors. Pursuant to the Plan, an aggregate of 6,000,000 shares of common stock have been reserved for issuance. On March 28, 2003, the Company filed a registration statement with the SEC to register all of the 3,000,000 shares of Common Stock underlying the Plan. On January 26, 2007, the Company amended the registration statement to register an additional 3,000,000 shares of Common Stock underlying the Plan. The registration statement and amendment was deemed effective upon filing.

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

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

	Year Ended June 30,		
	2008	2007	2006
Estimated life in years	4-6	6-10	6-10
Risk-free interest rate [1]	1.9%-4.1%	4.2%-4.65%	4.2-4.5%
Volatility	100%	70%-80%	70%-111%
Dividend paid	None	None	None

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

The economic values of the options will depend on the future price of the Company's common stock, par value $0.01 (the "Common Stock"), which cannot be forecast with reasonable accuracy.

Stock option activity under the Plan is summarized as follows:

	Shares	Weighted-average Exercise Price
Options outstanding at July 1, 2005	2,111,500	$2.74
Granted	318,000	$1.40
Exercised	-	-
Expired	(3,000)	$3.48
Options outstanding at June 30, 2006	2,426,500	$2.56
Granted	338,000	$1.08
Exercised	-	-
Expired	(118,500)	$3.42
Options outstanding at June 30, 2007	2,646,000	$2.33
Granted	1,069,600	$0.99
Exercised	-	-
Expired	-	-
Options outstanding at June 30, 2008	3,715,600	$1.95
Options exercisable at June 30, 2006	2,181,337	$2.64
Options exercisable at June 30, 2007	2,396,334	$2.45
Options exercisable at June 30, 2008	2,778,336	$2.25
Weighted-average fair value of options granted during the year ended June 30, 2006		$0.92
Weighted-average fair value of options granted during the year ended June 30, 2007		$0.85
Weighted-average fair value of options granted during the year ended June 30, 2008		$0.77

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

	Number of Options	Weighted-average Grant-Date Fair Value
Non-vested stock options at July 1, 2005	276,992	$2.98
Granted	318,000	$0.92
Vested	(349,162)	$2.05
Forfeited	(667)	$3.23
Non-vested stock options at June 30, 2006	245,163	$1.47
Granted	338,000	$0.86
Vested	(328,497)	$1.30
Forfeited	(5,000)	$0.87
Non-vested stock options at June 30, 2007	249,666	$1.07
Granted	1,069,600	$0.76
Vested	(382,002)	$0.82
Forfeited	-	-
Non-vested stock options at June 30, 2008	937,264	$0.77

The following table summarizes information about stock options outstanding at June 30, 2008:

	Options Outstanding			Options Exercisable	
Range of Exercise Prices	Number Outstanding at June 30, 2008	Weighted-average Remaining Contractual Life (Years)	Weighted-average Exercise Price	Number Exercisable at June 30, 2008	Weighted-average Exercise Price
$0.99 - $1.65	1,813,100	8.5	$1.11	875,836	$1.17
$2.05 - $2.35	1,025,000	2.9	$2.12	1,025,000	$2.12
$3.15 - $4.00	877,500	4.3	$3.49	877,500	$3.49
$0.99 - $4.00	3,715,600	6.0	$1.95	2,778,336	$2.25

As of June 30, 2008, the aggregate intrinsic value of stock options outstanding was $1,343,166, with a weighted-average remaining term of 6.0 years. The aggregate intrinsic value of stock options exercisable at that same date was $544,809, with a weighted-average remaining term of 4.9 years. As of June 30, 2008, the Company has 1,856,700 shares available for future stock option grants.

As of June 30, 2008, total compensation expense not yet recognized related to stock option grants amounted to $183,413, which will be recognized over the next 18 months, and an additional $640,000 which may be recognized as achievement of certain target goals under the Company's Long-Term Incentive Program become probable over the next 30 months.

Short-Term Equity Incentive Program

On December 13, 2007, upon recommendation of the Company's Compensation Committee, the Board adopted a Short-Term Equity Incentive Program for the members of the executive management team. The Programs are intended to ensure the achievement of certain goals of the Company, continuity of the Company's executive management, and to align the interests of the executive management with those of the shareholders.

Pursuant to and as defined in the Short-Term Equity Incentive Program, each executive will be awarded shares of the Company's Common Stock, or options to acquire shares of the Company's Common Stock, if the Company achieves certain target goals relating to research, financing, licensing, investor relations and other administrative items during the fiscal year ending June 30, 2008.

The number of eligible shares and options to be awarded to the executive is based upon the following weightings:

1. 45% of eligible shares and options for contributions relating to the Company's Multiple Myeloma project;
2. 25% of eligible shares and options for contributions relating to the Company's current financing;
3. 15% of eligible shares and options for contributions relating to the Company's licensing and licensing support activities;
4. 5% of eligible shares and option for contributions relating to the Company's audits and Securities and Exchange Commission filings;
5. 4% of the eligible shares and options for contributions relating to the administration of the Company's intellectual property;
6. 3% of the eligible shares and options for contributions relating to the Company's investor relations program;
7. 1% of the eligible shares and options for contributions relating to the administration of the Company's website;
8. 1% of the eligible shares and options for contributions relating to the administration and monitoring of the requirements of the American Stock Exchange; and
9. 1% of the eligible shares and options for contributions relating to planning for future financing requirements.

If the target goals are achieved by the Company, the executive officers would be awarded the following number of shares and options for the Fiscal year ended June 30, 2008:

	Number of Shares	Number of Options (1)
Bruce C. Galton	50,225	-
John E. Thompson, Ph.D.	-	52,676
Joel Brooks	37,275	-
Richard Dondero	-	71,924
Sascha P. Fedyszyn	25,200	-
Total	**112,700**	**124,600**

(1) Such options are exercisable at a strike price of $0.99, which represents the closing price of the common stock on December 12, 2007.

As of June 30, 2008, the Company has determined that the target goals have been achieved. The total amount of compensation expense in connection with the Short-Term Equity Incentive Program in the amount of $206,269 has been recorded ratably over the six and one-half month period from December 13, 2007 through June 30, 2008. Such compensation expense was determined under a Black-Scholes model on the date of adoption of the Short-Term Equity Incentive Program.

Long-Term Equity Incentive Program

On December 13, 2007, upon recommendation of the Company's Compensation Committee, the Board adopted a Long-Term Equity Incentive Program for the members of the executive management team. The Programs are intended to ensure the achievement of certain goals of the Company, continuity of the Company's executive management, and to align the interests of the executive management with those of the shareholders.

Pursuant to and as defined in the Long-Term Equity Incentive Program, each executive will be awarded shares of the Company's Common Stock and options to acquire shares of the Company's Common Stock if the Company achieves certain target goals relating to its Multiple Myeloma research project over the next three fiscal years.

The number of eligible shares and options to be awarded to the executive is based upon the following weightings:

1. 20% of the eligible shares upon the execution of a research agreement to conduct a phase I/II clinical trial at a research facility;
2. 20% of the eligible shares upon the filing and acceptance by the FDA of an investigational new drug application; and
3. 60% of the eligible shares upon the successful completion of a FDA approved phase I/II clinical trial.

If the target goals are achieved by the Company, the executive officers would be awarded the following number of shares and options :

	Goal 1	Goal 2	Goal 3
Number of Shares			
Bruce C. Galton	25,000	25,000	75,000
Joel Brooks	10,000	10,000	30,000
Sascha P. Fedyszyn	10,000	10,000	30,000
Total number of shares	45,000	45,000	135,000
Number of Options (1)			
John E. Thompson, Ph.D.	50,000	50,000	150,000
Richard Dondero	60,000	60,000	180,000
Total number of options	110,000	110,000	330,000

(1) Such options are exercisable at a strike price of $0.99, which represents the closing price of the common stock on December 12, 2007.

As of June 30, 2008, the Company is not able to determine if the achievement of the target goals under the Long-Term Equity Incentive Program are probable and, therefore, has not yet begun to recognize any of the $640,000 compensation expense that was computed on the date of adoption of the program. The Company will begin recognizing such compensation expense ratably over the remaining term of the plan at such time that the Company is able to determine that the achievement of the target goals are probable.

Warrants

On September 7, 1999, the Company granted to its patent counsel, as partial consideration for services rendered, options to purchase 10,000 shares of the Company's Common Stock at an exercise price equal to $3.50 per share, with 3,332 options vesting on the date of grant, 3,334 options vesting on the first anniversary of the date of grant, and 3,334 options vesting on the second anniversary of the date of grant. Such options were granted outside of the Company's Plan.

The following table represents warrants outstanding as of:

	June 30,	
Exercise Price	2008	2007
$7.00	10,000	10,000
3.79	842,141	842,141
3.59	237,600	237,600
3.50	280,000	280,000
3.45	15,000	15,000
3.38	965,380	965,380
3.25	-	750,000
3.15	20,000	20,000
2.35	15,000	15,000
2.15	110,000	110,000
2.00	-	750,000
1.40	5,000	5,000
1.18	993,153	993,153
1.08	2,500	2,500
1.07	139,041	139,041
1.01	7,175,000	-
1.00	1,500,000	-
.99	1,000	-
.90	7,330,555	-
.74	155,556	-
	19,796,926	5,134,815

As of June 30, 2008, 19,796,259 of the above warrants are exercisable expiring at various dates through 2017. At June 30, 2008, the weighted-average exercise price on the above warrants was $1.29.

Share Based Compensation

Effective July 1, 2005, the Company adopted FAS No. 123R, utilizing the modified-retrospective method. FAS No. 123R requires the recognition of stock-based compensation expense in the consolidated financial statements. Under the modified-retrospective method, the provisions of FAS No. 123R apply to all awards granted or modified after the date of adoption. Prior year results have been adjusted to reflect the amortized portion of the fair value of the options granted prior to the date of adoption, which have been measured under the original provisions of FAS No. 123. In addition, the unamortized portion of the options that were granted prior to the date of adoption, also determined under the original provisions of FAS No. 123, shall be recognized in the periods after the date of adoption.

The following stock-based compensation expense of $897,321, $970,162, $677,000 and $9,696,097 was recognized for the years ended June 30, 2008, 2007, 2006 and cumulatively from inception through June 30, 2008, respectively:

	Year Ended June 30,			Cumulative
	2008	2007	2006	From Inception
General and administrative expenses	$ 749,100	$ 909,848	$ 488,000	$ 8,286,041
Research and development expenses	148,221	60,314	189,000	1,410,056
Total stock-based compensation expense	$ 897,321	$ 970,162	$ 677,000	$ 9,696,097
Basic and diluted loss per common share	$ .05	$ .06	$ .04	

8. INCOME TAXES:

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

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

Year ended June 30,	2008	2007	2006
Federal statutory rate	(34.0)%	(34.0)%	(34.0)%
Stock based compensation	0.5 %	2.7 %	5.9 %
Interest expense paid with common stock	2.5 %	-	-
Amortization of debt discount and financing costs	2.9 %	-	-
Other	0.1 %	0.1 %	0.1 %
Valuation allowance	28.0 %	31.2 %	28.0 %
	0 %	0 %	0 %

The deferred income tax asset consists of the following at:

	June 30,	
	2008	2007
Deferred tax asset:		
Net operating loss carryforward	$ 7,528,000	$ 6,443,000
Stock-based compensation	1,506,000	1,181,000
Other	118,000	95,000
	9,152,000	7,719,000
Valuation allowance	(9,152,000)	(7,719,000)
	$ 0	$ 0

At June 30, 2008, the Company has federal and state net operating loss carryforwards of approximately $19,924,000 and $12,565,000, respectively, available to offset future taxable income expiring on various dates through 2028. The timing and extent to which the Company can utilize future tax deductions in any year may be limited by provisions of the Internal Revenue Code regarding changes in ownership of Corporations (i.e., IRS Code Section 382).

9. COMMITMENTS:

Research Agreement

Effective September 1, 1998, the Company entered into a research and development agreement, which has subsequently been renewed, with a university that a researcher, who is an officer, director and stockholder of the Company, is affiliated. Pursuant to the agreement, the university provides research and development under the direction of the researcher and the Company. The agreement is renewable annually by the Company which has the right of termination upon 30 days advance written notice. Effective September 1, 2008, the Company extended the research and development agreement for an additional one-year period through August 31, 2009, in the amount of CAD $735,000, or approximately U.S. $735,000. Research and development expenses under this agreement for the years ended June 30, 2008, 2007 and 2006 aggregated U.S. $730,960, U.S. $568,872 and U.S. $692,982, respectively, and U.S. $4,627,264 for the cumulative period through June 30, 2008. Future obligations to be paid under the agreement through August 31, 2009 equal approximately $855,000.

Supply Agreements

On June 27, 2008, the Company entered into a supply agreement with VGXI, Inc. ("VGXI") under which VGXI will supply the Company with the plasmid portion of the Company's combination therapy consisting of the Factor 5A gene and siRNA against Factor 5A (the "Plasmid Product"). The agreement has an initial term that commences 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. The Company's financial obligation under the agreement is dependent upon the amount of Plasmid Product ordered by the Company.

On June 30, 2008, the Company entered into a supply agreement with POLYPLUS under which POLYPLUS will supply the Company with its "in vivo-jetPEI" (the "Product"), which is used for systemic delivery of the Company's combination therapy of siRNA against Factor 5A and a plasmid of the Factor 5A gene. The agreement has an initial term which commences on the date of the agreement and runs until the eighth anniversary of the first sale of the 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 Product ordered by the Company.

In the aggregate, the Company anticipates that it will pay $876,000 under the terms of the supply agreements over to the next 12 months.

Employment and Consulting Agreements

Effective May 1, 1999, the Company entered into a consulting agreement for research and development with a researcher. Effective January 1, 2003, 2005, and 2007, the agreement was amended to provide for an increase in the monthly payments from $3,000 to $5,000, $5,000 to $5,200, and $5,200 to $5,417, respectively. The agreement was renewed for an additional two-year term through June 30, 2009. Future obligations to be paid under the agreement equal $65,000.

The Company has employment agreements with certain employees, all of whom are also stockholders of the Company. These agreements provide for a base compensation and additional amounts, as defined. The agreements expire between January 2009 and October 2009. Future base compensation to be paid through October 2009 under the agreements as of June 30, 2008 is $665,540.

Facility Lease

The Company is obligated under a noncancelable operating lease of office space expiring on May 31, 2011. The aggregate minimum future payments, subject to certain escalations, is payable as follows:

Year ending June 30,	
2009	$ 78,508
2010	79,420
2011	73,568
	$ 231,496

Rent expense charged to operations aggregated $75,602, $92,872, $86,849 and $585,809 for the years ended June 30, 2008, 2007, 2006, and from inception through June 30, 2008, respectively.

The lease provides for scheduled increases in base rent. Rent expense is charged to operations ratably over the term of the lease, which results in deferred rent payable and represents the cumulative rent expense charged to operations from inception of the lease in excess of the required lease payments.

Financial Advisory Agreement

On October 11, 2006, the Company entered into a three-year non-exclusive financial advisory agreement with Stanford Group Company ("Stanford"). As compensation under the agreement, previously issued warrants that were purchased by Stanford and its affiliates in a private placement were amended. The original exercise prices on 1,500,000 warrants, 750,000 of which had an exercise price of $3.25 and 750,000 of which had an exercise price of $2.00, were reduced to $2.00 and $1.50, respectively. Additionally, the original expiration dates of December 2006 and January 2007 were each extended for a three-year period through December 2009 and January 2010, respectively. Stock-based compensation in the amount of $683,000 related to the amendment of such warrants was recorded during the year ended June 30, 2007. Stanford was also granted piggyback registration rights in connection with the shares underlying the warrants.

On February 14, 2008, the Company amended the agreement. The amendment extended the term of the agreement through June 30, 2012 and expanded the services to be provided to the Company. As compensation for the term extension and expansion of services, previously issued warrants were amended. The exercise prices of the 1,500,000 shares of Common Stock underlying the warrants, 750,000 of which had an exercise price of $2.00 and 750,000 of which had an exercise price of $1.50, were reduced to $1.01. Additionally, the expiration dates of December 2009 and January 2010 were each extended through June 30, 2012. A compensation charge in the amount of $384,500 was recorded during the year ended June 30, 2008 in connection with extension and repricing of the warrants. The agreement may be terminated by either party upon sixty days written notice.

10. JOINT VENTURE:

On May 14, 1999, the Company entered into a joint venture agreement ("Joint Venture") with an Israeli partnership that is engaged in the worldwide marketing of tissue culture plants. The purpose of the Joint Venture is to develop enhanced banana plants which will result in banana fruit with improved consumer- and grower-driven traits. For the period from inception on May 14, 1999 to June 30, 2008, the Joint Venture has had no revenue, expenses, assets or liabilities. The program has been performed as a joint collaboration whereby the Company pays for 50% of the research costs of the program. The Company's portion of the expenses of the collaboration approximated $205,000 and $162,500 for the years ended June 30, 2008 and 2007, respectively, and is included in research and development expenses.

In July 1999, the Joint Venture applied for and received a conditional grant from the Israel - United States Binational Research and Development Foundation (the "BIRD Foundation"). This agreement, as amended, allowed the Joint Venture to receive $340,000 over a five-year period ending May 31, 2004. Grants received from the BIRD Foundation will be paid back only upon the commercial success of the Joint Venture's technology, as defined. The Company has received a total of $99,728, of which $9,578 was received during the year ended June 30, 2006 and none was received during the years ended June 30, 2008 and June 30, 2007.

11. LICENSE AND DEVELOPMENT AGREEMENTS:

In June 2002, the Company entered into a three-year exclusive worldwide development and option agreement with ArborGen, ("ArborGen") (the "Agreement") to develop the Company's technology in certain species of trees. In July 2002, the Company received an initial fee. In November 2004 and January 2006, the Company received milestone payments. On December 21, 2006, ArborGen converted the Agreement into a commercial license agreement for the development and commercialization of certain species of trees. Under the terms of the license agreement, the Company will receive certain annual payments over two years and, additionally, upon commercialization, a royalty on incremental net sales.

On November 8, 2006, the Company entered into a license agreement with Bayer CropScience GmbH for the development and commercialization of canola (the "Agreement"). Under the terms of the Agreement, the Company (i) received an upfront payment, (ii) will receive milestone payments upon the achievement of certain development milestones, and (iii) will receive commercialization fees based upon specified benchmarks.

On July 17, 2007, the Company entered into a license agreement with Bayer CropScience AG for the development and commercialization of cotton (the "Bayer Cotton Agreement"). Under the terms of the Bayer Cotton Agreement, the Company (i) received an upfront initial payment, (ii) will receive milestone payments upon the achievement of certain development milestones, and (iii) additionally, upon commercialization, a royalty on net sales.

On August 6, 2007, the Company entered into a license agreement with the Monsanto Company for the development and commercialization of corn and soy (the "Monsanto Agreement"). Under the terms of the Monsanto Agreement, the Company (i) received an upfront initial payment, (ii) will receive milestone payments upon the achievement of certain development milestones, and (iii) additionally, upon commercialization, a royalty on net sales.

On September 11, 2007, the Company entered into a license agreement with Bayer CropScience AG for the development and commercialization of rice (the "Bayer Rice Agreement"). Under the terms of the Bayer Rice Agreement, the Company (i) received an upfront payment, (ii) will receive milestone payments upon the achievement of certain development milestones, and (iii) additionally, upon commercialization, a royalty on net sales.

12. VALUATION AND QUALIFYING ACCOUNTS:

Years Ended June 30, 2008, 2007, and 2006

	Balance at Beginning of Year	Additions Charged to Expense(*)	Deductions	Balance at End of Year
Year ended June 30, 2008:				
Valuation allowance – deferred tax asset	$ 7,719,000	$ 1,433,000	$ 0	$ 9,152,000
Year ended June 30, 2007:				
Valuation allowance – deferred tax asset	$ 6,523,000	$ 1,196,000	$ 0	$ 7,719,000
Year ended June 30, 2006:				
Valuation allowance – deferred tax asset	$ 5,428,000	$ 1,095,000	$ 0	$ 6,523,000

(*) Offset to tax benefit of net operation losses.

13. QUARTERLY FINANCIAL DATA (UNAUDITED):

	Year Ended June 30, 2008			
Quarter Ended	September 30	December 31 (Restated)	March 31 (Restated)	June 30
Revenue	$ 371,250	$ 6,250	$ 79,167	$ -
Total operating expenses	741,954	978,105	1,351,142	984,488
Loss from operations	(370,704)	(971,855)	(1,271,975)	(984,488)
Interest expense and amortization of debt discount and financing costs	(18,221)	(103,210)	(254,149)	(727,337)
Interest income	6,879	25,227	43,907	24,436
Net loss	$ (382,046)	$ (1,049,838)	$(1,482,217)	$(1,687,389)
Basic and diluted net loss per common share	$ (0.02)	$ (0.06)	$ (0.08)	$ (0.09)
Basic and diluted weighted-average number of common shares outstanding	17,473,694	17,474,870	17,583,461	18,113,932

	Year Ended June 30, 2007			
Quarter Ended	September 30	December 31	March 31	June 30
Revenue	$ 81,250	$ 181,250	$ 6,250	$ 31,250
Total operating expenses	692,633	1,342,989	828,483	756,895
Loss from operations	(611,383)	(1,161,739)	(822,233)	(725,645)
Interest income	10,918	26,102	20,916	11,367
Net loss	$ (600,465)	$ (1,135,637)	$ (801,317)	$ (714,278)
Basic and diluted net loss per common share	$ (0.04)	$ (0.07)	$ (0.05)	$ (0.04)
Basic and diluted weighted-average number of common shares outstanding	15,480,649	17,257,791	17,473,694	17,473,694

BOARD OF DIRECTORS

John N. Braca
Managing Director
Fountainhead Venture Group

Christopher Forbes
Vice Chairman
Forbes, Inc.

Bruce C. Galton
President and Chief Executive Officer
Senesco Technologies, Inc.

Thomas C. Quick
President
First Palm Beach Properties, Inc.

David Rector
Principal
The David Stephen Group

Rudolf Stalder
Chairman
Senesco Technologies, Inc.

John E. Thompson, Ph.D.
Executive Vice President and Chief Scientific Officer
Senesco Technologies, Inc.

Jack Van Hulst
Consultant

Harlan W. Waksal, M.D.
President
Waksal Consulting L.L.C.

SCIENTIFIC ADVISORY BOARD

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Executive Director, Research Administration and Technology Transfer of the University of California

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University of Colorado, School of Medicine

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Associate Professor, Practicing Physician
Beth Israel Deaconess Medical Center

OFFICERS

Bruce C. Galton

John E. Thompson, Ph.D.

Joel Brooks
Chief Financial Officer and Treasurer

Richard Dondero
Vice President - Research and Development

Sascha P. Fedyszyn
Vice President - Corporate Development and Secretary

ANNUAL MEETING

The Annual Meeting of Stockholders will take place on December 18, 2008 at 10:00am at the Morgan, Lewis & Bockius, LLP, New York, NY, 10178.

CORPORATE HEADQUARTERS

Senesco Technologies, Inc.
303 George Street / Suite 420
New Brunswick, New Jersey 08901
Telephone: 732-296-8400
Facsimile: 732-296-9292
Internet Site: http://www.senesco.com

NEW JERSEY SUBSIDIARY

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TRANSFER AGENT AND REGISTRAR

American Stock Transfer & Trust Company
59 Maiden Lane
New York, New York 10038

COUNSEL

Morgan, Lewis & Bockius LLP
502 Carnegie Center
Princeton, New Jersey 08540-6241

INDEPENDENT PUBLIC ACCOUNTANTS

McGladrey & Pullen LLP
1185 Avenue of the Americas
New York, New York 10036-2602

STOCKHOLDERS OF RECORD OF COMMON STOCK

At October 23, 2008 there are 273 stockholders of record of Common Stock.

DIVIDENDS

The Company has not paid any cash dividends on its Common Stock since its inception and does not anticipate paying any such cash dividends in the foreseeable future.

MARKET FOR COMMON STOCK

NYSE Alternext US
Symbol: SNT

SEC FORM 10-K AND STOCKHOLDERS' INQUIRIES

A copy of the Company's Annual Report to the Securities and Exchange Commission on Form 10-K is available without charge. Request for Form 10-K or other stockholder inquiries should be directed in writing to:

Investor Relations
Senesco Technologies, Inc.
303 George Street / Suite 420
New Brunswick, New Jersey 08901

Notes to Consolidated Financial Statements

Certain quarterly amounts for the quarters ended December 31, 2007 and March 31, 2008 have been restated. Effective April 1, 2008, the Company changed the method of amortization of debt discount from the straight-line method to the effective yield method in accordance with EITF 98-5. The effect of this restatement, on a quarterly basis, is as follows:

	Quarter Ended	
	December 31, 2007	March 31, 2008
Decrease in interest expense and amortization of debt discount and financing costs	$ 244,833	$ 561,950
Decrease in net loss	$ 244,833	$ 561,950
Decrease in basic and diluted net loss per common share	$ 0.01	$ 0.04
Decrease in convertible notes payable	$ 244,833	$ 806,783
Increase in stockholder's equity	$ 244,833	$ 806,783

SENESCO

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END