SENESCO TECHNOLOGIES INC
Form 10-K/A
October 29, 2007

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K/A

(Amendment No. 1)

(Mark One)

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

For the fiscal year ended June 30, 2007

OR

o **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**.

For the transition period from to

Commission file number: 001-31326

SENESCO TECHNOLOGIES, INC.

(Exact name of registrant as specified in its charter)

Delaware	**84-1368850**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
303 George Street, Suite 420, New Brunswick, New Jersey	**08901**
(Address of principal executive offices)	(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	Name of each exchange on which registered
Common Stock, $0.01 par value per share	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 o No x

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Exchange Act . Yes o No x

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

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. x

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of accelerated filer and large accelerated filer in Rule 12b-2 of the Exchange Act.

Large accelerated filer o Accelerated filer o Non-accelerated filer x

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

As of September 15, 2007, the aggregate market value of the registrant s common stock held by non-affiliates of the registrant was $11,337,784, 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, 2007:

Class	-	Number of Shares
Common Stock, $0.01 par value		17,473,694

The following documents are incorporated by reference into the Annual Report on Form 10-K/A: None.

Explanatory Note

We are filing this Amended and Restated Annual Report on Form 10-K of Senesco Technologies, Inc. (the Form 10-K) to include the information required by Part III of the Form 10-K as we no longer anticipate filing our proxy statement for the 2007 annual meeting, within 120 days of June 30, 2007. With the exception of the inclusion of information required by Part III, no information contained in this Form 10-K has been changed.

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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, in human health applications to:

Develop novel approaches to treat inflammatory and / apoptotic related diseases in humans;

Develop novel approaches to treat cancer, a group of diseases in which apoptosis does not occur normally; and

Factor 5A, DHS and Lipase in agricultural applications, to enhance the quality and productivity of fruits, flowers, and vegetables and agronomic crops through the control of cell death, referred to 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 accelerating apoptosis. Inhibiting apoptosis may be useful in preventing or treating a wide range of inflammatory and ischemic diseases attributed to premature apoptosis. Accelerating apoptosis may be useful in treating certain forms of cancer. 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:

Increasing median survival by approximately 250% in a tumor model of mice injected with melanoma cancer cells;

Inducing apoptosis in both human cancer cell lines derived from tumors and in lung tumors in mice;

Inducing apoptosis of cancer cells in a human multiple myeloma cell line;

Measuring VEGF reduction in mouse lung tumors as a result of treatment with our genes;

Reducing the amounts of p24 and IL-8 by approximately 50 percent in an HIV-1 infected human cell line;

Increasing the survival, while maintaining functionality, of mouse pancreatic islet cells isolated for transplantation; preliminary animal studies have shown that siRNA to Factor 5A 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

also shown that the treated beta islet cells survive a pro-inflammatory cytokine challenge, while maintaining their functionality with respect to insulin levels.

Confirmed protection during pro-inflammatory cytokine challenge.

Demonstrating that the efficacy of our technology is comparable to that of existing approved anti-inflammatory prescription drugs in reducing certain inflammatory cytokines in mice;

Increasing the survival rate of mice in a lethal challenge sepsis model. Additionally, a broad spectrum of systemic pro-inflammatory cytokines were down-regulated;

Inhibiting Apoptosis

We believe that down-regulation of our proprietary Factor 5A gene may have potential application as a means for controlling a broad range of diseases that are attributable to premature apoptosis, ischemia, or inflammation. Apoptotic diseases include glaucoma, heart disease, and certain inflammatory diseases such as Crohn s disease, sepsis and rheumatoid arthritis, among others. We have commenced preclinical research on a variety of these diseases. Using small inhibitory RNAs, or siRNAs, against the apoptosis isoform of Factor 5A to inhibit its expression, we have reduced pro-inflammatory cytokine formation and formation of receptors for liposolysaccharide, or LPS, interferon gamma and TNF-alpha. We have also determined that inhibiting the apoptosis isoform of Factor 5A down-regulates MAPK, NFkB and JAK1 and decreases the pro-inflammatory cytokines formed through these pathways. Additionally, we have shown in a mouse study that our siRNA is comparable to a steroid and to a prescription anti-TNF drug in its ability to reduce cytokine response to LPS. *In-vivo* mouse studies have shown that the siRNA against Factor 5A (i) protects thymocyte cells from apoptosis and decreases formation of myeloperoxidase, or MPO, TNF, 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, TNFa, IFNg, and MIP-1alpha, while not effecting IL-10, an anti-inflammatory cytokine. The siRNA s against Factor 5A are currently being tested in several preclinical *in-vivo* inflammatory disease models. Other experiments utilizing siRNA to Factor 5A include inhibition of cell death, or apoptosis, during the processing of mouse pancreatic beta islet cells for transplantation, and the inhibition of viral replication in a human cell line infected with HIV-1.

Proteins required for cell death include p53, interleukins and other cytokines, caspases, and TNF-a. Expression of these cell death proteins is required for the execution of apoptosis. We have found that downregulating 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, down-regulation of Factor 5A up-regulates Bcl-2, a major suppressor of apoptosis.

Accelerating Apoptosis

In preclinical studies, we have also established that up-regulation of Factor 5A isoform induces death in cancer cells through both the p53 (intrinsic) and cell death receptor (extrinsic) apoptotic pathways. Tumors arise when cells that have been targeted by the immune system to

undergo apoptosis are unable to do so because of an inability to activate the 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. Through in in-vitro studies, we have found that up-regulating Factor 5A results in: the up-regulation of p53, an important tumor suppressor gene that promotes apoptosis in cells with damaged DNA; inflammatory cytokine production; increased cell death receptor formation; and caspase activity. These features, coupled with a simultaneous down-regulation Bcl-2, a suppressor of apoptosis, result in apoptosis of cancer cells. In addition, in-vitro studies have shown that 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.

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 a certain cancer target 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. Successful future operations will 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 performed by approximately 16 third party researchers, at our direction, at the University of Waterloo, Mayo Clinic, the University of Colorado, the University of Virginia, and the University of Florida.

Our research and development expenses incurred on human health applications were approximately 42% and 48% of our total research and development expenses for the fiscal years ended June 30, 2007 and 2006, respectively. Since inception, the proportion of research and development expenses on human health applications has increased, as compared to 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 research partners.

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

Pancreatic Islets isolated for transplantation. Additional in vitro experiments will involve moving from mouse beta islet cells to human beta islet cells. The human cells will be tested for survival and functionality, insulin activity post processing and cytokine challenge.

HIV-1. We will continue in-vitro studies utilizing different siRNA delivery systems in order to increase the transfection efficiency of the siRNA to Factor 5A to determine further decreases in HIV replication and may seek animal models to test.

Multiple Myeloma. The next set of multiple myeloma experiments will involve a mouse model system and may include optimizing the delivery of Factor 5A. In-vitro experiments will continue with myeloma cells in order to maximize the transfection efficiency while concurrently elucidating the most effective post-translation form of Factor 5A to employ.

Delivery Systems. We are evaluating a number of delivery systems in an effort to maximize the efficacy of Factor 5A.

Lung Inflammation. Optimization of the delivery and dose of the siRNA to Factor 5A to the lungs is the direction of our planned future experiments. Mouse model systems may be used to evaluate the siRNA to Factor 5A s ability to reduce morbidity and mortality in lung inflammation, caused by the up-regulation of pro-inflammatory cytokines induced by pathogens and other stresses to the lungs.

Diabetic Retinopathy. Based upon the review of data from an ongoing siRNA against Factor 5A diabetic rat experiment, we may be conducting a second round of experiments, which will employ siRNA against Factor 5A in order to decrease pro-inflammatory cytokine levels.

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

Additionally, we are planning to advance a certain cancer target toward a Phase I clinical trial. In connection with the potential clinical trial, we will be working towards engaging a clinical research organization to assist us through the process, completing a pre-clinical animal model of the disease and evaluating potential delivery systems for our technology in the animal model, contracting for the supply of pharmaceutical grade materials to be used in toxicology and human studies, and ultimately filing an investigational new drug application with the U.S. Food and Drug Administration for their review and consideration in order to initiate a clinical trial. We estimate that it will take approximately two years to complete this program.

In order to pursue the above research initiatives, as well as other research initiatives that may arise, we have recently completed private placements of $10 million of convertible debentures. The proceeds from the private placements will be received upon the occurrence of the following corporate and development milestones:

$1.5 million was received on September 21, 2007, less financing costs;

$1.5 million upon our filing of a registration statement;

$2.0 million upon the later of stockholder approval of the private placement or the filing of the registration statement;

$2.0 million upon the later of stockholder approval of the private placement or the effectiveness of the registration statement;

$1.5 million on the date that we enter into a supply agreement with a third party manufacturer for sufficient quantity and quality of nano-particle for encapsulation of Factor 5A gene to be used in toxicology and proof of concept human studies;

$1.5 million on the date that we enter into a supply agreement with a third party manufacturer to provide sufficient quantity and quality of Factor 5A DNA to carry out toxicology and proof of concept human studies under a FDA accepted investigational new drug application.

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 or meet the corporate and scientific milestones provided for in the convertible debentures, 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:

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 owned by 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 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., among others.

Agricultural Applications

Our 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 stress 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 of field trials in banana, lettuce, trees, and bedding plants.

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 limited number of 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 gene suppression techniques.

We have licensed this technology to various strategic partners and have entered into a joint venture, and we intend to continue to license this technology to additional strategic partners and/or enter into additional joint ventures. Together with our commercial partners, we are currently working with 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 plants. We have ongoing field trials of certain trees and bananas with our respective partners. The first and second round of banana field trials have shown 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 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 licensing agreements or other strategic relationships with a variety of companies or other entities on a crop-by-crop basis.

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

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 is being conducted. This greenhouse evaluation has shown that the plants with our technology significantly outperform control plants under adverse conditions. 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 a license agreement with Poet (formerly the Broin Companies) to license our proprietary gene technology to Poet to improve aspects of Broin s ethanol production capabilities. We are currently working on incorporating 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 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.

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 joint venture 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 12 million metric tons of bananas exported in 2002. 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 equally own the Rahan Joint Venture and 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 shown promising disease tolerance results and we are currently performing additional field trials to further assess disease tolerance. We believe that these field trials have yielded data sufficient to initiate contact with potential marketing partners. However, as the banana modified with our technology may be considered a 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, 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 License, 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 in Ontario, Canada, and is our Executive Vice President and Chief Scientific Officer. Dr. Thompson is also one of our directors and owns 3.3% of the outstanding shares of our common stock, $0.01 par value, as of June 30, 2007. On September 1, 1998, we entered into, and subsequently have extended through August 31, 2008, 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 owned by 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 Marketing Program

We presently license our technology to agricultural companies capable of incorporating our technology into crops grown for commercial agriculture. We anticipate revenues from these relationships in the form of licensing fees and royalties from our partners, usage fees in the case of the agreement with Poet, or sharing gross profits in the case of the joint venture with Rahan Meristem. In addition, we anticipate payments from our partners upon our achievement of certain research and development benchmarks. This commercialization strategy allows us to generate revenues 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. Through June 30, 2007, we have entered into six license agreements and one joint venture with established agricultural biotechnology companies. Subsequent to June 30, 2007, we have entered into three additional license agreements covering four crops.

Generally, projects with our license and joint venture partners begin by transforming seed or germplasm to incorporate our technology. Those seeds or germplasm are then grown in our partners greenhouse. 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	Seed transformation
Melon	Harris Moran	Seed transformation

Trees	Arborgen	
Growth		Field trials
Alfalfa	Cal/West	Greenhouse
Corn	Monsanto	Just initiated
Cotton	Bayer	Just initiated
Canola	Bayer	Seed transformation
Rice	Bayer	Just initiated
Soybean	Monsanto	Just 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 fifteen issued patents from the United States Patent and Trademark Office, or PTO, and twelve issued patents from foreign countries as follows: seven from New Zealand, two from Australia, one from Mexico and one from Hong Kong.

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

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 Food and Drug Administration regulates foods derived from new plant varieties. The FDA requires that transformed plants meet the same standards for safety that are

required for all other plants and foods in general. Except in the case of additives that significantly alter a food s structure, the FDA does not require any additional standards or specific approval for genetically engineered foods but expects transformed plant developers to consult the FDA before introducing a new food into the market place.

In addition, our ongoing preclinical research with cell lines and lab animal models of human disease is not currently subject to the FDA requirements that govern clinical trials. However, use of our technology, 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 19 scientists performing funded research for us at the University of Waterloo, Mayo Clinic, the University of Virginia, the University of Florida and the University of Colorado, 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. 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 is an Associate Professor of Medicine at Beth Israel Deaconess Medical Center, a teaching hospital of Harvard Medical School. He is also a practicing physician in the Division of Hematology-Oncology at Beth Israel. Dr. Mier s research is funded by the NIH and he is a member of numerous professional societies.

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

We 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 the Mayo Clinic, University of Florida 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 amended and restated Annual Report on Form 10-K/A 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 License, the Broin 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 meet our funding milestones under our financing transaction, 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 have an accumulated deficit of $25,621,540 at June 30, 2007. We have generated minimal revenues by licensing our technology for certain crops to companies willing to share in our development costs. However, our technology may not be ready for widespread 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, commercialization and administrative activities will significantly exceed our revenues during that period. We cannot predict when, if ever, we will become profitable.

Our independent auditors have expressed substantial doubt about our ability to continue as a going concern.

In their audit opinion issued in connection with our consolidated balance sheets as of June 30, 2007 and our related consolidated statements of operations, stockholders equity, and cash flows for the year then ended and for the period ending June 30, 2007, our auditors have expressed substantial doubt about our ability to continue as a going concern given our recurring net losses, negative cash flows from operations, planned spending levels and the limited amount of funds on our balance sheet. We have prepared our financial statements on a going concern basis, which contemplates the realization of assets and the satisfaction of liabilities and commitments in the normal course of business. The consolidated financial statements do not include any adjustments that might be necessary should we be unable to continue in existence.

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 studies and competitive and technological advances.

We do not expect that our revenue and/or cash and investments on hand will cover our expenses during the next twelve months. However, we have entered into definitive agreements to issue convertible debentures and warrants for aggregate gross proceeds of $10,000,000, of which $1,500,000 have been issued on September 21, 2007. The balance of $8,500,000 convertible debentures will be issued as follows: $1,500,000 upon the filing of a registration statement; $2,000,000 upon the later of the filing of a registration statement or receiving

shareholder approval; $2,000,000 upon the later of receiving shareholder approval or the effectiveness of the registration statement, $1,500,000 on the date we enter into a supply agreement with a third party manufacturer for sufficient quantity and quality of nano-particle for encapsulation of Factor 5A gene to be used in toxicology and proof of concept human studies under a United States Food and Drug Administration accepted Investigational New Drug application; and $1,500,000 on the date we enter into a supply agreement with a third party manufacturer to provide sufficient quantity and quality of Factor 5A DNA to carry out toxicology and proof of concept human studies under a United States Food and Drug Administration accepted Investigational New Drug application. However, we can not assure you that we will meet the funding milestones or that our stockholders will approve this financing. In addition, this financing is secured by all of our assets. If we default under the convertible debentures, 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.

attempt to sell our company;

cease operations; or

declare bankruptcy.

We will continue to maintain an appropriate level of spending over the upcoming fiscal year, given the uncertainties inherent in our business and our current liquidity position. We believe that at the projected rate of spending and the additional $8,500,000 proceeds from the issuance of the convertible debentures, we should have sufficient cash and investments to maintain our present operations for the next 24 months. However, if we do not receive the additional $8,500,000 proceeds from the issuance of the convertible debentures, we should have sufficient cash and investments to maintain our present operations for the next 6 months. ..

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 commercial exploitation of technology to identify, isolate, characterize and 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 to successfully commercialize such technology or develop a commercially viable product 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 primary 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, the University of Florida, 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, such as the University of Waterloo, 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, 2007, we had cash and highly-liquid investments valued at $658,061 and working capital of $259,303. Using our available reserves as of June 30, 2007 and the $1,500,000 gross proceeds from the issuance of a convertible debenture on September 21, 2007, we believe that we can operate according to our current business plan for the next six months. However, with the potential additional gross proceeds of $8,500,000 from the issuance of additional convertible debentures, we believe that we can operate according to our current business plan for the next 24 months. 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, or attempt to sell our company; or

cease operations.

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, as of June 30, 2007, we had 31,471,491 shares of common stock authorized but unissued, which may be issued from time to time by our board of directors without stockholder approval. We also have reserved for issuance the proper number of shares to be issued in connection with the convertible dentures issued and to be issued prior to shareholder approval. The total number of shares that may be issued under the financing is subject to certain caps as more fully described elsewhere in the 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 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.

We have been issued fifteen patents by the U.S. Patent and Trademark Office, or PTO, and twelve 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 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 to 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 will 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 will 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 also 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 we fail to successfully establish distribution channels, or if our marketing partners fail to provide adequate levels of sales, our commercialization efforts will be delayed or limited and we will 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 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 senescence and apoptosis. 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, 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.

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 consumer products. The adverse consequences from heightened consumer concern in this regard could affect the markets for 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, including the conflict in Iraq and the current crisis in the Middle East, 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. Specifically, if the current situation in Israel continues to escalate, our joint venture with Rahan Meristem Ltd. could be adversely affected.

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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, 2007, our executive officers, directors and affiliated entities together beneficially own approximately 38.9% 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, 2007, 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.

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, 2007, we have granted options outside of our stock option plan to purchase 10,000 shares of our common stock and outstanding warrants to purchase 5,134,815 shares of our common stock. In addition, as of June 30, 2007, 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, 2,754,500 of which have been granted, 90,000 of which have been exercised since inception, 2,646,000 of which are outstanding, and 3,264,000 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 connection with the YA Global or Stanford financings, as further discussed below, can also have a dilutive effect and a possible material adverse effect on our stock price.

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, 2007, we had 17,473,694 shares of our common stock issued and outstanding, of which approximately 1,986,306 shares are registered pursuant to a registration statement on Form S-3, which was declared effective on November 27, 2006, 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 2,701,715 shares of our Common Stock underlying warrants previously issued on the Form S-3 registration statement that was declared effective on November 27, 2006, 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. Currently, we do not meet the continued listing requirements of the American Stock Exchange 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.

We currently do not meet the American Stock Exchange continued listing standards. 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. Currently, we do not meet the $6,000,000 minimum net worth continued listing requirement of the American Stock Exchange and have received a notice of noncompliance from the American Stock Exchange. We have submitted a plan to the American Stock Exchange discussing how we intend to regain compliance with the continued listing requirements. The American Stock Exchange has accepted our plan and has given us until March 1, 2008 to effectuate the plan and regain compliance with the continued listing requirements. If we are unable to execute on the plan, 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 Securities and Exchange Commission (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.

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 one percent 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 and 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, 2005, as reported on the American Stock Exchange.

QuarterEnded	Common Stock High	Common Stock Low
September 30, 2005	$ 2.17	$ 1.30
December 31, 2005	$ 2.00	$ 1.16
March 31, 2006	$ 2.25	$ 1.20
June 30, 2006	$ 2.24	$ 1.40
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

As of September 20, 2007, the approximate number of holders of record of our common stock was 296**.** 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, 2007.

EQUITY COMPENSATION PLAN INFORMATION

	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans
Equity compensation plans approved by security holders	2,646,000(1)	$ 2.33	3,264,000(2)
Equity compensation plans not approved by security holders			
Total	2,646,000(1)	$ 2.33	3,264,000(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

In connection with a private placement in October 2006, we sold an aggregate of 1,986,306 shares of our common stock and warrants to purchase our common stock to certain institutions, accredited investors and certain directors. The issuance to our directors is summarized as follows:

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

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

The private placement closed on October 11, 2006. We received gross proceeds equal to $2,249,491. The proceeds will be used for research and development and working capital purposes.

H.C. Wainwright & Co., Inc. acted as the placement agent for this private placement pursuant to the terms of a placement agent agreement. The placement agent was entitled to receive 7% of the gross proceeds from investors introduced by the placement agent and 3% of the gross proceeds from investors introduced by us. The actual placement agent fee amounted to 3.6% of the gross proceeds of the private placement, and warrants to purchase shares of common stock equal to 7% of the shares so issued in the private placement.

A registration statement on Form S-3 was filed on November 3, 2006 covering the common stock and warrants sold in this private placement. Such registration statement was declared effective on November 13, 2006.

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, 2002 and ending on the last day of our last completed fiscal year. The stock performance shown on the graph below is not indicative of future price performance.

	7/1/02	6/30/03	6/30/04	6/30/05	6/30/06	6/30/07
Senesco Technologies, Inc.	$ 100.00	$ 106.00	$ 157.50	$ 89.50	$ 95.00	$ 57.50
AMEX Market Value (U.S.) Index	$ 100.00	$ 108.49	$ 141.09	$ 179.55	$ 221.32	$ 273.59
RDG Microcap Biotechnology Index	$ 100.00	$ 106.15	$ 107.12	$ 69.49	$ 47.57	$ 35.81

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.

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Item 6. Selected Financial Data.

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

SELECTED FINANCIAL DATA

	Year Ended June 30,				
	2007	**2006**	**2005**	**2004**	**2003**
	(In thousands, except per share data)				
Statement of Operations Data:					
Revenue	$ 300	$ 67	$ 125	$ 17	$ 10
Operating expenses:					
General and administrative	2,413	1,920	2,030	2,907	2,093
Research and development	1,208	1,566	1,417	1,147	897
Total operating expenses	3,621	3,486	3,447	4,054	2,990
Loss from operations	(3,321)	(3,419)	(3,322)	(4,037)	(2,980)
Noncash income			136	186	
Sale of state income tax loss - net			153	91	131
Interest income, net	69	104	54	33	71
Net loss	$ (3,252)	$ (3,315)	$ (2,979)	$ (3,727)	$ (2,778)
Basic and diluted net loss per common share	$ (.19)	$ (.21)	$ (.21)	$ (.29)	$ (.23)
Basic and diluted weighted average number of common shares outstanding	16,917	15,469	14,054	12,668	11,880
Balance Sheet Data:					
Cash, cash equivalents and investments	$ 658	$ 1,168	$ 4,481	$ 4,136	$ 2,419
Working capital	259	859	3,959	3,840	2,285
Total assets	3,322	3,535	6,113	5,211	3,266

Accumulated deficit	(25,622)	(22,370)	(19,055)	(16,076)	(12,349)
Total stockholders equity	2,690	2,952	5,590	4,731	2,857

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 the Harris Moran License, the ArborGen License, the Cal/West License, the Scotts License, the Bayer Licenses, the Monsanto License and the Poet Agreement to develop and commercialize our technology in certain varieties of lettuce, melons, trees, alfalfa, bedding plants, turf grass, canola, cotton, soy, corn, rice and ethanol. The Harris Moran License, the ArborGen License, the Cal/West License, the Scotts License, the Bayer Licenses, and the Monsanto License also provide for royalty payments to us upon commercial introduction. The Cal/West License contains an option for Cal/West to develop our technology in various other forage crops. The Poet License provides for annual payments for each of Poet s ethanol production facilities that incorporates our technology. We also have entered into the Rahan Joint Venture to develop and commercialize our technology in banana plants. In connection with the Rahan 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 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.

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 $7,719,000 at June 30, 2007. The valuation allowances relate primarily to the net operating loss carryforward deferred tax asset where the tax benefit of such asset is not assured.

As of June 30, 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 had determined that the economic benefit of the patent applications did not begin until they were issued. As such, we would amortize the issued patent costs beginning on the date of issue, but did not amortize the cost of patent applications that were still pending. Due to the increasing number and scope of license agreements we have entered into, we have determined that we are now receiving the economic benefit of the patent applications as well as the issued patents and have begun amortizing the patent application costs during the year ended June 30, 2007.

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.

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, 2007, our cash balance and investments totaled $658,061, and we had working capital of $259,303. As of June 30, 2007, we had a federal tax loss carryforward of

approximately $17,212,000 and a state tax loss carry-forward of approximately $9,854,000 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, 2007:

	Payments Due by Period				
Contractual Obligations	**Total**	**Less than 1 year**	**1 - 3 years**	**4 - 5 years**	**More than 5 years**
Research and Development Agreements (1)	$ 640,000	$ 550,000	$ 90,000	$	$
Facility, Rent and Operating Leases (2)	$ 309,092	$ 77,596	$ 157,928	$ 73,568	$
Employment, Consulting and Scientific Advisory Board Agreements (3)	$ 799,371	$ 666,542	$ 132,830	$	$
Total Contractual Cash Obligations	$ 1,748,463	$ 1,294,138	$ 380,758	$ 73,568	$

(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, 2007, we extended our research and development agreement with the University of Waterloo for an additional one-year period through August 31, 2008, in the amount of CAD $652,600 or approximately USD $555,000. Research and development expenses under this agreement for years ended ended June 30, 2007 and June 30, 2006 aggregated USD $568,872 and USD $692,982, respectively, and USD $3,896,304 for the cumulative period from

inception through June 30, 2007. Total research and development expenses for the years ended June 30, 2007 and June 30, 2006 aggregated $1,208,321 and $1,566,267, respectively, and $8,193,169 for the cumulative period from inception through June 30, 2007.

Capital Resources

Since inception, we have generated revenues of $718,333 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 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.

On October 11, 2006, we completed a private placement to certain members of our board of directors, institutional and accredited investors for an aggregate amount of 1,986,306 shares of common stock and warrants to purchase 993,153 shares of our common stock for the aggregate net cash consideration of $2,019,008. 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 offered with an exercise price equal to $1.18 per share, with such warrants becoming exercisable six months from the date of closing. The costs associated with the private placement totaled $230,483**.**

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 license 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.

On December 21, 2006, we converted our development agreement with ArborGen, LLC into a commercial license agreement for the development and commercialization of certain species of trees. Under the terms of the license agreement, we will receive certain annual payments over the next two years and, additionally, upon commercialization, a royalty on incremental net sales.

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.

On August 1, 2007 and August 29, 2007, we entered into binding Securities Purchase Agreements with YA Global Investments, referred to herein as YA Global, and Stanford Venture Capital Holdings, Inc., referred to herein as Stanford, respectively, to sell each of YA Global and Stanford up to $5,000,000 of secured convertible debentures and accompanying warrants for an aggregate gross proceeds of $10,000,000. The convertible debentures convert into shares of 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, provided that we have achieved the following milestones by January 31, 2008:

successful completion of animal studies, other than toxicology studies, necessary for the advancement of factor 5A 1 in human clinical trials,

The engagement of a contract research organization for human clinical studies of factor 5A1, and

The signing of at least one (1) corporate partnership or license agreements after August 1, 2007 with agricultural companies utilizing our proprietary platform.

After the second anniversary of the signing date, or if we don not achieve the foregoing milestones by January 31, 2008, the convertible debentures 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 the common stock during the five trading days prior to the conversion date. The maturity date of each of the convertible debentures 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 convertible debentures and exercise of the warrants represents in the aggregate, 25,000,000 shares plus an estimated additional 2,000,000 shares for the payment of interest in stock under the convertible debentures.

Pursuant to the terms of the Securities Purchase agreements, we are required to seek shareholder approval to increase the authorized number of shares of common stock from 60,000,000 shares to 100,000,000 shares.

The convertible debentures 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, shares of common stock. If we pay interest in shares of 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 debentures by providing the investors with at least 30 business days written notice, provided that, at the time of receipt of the notice, either:

If

The VWAP of the common stock exceeds 130% of the Fixed Conversion Price for at least 20 of 30 prior trading days, and

there is an effective registration statement for the resale of the commonstock that will be issued under the redemption

or 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 debentures, 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 debentures or if such shares become 144(k) eligible, we will have the option to force the investors to convert 50% and 100% of our then-outstanding convertible debentures 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 investor equal to 50% of the number of shares underlying the convertible debenture 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 debentures 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.

YA Global and Stanford will also be issued warrants to purchase an aggregate of 5,555,555 and 8,333,333 shares, respectively, of our 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 will be issued in two series. Generally, the Series A warrants may be issued prior to stockholder approval, while the Series B warrants are only issued after stockholder approval. 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 debenture 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 debentures is outstanding.

Under the registration rights agreements executed with each of YA Global and Stanford, we have agreed to file an initial registration statement with the SEC to register the resale of common stock issuable to YA Global (including interest shares), such shares are also referred to herein as the registrable shares, within 30 days of the first closing of the YA Global deal. Also, we have agreed to respond to all SEC comment letters as promptly as reasonably possible and to use our best efforts to have the registration statement declared effective within 120 days of the aforementioned first closing. The initial registration statement covering YA Global s shares shall include 33% of the public float. If the registrable shares remain outstanding after all shares under the initial registration statement have been sold, we may be required to file additional registration statements for those registrable shares. These registration rights will cease once the registrable shares are eligible for sale by the investor without restriction under Rule 144(k). Upon certain events, we have 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 gross proceeds of the sale will be $10,000,000 before payment of 3.25% of the purchase price in commissions to Wainwright & Co., Inc, also referred to herein as the placement agent. We will issue 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 will be issued to the investors. We paid YA Global and Stanford a non-refundable structuring/ due diligence fee of $30,000 each. We have also agreed to pay YA Global and Stanford a commitment fee of 5% and 7%, respectively, of its purchase price, which is paid proportionately at each closing.

Specifics of YA Global Financing

Pursuant to the YA Global Securities Purchase Agreement, we have issued a convertible debenture in the amount of $1,500,000 and will issue and sell to YA Global:

(1) a convertible debenture in the amount of $1,500,000 on the date the

registration statement is filed, pursuant to the registration rights agreement, with the SEC; and

(2) a convertible debenture in the amount of $2,000,000 on the date that is the

later of the following:

the date stockholders approve the transaction, or

the date the registration statement is declared effective by the SEC.

Pursuant to the rules of the American Stock Exchange, the convertible debentures and warrants issued and issuable to YA Global at the first two closings will be subject to a cap on the number of shares of common stock that can be issued upon the conversion of the convertible debentures and the exercise of the warrants, until the Company receives shareholder approval. The cap of 3,493,000 shares is equal to 19.99% of the company s outstanding common stock on

the signing date. In addition, there is a maximum overall cap of 30,500,000 shares for the YA Global financing.

Specifics of Stanford Financing

Pursuant to the Stanford securities purchase agreement, we will issue and sell to Stanford:

(1) a convertible debenture in the amount of $2,000,000 and warrants within two

business days of the later of the following:

the date stockholders approve the transaction, or

the date that the initial registration statement relating to the YA Global financing is filed with the SEC;

(2) a convertible debenture in the amount of $1,500,000 on the date the Company

Enters into a supply agreement with a third party manufacturer for sufficient quantity and quality of nano-particle for encapsulation of Factor 5A gene to be used in toxicology and proof of concept human studies under a United States Food and Drug Administration, referred to herein as FDA, accepted Investigational New Drug application, referred to herein as IND application; and

(3) a convertible debenture in the amount of $1,500,000 on the date the Company enters into a supply agreement with a third party manufacturer to provide sufficient quantity and quality of Factor 5A DNA to carry out toxicology and proof of concept human studies under a FDA accepted IND application.

The convertible debentures and warrants issuable to Stanford will be 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 debentures and the exercise of the warrants.

We anticipate that, based upon our current cash and investments and the additional $8,500,000 proceeds from the issuance of convertible debentures, we will be able to fund our operations for the next twenty-four months. If we are unable to issue the additional $8,500,000 of convertible debentures, we will only be able to fund our operations for the next six months. Over the next twelve months, we plan to fund our research and development and commercialization activities by:

utilizing our current cash balance and investments,

achieving some of the milestones set forth in our current licensing agreements,

through the execution of additional licensing agreements for our technology, and

through the issuance of convertible debentures under the recently completed transaction with YA Global and Stanford Financial.

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, 2007, 2006 and 2005

Revenue

Total revenues consisted of initial fees and milestone payments on our agricultural development and license agreements. During the year ended June 30, 2007, revenue of $300,000 consisted of initial payments, current milestone payments, and the amortized portion of previous milestone payments in connection with certain license agreements. During the years ended June 30, 2006 and June 30, 2005, revenue of $66,666 and $125,000, respectively, 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,							
	2007	2006	Change	%	2006	2005	Change	%
	(In thousands, except % values)							
General and administrative	$ 2,413	$ 1,920	$ 493	26 %	$ 1,920	$ 2,029	$ (109)	(5)%
Research and development	1,208	1,566	(358)	(23)%	1,566	1,417	149	11%
Total operating expenses	$ 3,621	$ 3,486	$ 135	4 %	$ 3,486	$ 3,446	$ 40	1%

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,		
	2007	2006	2005
	(In thousands)		
Stock-based compensation	$ 910	$ 488	$ 691
Payroll and benefits	616	607	564
Investor relations	278	341	328
Professional fees	217	211	197
Depreciation and amortization	166	40	43

Other general and administrative expenses	226	233	206
Total general and administrative expenses	$ 2,413	$ 1,920	$ 2,029

Stock-based compensation consists primarily of the amortized portion of the Black-Scholes value of options and warrants granted to consultants, directors and employees. During Fiscal 2007 and 2006, there were 240,000 and 235,000 options granted to such directors, employees and consultants and 2,500 and 5,000 warrants granted to a consultant. Additionally, during Fiscal 2007, 1,500,000 warrants were extended and repriced in connection with a financial advisory agreement.

Stock-based compensation was higher in Fiscal 2007 due to the extension and repricng 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.

Stock-based compensation was lower in Fiscal 2006 compared to Fiscal 2005 primarily due to the Black-Scholes value of the options and warrants granted during Fiscal 2006 being lower than the Black-Scholes value of the options and warrants granted during Fiscal 2005 because the market price of the common stock on the date of grant in Fiscal 2006 was lower than the market price of the common stock on the date of grant in Fiscal 2005.

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

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

Investor relations expense for Fiscal 2006 is higher than Fiscal 2007 primarily as a result of an increase in the amount of investor relations consulting fees.

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.

Professional fees increased during Fiscal 2006 compared to Fiscal 2005 primarily as a result of an increase in legal fees due to the increased regulatory environment, which was partially offset by a decrease in accounting and consulting fees as a result of the postponement by the SEC of the auditing requirements in connection with Section 404 of the Sarbanes-Oxley Act.

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 an increase in legal and accounting fees related to the increased regulatory environment surrounding our business.

Research and development expenses

	Year Ended June 30,							
	2007	2006	Change	%	2006	2005	Change	%
	(In thousands, except % values)							
Stock-based compensation	$ 60	$ 189	$ (129)	(68)%	$ 189	$ 283	$ (94)	(3)%
Other research and development	1,148	1,377	(229)	(17)%	1,377	1,134	243	21%
Total research and development	$ 1,208	$ 1,566	$ (358)	(23)%	$ 1,566	$ 1,417	$ 149	11%

Stock-based compensation decreased during Fiscal 2007 compared to Fiscal 2006 primarily because the Black-Scholes 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.

Stock-based compensation increased during Fiscal 2006 compared to Fiscal 2005 because the market price of the common stock on the date of grant in Fiscal 2006 was lower than the market price of the common stock on the date of grant in Fiscal 2005.

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.

Other research and development costs increased during Fiscal 2006 compared to Fiscal 2005 primarily as a result of the expanded research programs in both the agricultural and human health applications of our technology and the weakness of the U.S. currency against the Canadian currency.

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

	Year ended June 30,					
	2007	%	2006	%	2005	%
	(In thousands, except % values)					
Agricultural research programs	$ 701	58%	$ 813	52%	$ 711	50%
Human health research programs	507	42%	753	48%	706	50%
Total research and development expenses	$ 1,208	100%	$ 1,417	100%	$ 1,417	100%

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.

Agricultural research expenses increased during Fiscal 2006 compared to Fiscal 2007 primarily as a result of the expanded research program at the University of Waterloo and the weakness of the U.S. currency against the Canadian currency.

Human health research expenses decreased 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.

Human health research expenses increased during Fiscal 2006 compared to Fiscal 2005 primarily as a result of the expanded human health research program.

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.

Noncash income

In May 2005, we completed a private placement of common stock and warrants. In the private placement, we were obligated to file a registration statement to register all of the shares and the shares underlying the warrants. Due to our obligation to file a registration to register for resale the shares underlying the warrants, 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 in the private placement was recorded as a liability until the filing was made. The decrease in market value of the Common Stock from the closing of the financings until the date of the filing or effectiveness of the registration statement resulted in noncash income of $135,632.

Sale of state income tax loss

During fiscal 2005, we received net proceeds of $153,160 from the sale of our New Jersey state tax loss for fiscal 2003. Because the criteria required for approval changed, we have not been approved to sell our New Jersey state tax loss for fiscal 2004 and thereafter, and therefore, we did not receive any proceeds during fiscal 2007 or 2006.

Interest income

	Year Ended June 30,							
	2007	2006	Change	%	2006	2005	Change	%
	(In thousands, except % values)							
Interest income	$ 69	$ 105	$ (36)	(34)%	$ 105	$ 54	$ 51	94%

The decrease in interest income for fiscal 2007 compared to fiscal 2006 is lower due to a lower average cash and investments balance during the year, which was partially offset by higher interest rates. The increase in interest income for fiscal 2006 compared to fiscal 2005 is related to a higher rate of interest earned on our investments.

From Inception on July 1, 1998 through June 30, 2007

From inception of operations on July 1, 1998 through June 30, 2007, we had revenues of $718,333, 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 approximately 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 $25,621,540 at June 30, 2007. 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 amended and restated Annual Report on Form 10-K/A. 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.

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 June 30, 2007. Based on this evaluation, our chief executive officer and chief financial officer concluded that as of June 30, 2007, our disclosure controls and procedures were (1) designed to ensure that material information relating to us, including our consolidated subsidiaries, is made known to our chief executive officer and

chief financial officer by others within those entities, particularly during the period in which this report was being prepared and (2) effective, in that they provide reasonable assurance that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is (i) recorded, processed, summarized and reported within the time periods specified in the SEC s rules and forms; and (ii) accumulated and communicated to our management including our chief executive office and chief financial officer, as appropriate, to allow timely decisions regarding disclosures.

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, 2007 that has materially affected, or is reasonably likely to materially affect, our internal controls over financial reporting.

Item 9B. Other Information.

On August 1, 2007 and August 29, 2007, we entered into binding Securities Purchase Agreements with YA Global Investments, referred to herein as YA Global, and Stanford Venture Capital Holdings, Inc., referred to herein as Stanford, respectively, to sell to each of YA Global and Stanford up to $5,000,000 of secured convertible debentures and accompanying warrants for an aggregate gross proceeds of $10,000,000. The convertible debentures convert into shares of 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, provided that we have achieved the following milestones by January 31, 2008:

successful completion of animal studies, other than toxicology studies, necessary for the advancement of factor 5A 1 in human clinical trials,

the engagement of a contract research organization for human clinical studies of factor 5A 1, and

the signing of at least one (1) corporate partnership or license agreements after August 1, 2007 with agricultural companies utilizing our proprietary platform.

After the second anniversary of the signing date, or if we do not achieve the foregoing milestones by January 31, 2008, the convertible debentures 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 the common stock during the five trading days prior to the conversion date.. The maturity date of each of the convertible debentures 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 convertible debentures and exercise of warrants represents, in the aggregate, 25,000,000 shares, plus an estimated additional 2,000,000 shares for the payment of interest in stock under the convertible debentures.

Pursuant to the terms of the Securities Purchase agreements, we are required to seek shareholder approval to increase the authorized number of shares of common stock from 60,000,000 shares to 100,000,000 shares.

The convertible debentures 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, shares of common stock. If we pay interest in shares of 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 debentures by providing the investors with at least 30 business days written notice; provided that, at the time of receipt of the notice, either:

If

the VWAP of the common stock exceeds 130% of the Fixed Conversion Price for at least 20 of 30 prior trading days, and

there is an effective registration statement for the resale of the common stock that will be issued under the redemption

or 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 debentures, 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 debentures or if such shares become 144(k) eligible, we will have the option to force the investors to convert 50% and 100% of our then-outstanding convertible debentures 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 investor equal to 50% of the number of shares underlying the convertible debenture 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 debentures 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.

YA Global and Stanford will also be issued warrants to purchase an aggregate of 5,555,555 and 8,333,333 shares, respectively, of our 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 will be issued in two series. Generally, the Series A warrants may be issued prior to stockholder approval, while the Series B warrants are only issued after stockholder approval. 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 debenture 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 debentures is outstanding.

Under the registration rights agreements executed with each of YA Global and Stanford, we have agreed to file an initial registration statement with the SEC to register the resale of common stock issuable to YA Global (including interest shares), such shares are also referred to herein as the registrable shares, within 30 days of the first closing of the YA Global deal. Also, we have agreed to respond to all SEC comment letters as promptly as reasonably possible and to use our best efforts to have the registration statement declared effective within 120 days of the aforementioned first closing. The initial registration statement covering YA Global s shares shall include 33% of the public float. If the registrable shares remain outstanding after all shares under the initial registration statement have been sold, we may be required to file additional registration statements for those registrable shares. These registration rights will cease once the registrable shares are eligible for sale by the investor without restriction under Rule 144(k). Upon certain events, we have 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 gross proceeds of the sale will be $10,000,000 before payment of 3.25% of the purchase price in commissions to Wainwright & Co., Inc., also referred to herein as the placement agent. We will issue 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 will be issued to the investors. We paid YA Global and Stanford a non-refundable structuring/ due diligence fee of $30,000 each. We have also agreed to pay YA Global and Stanford a commitment fee of 5% and 7%, respectively, of its purchase price, which is paid proportionately at each closing.

Specifics of YA Global Financing

Pursuant to the YA Global Securities Purchase Agreement, we have issued a convertible debenture in the amount of $1,500,000 and will issue and sell to YA Global:

(1) a convertible debenture in the amount of $1,500,000 on the date the registration statement is filed, pursuant to the registration rights agreement, with the SEC; and

(2) a convertible debenture in the amount of $2,000,000 on the date that is the later of the following:

the date stockholders approve the transaction, or

the date the registration statement is declared effective by the SEC.

The convertible debentures and warrants issued and issuable to YA Global at the first two closings will be subject to a cap on the number of shares of common stock that can be issued upon the conversion of the convertible debentures and the exercise of the warrants, until the Company receives shareholder approval. The cap of 3,493,000 shares is equal to 19.99% of the company s outstanding common stock on the signing date. In addition, there is a maximum overall cap of 30,500,000 shares for the YA Global financing.

Specifics of Stanford Financing

Pursuant to the Stanford securities purchase agreement, we will issue and sell to Stanford:

(1) a convertible debenture in the amount of $2,000,000 and warrants within two business days of the later of the following:

the date stockholders approve the transaction, or

the date that the initial registration statement relating to the YA Global financing is filed with the SEC;

(2) a convertible debenture in the amount of $1,500,000 on the date the Company enters into a supply agreement with a third party manufacturer for sufficient quantity and quality of nano-particle for encapsulation of Factor 5A gene to be used in toxicology and proof of concept human studies under a United States Food and Drug Administration, referred to herein as FDA, accepted Investigational New Drug application, referred to herein as IND application; and

(3) a convertible debenture in the amount of $1,500,000 on the date the Company enters into a supply agreement with a third party manufacturer to provide sufficient quantity and quality of Factor 5A DNA to carry out toxicology and proof of concept human studies under a FDA accepted IND application.

The convertible debentures and warrants issuable to Stanford will be 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 debentures and the exercise of the warrants.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

Our Directors and executive officers, on September 30, 2007, together with their ages and business backgrounds were as follows:

Name	Age	Served Since	Position(s) with Senesco
Rudolf Stalder (1)	66	1999	Chairman of the Board and Director
Bruce C. Galton	55	2001	President, Chief Executive Officer and Director
John E. Thompson, Ph.D.	66	2001	Executive Vice President, Chief Scientific Officer and Director
Sascha P. Fedyszyn	32	1999	Vice President of Corporate Development and Secretary
Joel Brooks	48	2000	Chief Financial Officer and Treasurer
Richard Dondero	57	2004	Vice President of Research and Development
John N. Braca (2)(3)	49	2003	Director
Christopher Forbes (1)	56	1999	Director
Thomas C. Quick (1)(2)	52	1999	Director
David Rector (2)(3)	60	2002	Director
Jack Van Hulst (3)	68	2007	Director

(1) Member of Nominating and Corporate Governance Committee

(2) Member of Audit Committee

(3) Member of Compensation Committee

Each Director holds office until the next Annual Meeting of shareholders and until his successor has been elected and qualified.

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

Rudolf Stalder has been our director since February 1999 and was appointed as our Chairman and Chief Executive Officer on January 10, 2000. On October 4, 2001, Mr. Stalder resigned as our Chief Executive Officer. Mr. Stalder is a former member of the Executive

Boards of Credit Suisse Group and Credit Suisse First Boston and former Chief Executive Officer of the Americas Region of Credit Suisse Private Banking. Mr. Stalder joined Credit Suisse in 1980 as a founding member and Deputy Head of the Multinational Services Group. In 1986, he became Executive Vice President. He was named to Credit Suisse s Executive Board in 1989. In 1990, he became Head of the Commercial Banking Division and a Member of the Executive Committee. From 1991 to 1995, Mr. Stalder was Chief Financial Officer of Credit Suisse First Boston and a Member of the Executive Boards of Credit Suisse Group and Credit Suisse First Boston. He became head of the Americas Region of Credit Suisse Private Banking in 1995 and retired in 1998. Prior to moving to the United States, Mr. Stalder was a member of the Board of Directors for several Swiss subsidiaries of major corporations including AEG, Bayer, BTR, Hoechst, Saint Gobain, Solvay and Sony. He is a fellow of the World Economic Forum and a board member of the Greater Bridgeport Symphony. He was a member of the Leadership Committee of the Consolidated Corporate Fund of Lincoln Center for the Performing Arts, Board of The American Ballet Theatre, and a Trustee of Carnegie Hall. From 1991 through 1998, Mr. Stalder was Chairman of the New York Chapter of the Swiss-American Chamber of Commerce. He continues to serve as an Advisory Board Member of the American-Swiss Foundation. Mr. Stalder received a diploma in advanced finance management at the International Management Development Institute in Lausanne, Switzerland in 1976. He completed the International Senior Managers Program at Harvard University in 1985.

Bruce C. Galton has been our director since November 2001, and he was appointed our President and Chief Executive Officer on October 4, 2001. From April 2000 until June 2001, when it was acquired by Transgenomic, Inc., Mr. Galton was President and Chief Operating Officer and a director of Annovis, Inc., a manufacturer of specialty chemicals for DNA synthesis with operations in Pennsylvania and Glasgow, United Kingdom. From January 1985 to May 1999, Mr. Galton held various senior management positions at Cistron Biotechnology, Inc., including President and Chief Operating Officer from 1988 to 1997 and Chairman and Chief Executive Officer from 1997 to 1999. Cistron Biotechnology, Inc. was engaged in the research and development of certain cytokines, which act as key immune regulators. Mr. Galton is a trustee of the Interfaith Food Pantry (Morris County New Jersey) and is a former member of the Borough of Madison, New Jersey Downtown Development Commission and a former trustee of the Museum of Early Trades and Crafts. Mr. Galton had also served as a Councilman from 1996 through 1998 and a member of Madison s Planning Board from 1994 through 1998. Mr. Galton received a Bachelor of Science in Commerce with a major in accounting from the University of Virginia in 1974 and an M.B.A. in finance from Fairleigh Dickinson University in 1977.

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

Sascha P. Fedyszyn was appointed our Vice President of Corporate Development in January 1999 and was appointed our Secretary in January 2000. Mr. Fedyszyn has been a Vice President of Senesco since its inception in June 1998. Mr. Fedyszyn was also a Research Associate at the Logistics Management Institute from May 1995 to September 1995. Mr. Fedyszyn received a Bachelor of Arts degree in Biology from Princeton University in June 1997.

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

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

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

Christopher Forbes has been our director since January 1999. Since 1989, Mr. Forbes has been Vice Chairman of Forbes, Inc., which publishes Forbes Magazine and Forbes.com. From 1981 to 1989, Mr. Forbes was Corporate Secretary at Forbes. Prior to 1981, he held the position of Vice President and Associate Publisher. Mr. Forbes has been a director of Forbes, Inc. since 1977. Mr. Forbes is the Chairman of the American Friends of the Louvre, and he also

sits on the Boards of The Business Committee for the Arts, The Brooklyn Museum, The Friends of New Jersey State Museum, The New York Academy of Art, The Victorian Society in America and the Prince Wales Foundation. He is also a member of the Board of Advisors of The Princeton University Art Museum. Mr. Forbes received a Bachelor of Arts degree in Art History from Princeton University in 1972. In 1986, he was awarded the honorary degree of Doctor of Humane Letters by New Hampshire College and in 2003 was appointed a Chevalier of the Legion of Honor by the French Government.

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

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

Jack Van Hulst has been our director since January 2007. Mr. Van Hulst also serves as a director and member of the compensation committee of Napo Pharmaceuticals, Inc. He has more than 39 years of international experience in the pharmaceutical industry. He began his career in 1968 at Organon, which was subsequently acquired by AKZO, N.V., the multinational human and animal healthcare company, where he was based in Europe and US and responsible for establishing AKZO s position in the US in the manufacturing and sales and marketing of fine chemicals. Mr. Van Hulst later became President of AKZO s US Pharmaceutical Generic Drug Business and was responsible for establishing AKZO in the US generic drug industry. From

1989 to 1999 Mr. Van Hulst successively owned and led two generic pharmaceutical companies, improving their operations and then selling them to a private equity group and a pharmaceutical company. From 1999 to 2005, he was Executive Vice President at Puerto Rico-based MOVA Pharmaceutical Corporation, a contract manufacturer to the pharmaceutical industry that recently merged with Canadian-based Patheon.

Board Determination of Independence

Under the current AMEX rules, a director will, among other things, qualify as an independent director if, in the opinion of our board of directors, that person does not have a material relationship which would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. Our board of directors currently consists of Rudolf Stalder, Bruce C. Galton, John E. Thompson, Ph.D., John N. Braca, Christopher Forbes, Thomas C. Quick, David Rector and Jack Van Hulst. We are currently traded on the AMEX, which requires our board be comprised of a majority of independent directors. Our board of directors has determined that each of Messrs. Stalder, Braca, Forbes, Quick, Rector and Van Hulst is an independent director as defined under Sections 121(A) and 802 of the AMEX rules.

Audit Committee Financial Expert

Our Audit Committee is comprised of John N. Braca, David Rector and Thomas C. Quick. Mr. Braca currently serves as the chairman of the Audit Committee. AMEX currently requires an Audit Committee comprised solely of independent directors. Messrs. Braca, Rector and Quick are independent members of our board of directors as defined in Rule 10A-3 under the Securities Exchange Act of 1934, as amended, or the Exchange Act, and Sections 121(A) and 803 of the AMEX rules. In addition, our board of directors has determined that Mr. Braca satisfies the definition of an audit committee financial expert as set forth in Item 401(e) of Regulation S-B promulgated by the SEC.

Code of Business Conduct and Ethics

Pursuant to the requirements of Section 406 of the Sarbanes-Oxley Act of 2002 and Section 807 of the AMEX rules, on March 17, 2003, our board of directors adopted a Code of Business Ethics and Conduct, which may also be found on our website at www.senesco.com. Our Code of Ethics contains written standards designed to deter wrongdoing and to promote:

honest and ethical conduct, including the ethical handling of actual or apparent conflicts of interest between personal and professional relationships;

full, fair, accurate, timely, and understandable disclosure in reports and documents filed with the SEC;

compliance with applicable governmental laws, rules and regulations;

the prompt internal reporting of violations of our Code of Ethics to an appropriate person or persons identified in our Code of Ethics; and

accountability for adherence to our Code of Ethics.

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

Section 16(A) Beneficial Ownership Reporting Compliance

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

Based solely on our review of the copies of such forms received by us and upon written representations of the Reporting Persons received by us, we believe that there has been compliance with all Section 16(a) filing requirements applicable to our Reporting Persons.

Item 11. Executive Compensation.

Compensation Discussion and Analysis

This Compensation Discussion and Analysis explains the principles underlying our compensation policies and decisions and the principal elements of compensation paid to our executive officers during Fiscal 2007. Our Chief Executive Officer, Chief Financial Officer and the other executive officers included in the Summary Compensation Table will be referred to as the named executive officers for purposes of this discussion. In general, the compensation principles for our named executive officers are similar to those of all our other executive officers.

Compensation Objectives and Philosophy

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

to discharge the Board s responsibilities relating to compensation of our directors and named executive officers;

to have overall responsibility for approving and evaluating our director and officer compensation plans, policies and programs;

to have responsibility for producing an annual report on executive compensation for inclusion in our proxy statement; and

to review and discuss with Senesco management, the Compensation Discussion & Analysis which is included in Senesco s annual proxy statement.

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

to motivate, recruit and retain executives capable of meeting our strategic objectives;

to provide incentives to ensure superior executive performance and successful financial results for us; and

to align the interests of executives with the long-term interests of our stockholders.

The Committee seeks to achieve these objectives by:

establishing a compensation structure that is both market competitive and internally fair, taking into account the value of the position in the marketplace;

linking a substantial portion of compensation to our achievement of long-term and short-term financial objectives and the individual s contribution to the attainment of those objectives;

providing risk for underachievement and upward leverage for overachievement of goals; and

providing long-term equity-based incentives and encouraging direct share ownership by executives with the intention of providing incentive-based compensation to encourage a long-term focus on company profitability and stockholder value.

Setting Executive Compensation

In Fiscal 2007, the Committee engaged J. Richard and Co., also referred to herein as J. Richard, a nationally recognized compensation consulting firm, to provide competitive compensation data and general advice on our compensation programs and policies for our Chief Executive Officer, and J. Richard was available for consultation with the Committee to discuss the compensation programs for our other named executive officers. During Fiscal 2007, J. Richard performed a market analysis of the compensation paid by comparable companies and provided the Committee with recommended compensation ranges for the Chief Executive Officer based on the competitive data. In addition, the Chief Executive Officer provided recommendations to the Committee with respect to the compensation packages for those other named executive officers for Fiscal 2007, and the Committee also reviewed the Chief Executive Officer s recommendation against compensation paid by comparable companies.

It is the Committee s objective to target each component of compensation listed below to be competitive with comparable positions at peer group companies, and to target the total annual compensation of each named executive officer at the appropriate level for comparable positions at the competitive peer group companies. Our list of peer group companies is as follows: Amarillo Biosciences, Inc., A.P.Pharma, Inc., Applied NeuroSolutions, Inc., AutoImmune Inc., Avax Technologies, Inc., Cadus Corporation, Helix BioMedix, Inc., ImmuCell Corporation, Medistem Laboratories, Inc., MicroIslet, Inc., Millennium Biotechnologies Group, Inc., Nanobac Pharmaceuticals, Inc., Neurologix, Inc., Opexa Therapeutics, Inc., Point Therapeutics, Inc., Pro-Pharmaceuticals, Inc., Sanguine Corporation, Symbollon Pharmaceuticals, Inc., Synthetech, Inc., Synthetic Blood International, Inc., and TorreyPines Therapeutics, Inc.

However, in determining the compensation of each named executive officer, the Committee also considers a number of other factors, including Senesco s recent performance and the named executive officer s individual performance, the Chief Executive Officer s recommendations, the importance of the executive s position and role in relation to execution of the Company s strategic plan, and the cost of living in the geographic area in which the named executive officer s office is located. There is no pre-established policy for allocation of compensation between cash and non-cash components or between short-term and long-term

components. Instead, the Committee determines the mix of compensation for each named executive officer based on its review of the competitive data and its subjective analysis of that individual s performance and contribution to our financial performance. For the Chief Executive Officer, for fiscal 2008, the Committee set his performance targets and compensation levels based upon the input from the Compensation Committee s consultant and from the Chief Executive Officer. For other named executive officers, the Committee sets performance targets and compensation levels after receiving recommendations from the Chief Executive Officer.

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

Components of Compensation

For Fiscal 2007, our executive compensation program included the following components:

base salary;

annual short-term equity incentives; and

change in control and other severance arrangements.

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

base salary;

annual short-term equity incentives;

long-term equity incentive awards; and

change in control and other severance arrangements.

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

Base Salary

In General It is the Committee s objective to set a competitive rate of annual base salary or consulting fees for each named executive officer. The Committee believes competitive base salaries are necessary to attract and retain top quality executives, since it is common

practice for public companies to provide their executive officers with a guaranteed annual component of compensation that is not subject to performance risk. However, the Committee recognizes that Senesco is still a development stage company, with little to no revenue currently.

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

Base Salary for Fiscal 2007 For Fiscal 2007, each named executive officer s salary, except for the President and Chief Executive Officer, was increased to cover cost of living increases. The table below shows annual Fiscal 2006 and Fiscal 2007 base salary or consulting rates for each named executive officer:

Name	Title	2006 Salary	2007 Salary (1)	% Increase
Bruce C. Galton	President and Chief Executive Officer	$ 242,500	$ 242,500	0.0%
John E. Thompson	Executive Vice-President and Chief Scientific Officer	$ 62,400 (2)	$ 65,000 (2)	4.2%
Sascha P. Fedyszyn	Vice-President of Corporate Development and Secretary	$ 93,600	$ 97,500	4.2 %
Joel Brooks	Chief Financial Officer and Treasurer	$ 139,100	$ 145,000	4.2%
Richard Dondero	Vice President of Research and Development	$ 120,000	$ 125,000	4.2 %

(1) Annual salary increases became effective January 1, 2007.

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

Base Salary for Fiscal 2008 The Committee has not approved any increases in base salary for Fiscal 2008, but it will consider a cost of living adjustment for the named executive officers for calendar 2008.

Annual Bonuses for Fiscal 2007 and Fiscal 2008 Bonuses are determined at the discretion of the Board of Directors based upon the recommendation of the Committee. There were no cash bonuses granted during Fiscal 2007, and it is anticipated that there will be no cash bonuses granted for Fiscal 2008.

Short Term Incentive Equity Awards

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

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

Incentive Stock Option Fiscal 2007 Awards In Fiscal 2007, equity grants to our named executive officers were in the form of incentive stock options, also referred herein as ISO s. Each ISO entitles the recipient to purchase a stated amount of shares of common stock at a fixed price, which represents the closing market price of the common stock on the day prior to the date of grant.

The President and Chief Executive Officer received ISO s in the amount of 40,000 shares at an exercise price of $1.08 on December 14, 2006. The ISO s vest as follows: one-third on December 14, 2006; one-third on December 14, 2007; and one-third on December 14, 2008.

The Chief Financial Officer, Executive Vice President, Vice President of Corporate Development and Vice President of Research and Development each received ISO s in the amount of 25,000 shares at an exercise price of $1.08 on December 14, 2006. The ISO s vest as follows: one-third on December 14, 2006; one-third on December 14, 2007; and one-third on December 14, 2008.

Restricted Stock Unit Short-Term Incentive Plan for Fiscal 2008 The Company s Restricted Stock Unit Short-Term Incentive Plan, or STIP, covering Fiscal 2008, equity grants to our named executive officers will be in the form of restricted stock units, also referred to herein as RSU s. Each RSU entitles the recipient to receive one share of our common stock upon vesting or upon a designated date or event following such vesting. All RSUs will be awarded together and will be available for distribution on or around July-August 2008 upon evaluation of performance objectives that have been identified further below under the heading STIP Performance Objectives, or SPO s.

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

The total amount of RSU s in the STIP pool awarded to our named executive officers will be 175,000 shares representing one percent (1%) of the outstanding shares as of July 1, 2007. The specific amount of RSU s awarded to each individually named executive officer relating to the performance objectives are based on (i) the functional areas assessed by the underlying detailed objectives of each named executive officer, (ii) the weight of each of the functions of each named executive officer, and (iii) the contribution to each function by each named executive officer.

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

STIP Performance Objective	Percentage of STIP RSU Award Pool	Total Amount of RSUs Awarded As a Whole to All Named Executive Officers per SPO
First STIP Performance Objective. Contributions Relating to Cancer Target	45%	78,750
Second STIP Performance Objective. Contributions Relating to Financing	25%	43,750
Third STIP Performance Objective. Contributions Relating to Licensing and Support	15%	26,250
Fourth STIP Performance Objective. Contributions Relating to Intellectual Property Administration	4%	7,000
Fifth STIP Performance Objective. Contributions Relating to Investor Relations	3%	5,250
Sixth STIP Performance Objective. Contributions Relating to Website Administration	1%	1,750
Seventh STIP Performance Objective. Contributions Relating to Audits and Securities Filings	5%	8,750
Eighth STIP Performance Objective. Contributions Relating to the American Stock Exchange Duties	1%	1,750
Ninth STIP Performance Objective. Contributions Relating to the Future Financing Plan	1%	1,750

Each named executive officer eligible to receive an award pursuant to the STIP is required to be employed by the Company upon vesting date in or around July-August 2008 (the Vesting Date). If a named executive officer is no longer employed by the Vesting Date, then such named executive officer s respective RSU award tied to such STIP Performance Objective will be forfeited. The Committee shall have the sole discretion to reinstate any eliminated portion or segment of a STIP Performance Objective award or that portion of a STIP Performance Objective award for an award to a successor to the STIP Performance Objectives.

The amount and percentage of RSU s awarded to the named executive officers individually for their contributions to each of the STIP Performance Objectives may be modified, altered and redistributed by the Chief Executive Officer, subject to Committee review, to reflect (i) the actual performance of each named executive officer, (ii) the potential reassignment of duties of each named executive officer, and (iii) the unanticipated accomplishments by any of the named executive officers after the outset of the STIP that contribute significantly to shareholder value during fiscal 2008.

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

Name	Bruce C. Galton	John E. Thompson	Sascha P. Fedyszyn	Joel Brooks	Richard Dondero
Title	President and Chief Executive Officer	Executive Vice-President and Chief Scientific Officer	Vice-President of Corporate Development and Secretary	Chief Financial Officer and Treasurer	Vice-President of Research and Development
Percentage of 78,750 RSU s Awarded for First SPO	20%	25%	10%	10%	35%
Number of RSU s Awarded for the First SPO	15,750	19,687.5	7,875	7,875	27,562.5
Percentage of 43,750 RSU s Awarded for the Second SPO	45%	0%	5%	45%	5%
Number of RSU s Awarded for the Second SPO	19,687.5	0	2,187.5	19,687.5	2,187.5
Percentage of 26,250 RSU s Awarded for the Third SPO	35%	15%	35%	5%	10%
Number of RSU s Awarded for the Third SPO	9,187.5	3,937.5	9,187.5	1,312.5	2,625
Percentage of 7,000 RSU s Awarded for the Fourth SPO	4%	30%	30%	0%	30%
Number of RSU s Awarded for the Fourth SPO	700	2,100	2,100	0	2,100
Percentage of 5,250 RSU s Awarded for the Fifth SPO	30%	0%	30%	30%	10%
Number of RSU s Awarded for the Fifth SPO	1,575	0	1,575	1,575	525
Percentage of 1,750 RSU s Awarded for the Sixth SPO	10%	0%	70%	10%	10%
Number of RSU s Awarded for the Sixth SPO	175	0	1,225	175	175
Percentage of 8,750 RSU s Awarded for the Seventh SPO	20%	5%	10%	60%	5%
Number of RSU s Awarded for the Seventh SPO	1,750	437.5	875	5,250	437.5
Percentage of 1,750 RSU s Awarded for the Eighth SPO	50%	0%	0%	50%	0%
Number of RSU s Awarded for the Eighth SPO	875	0	0	875	0
Percentage of 1,750 RSU s Awarded for the Ninth SPO	30%	10%	10%	30%	20%
Number of RSU s Awarded for the Ninth SPO	525	175	175	525	350
Total RSU s Awarded	50,225	26,338	25,200	37,275	35,962
Percentage of 175,000 RSU s Awarded for All SPOs	29%	15%	14%	21%	21%

It is the Committee s belief that equity awards are essential to the retention of the named executive officers and crucial to our long-term financial successes. The equity award s have vesting schedules that provide a meaningful incentive for the named executive officer to remain in our service. These equity awards also serve as an important vehicle to achieve the Committee s objective of aligning management and stockholders interests. Equity awards in the form of ISO s and RSU s promote all of these objectives.

Long-Term Incentive Equity Awards

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

There was no formal LTIP in Fiscal 2007. Beginning with Fiscal 2008, equity awards will be made in the form of restricted stock units. The Committee will follow a grant practice of tying equity awards upon of the completion of certain event milestones (LTIP Event Milestones) discussed below. Accordingly, it is expected that any equity awards to the named executive officers will be made on promptly after the completion of each LTIP Event Milestone. The Committee has established long-term incentive grant guidelines for eligible named executive officers based on competitive annual grant data provided by management s compensation consultant and by J. Richard, the Committee s compensation consultant.

Long-Term Incentive Plan Beginning on October 23, 2007 (the LTIP Effective Date) and ending on the earlier of (i) the completion of the Third LTIP Event Milestone or (ii) three (3) years from the LTIP Effective Date, LTIP equity grants to our named executive officers will be in the form of RSU s. Each RSU entitles the recipient to receive one share of our common stock upon vesting or upon a designated date or event following such vesting.

The total RSU s in the LTIP pool awarded to our named executive officers will be 500,000 shares representing three percent (3%) of the outstanding shares as of July 1, 2007.

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

LTIP Event Milestone	Percentage of LTIP RSU Award Pool	Total Amount of RSUs Awarded As a Whole to All Named Executive Officers
First LTIP Event Milestone. The Execution of a Research Agreement to Conduct Phase I/II Trials by a Research Facility	20%	100,000
Second LTIP Event Milestone. The Filing and Acceptance by the U.S. FDA of an investigation new drug application, or IND, by the date set by the Committee	20%	100,000
Third LTIP Event Milestone. The Successful Completion of Phase I/II Trials Approved by the FDA by the date set by the Committee	60%	300,000

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

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

Name	Title	Percentage of Total RSU s Awarded Upon Completion of a LTIP Event Milestone	Number of RSU s Awarded upon Completion of First LTIP Event Milestone	Number of RSU s Awarded upon Completion of Second LTIP Event Milestone	Number of RSU s Awarded upon Completion of Third LTIP Event Milestone
Bruce C. Galton	President and Chief Executive Officer	25%	25,000	25,000	75,000
John E. Thompson	Executive Vice-President and Chief Scientific Officer	25%	25,000	25,000	75,000
Sascha P. Fedyszyn	Vice-President of Corporate Development and Secretary	10%	10,000	10,000	30,000
Joel Brooks	Chief Financial Officer and Treasurer	10%	10,000	10,000	30,000
Richard Dondero	Vice-President of Research and Development	30%	30,000	30,000	90,000

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

compensation cost that we must record for financial accounting purposes and the value delivered to the named executive officers.

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

Executive Benefits and Perquisites

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

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

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

IRC Section 162(m) compliance

As a result of Section 162(m) of the Internal Revenue Code, publicly-traded companies such as us are not allowed a federal income tax deduction for compensation, paid to the Chief Executive Officer and the four other highest paid executive officers, to the extent that such compensation exceeds $1 million per officer in any one year and does not otherwise qualify as performance-based compensation. Currently, our stock option compensation packages are structured so that compensation deemed paid to an executive officer in connection with the exercise of a stock option should qualify as performance-based compensation that is not subject to the $1 million limitation. However, other awards, like RSU s, made under that Plan may or may not so qualify. In establishing the cash and equity incentive compensation programs for the executive officers, it is the Committee s view that the potential deductibility of the compensation payable under those programs should be only one of a number of relevant factors taken into consideration, and not the sole governing factor. For that reason the Committee may deem it appropriate to continue to provide one or more executive officers with the opportunity to earn incentive compensation, including cash bonus programs tied to our financial performance and restricted stock units awards, which may be in excess of the amount deductible by reason of Section 162(m) or other provisions of the Internal Revenue Code. It is the Committee s belief that cash and equity incentive compensation must be maintained at the requisite level to attract and retain the executive officers essential to our financial success, even if part of that compensation may not be deductible by reason of the Section 162(m) limitation. For Fiscal 2007, none of our executive officer's compensation reached the $1 million limitation. The Committee will continue to evaluate such $1 million limitation in Fiscal 2008.

Report of the Compensation Committee

The Compensation Committee has reviewed and discussed the Compensation, Discussion and Analysis with management, and based on this review and these discussions, the Compensation Committee recommended to the Board of Directors that the Compensation, Discussion and Analysis be included in the Company s amended and restated Annual Report on Form 10-K/A.

This report is submitted on behalf of the

Compensation Committee

David Rector, Chairman

John. N Braca

Jack Van Hulst

Summary Compensation Table

The following Tables sets forth information concerning compensation for services rendered in all capacities during the fiscal year ended June 30, 2007 awarded to, earned by or paid to: (i) each person who served as our Chief Executive Officer at any time during fiscal 2007; (ii) our executive officers other than the Chief Executive Officer who were serving as our executive officers at the end of fiscal 2007; and (iii) those individuals for whom disclosure would have been provided but for the fact that the individual was not serving as our executive officer at the end of fiscal 2007, collectively referred to herein as the Named Executives.

Name and Principal Position (a)	Year (1) (b)	Salary ($)(2) (c)	Bonus ($)(3) (d)	Stock Awards ($) (e)	Option Awards ($) (4) (f)	Non-Equity Incentive Plan Compensation ($) (g)	Change in Pension Value and Nonqualified Deferred Compensation Earnings ($) (h)	All Other Compensation ($) (i)	Total ($) (j)
Bruce C. Galton (President and Chief Executive Officer)	2007	$ 244,722			$ 34,000				$ 278,722
Joel Brooks (Chief Financial Officer and Treasurer)	2007	$ 143,450			$ 21,250				$ 164,700
Richard Dondero (Vice-President of Research)	2007	$ 124,500			$ 21,250				$ 145,750
Sascha P. Fedyszyn (Vice-President of Corporate Development and Secretary)	2007	$ 95,750			$ 21,250				$ 117,000
John E. Thompson Ph.D (Executive Vice-President and Chief Scientific Officer)	2007	$ 63,700			$ 21,250				$ 84,950

(1) For the Company s fiscal year ended June 30.

(2) Such amount represents actual salary paid.

(3) There were no bonuses earned or paid during the fiscal year ended June 30, 2007

(4) Such amount represents the black-sholes value of stock options granted during the fiscal year.

Executive Compensation Agreements

On October 4, 2001, we hired Bruce C. Galton as our new President and Chief Executive Officer. In conjunction with Mr. Galton s appointment, we entered into a three-year employment agreement with Mr. Galton, effective October 4, 2001. The agreement shall automatically renew for successive one-year terms thereafter, unless written notice of termination is provided at least 120 days prior to the end of the applicable term. The term of Mr. Galton s employment agreement currently runs through October 3, 2008. The agreement provides Mr. Galton with an annual base salary of $200,000 plus certain benefits, including potential bonuses, equity awards and other perquisites as determined by our board of directors. Our board of directors have since approved several increases in Mr. Galton s annual base salary, which is currently $255,000. The agreement also provides that Mr. Galton is entitled to a lump sum payment of 1.5 times his base annual salary plus an additional 1.5 times his base salary, payable in common stock in three annual installments, if his employment with us is terminated without cause or with good reason, as defined in his employment agreement. If Mr. Galton s employment with us is terminated pursuant to a change in control, as defined in his employment agreement, he is entitled to receive the difference between the monies actually received upon termination and 1.5 times his annual base salary plus an additional 1.5 times his base salary, payable in common stock.

On January 21, 1999, Sascha P. Fedyszyn entered into an employment agreement with Senesco for a term of two (2) years, whereby we agreed to pay Mr. Fedyszyn an annual base salary of $36,000 plus certain benefits, including potential bonuses, equity awards and other perquisites as determined by the board of directors. Our board of directors has since approved several increases in Mr. Fedyszyn s base salary, which is currently $97,500 per annum. Mr. Fedyszyn s employment contract automatically renews for additional one-year periods, unless terminated by either party before September in the year prior to expiration. The term of Mr. Fedyszyn s employment agreement currently runs through January 21, 2009. The agreement also provides that Mr. Fedyszyn is entitled to a lump sum payment of 2.0 times his base annual salary if his employment with us is terminated without cause or with good reason, as defined in his employment agreement. If Mr. Fedyszyn s employment with us is terminated pursuant to a change of control, as defined in his employment agreement, he is entitled to receive the difference between the monies actually received upon termination and 2.99 times his annual base salary.

On July 1, 2003, Joel Brooks entered into an employment agreement with Senesco for a term of three (3) years. The agreement shall automatically renew for successive one-year terms thereafter, unless written notice of termination is provided at least 120 days prior to the end of the applicable term. The term of Mr. Brooks employment agreement currently runs through June 30, 2008. The agreement provides Mr. Brooks with an annual base salary of $122,000 plus certain

benefits, including potential bonuses, equity awards and other perquisites as determined by the board of directors. Our board of directors has since approved several increases in Mr. Brooks base salary, which is currently $145,000. The agreement also provides that Mr. Brooks is entitled to a lump sum payment of 1.0 times his base annual salary if his employment with us is terminated without cause or with good reason or pursuant to a change in control, as defined in his employment agreement.

On July 19, 2004, we hired Richard Dondero as our new Vice President of Research and Development. In conjunction with Mr. Dondero s appointment, we entered into a three-year employment agreement with Mr. Dondero, effective July 19, 2004. The agreement shall automatically renew for successive one-year terms thereafter, unless written notice of termination is provided at least 120 days prior to the end of the applicable term. The term of Mr. Dondero s employment agreement currently runs through July 19, 2008. The agreement provides Mr. Dondero with an annual base salary of $110,000 plus certain benefits, including potential bonuses, equity awards and other perquisites as determined by our board of directors. Our board of directors has since approved several increases in Mr. Dondero s base salary, which is currently $125,000. The agreement also provides that Mr. Dondero is entitled to a lump sum payment of 1.0 times his base annual salary if his employment with us is terminated without cause or with good reason, as defined in his employment agreement. If Mr. Dondero s employment with us is terminated pursuant to a change in control, as defined in his employment agreement, he is entitled to receive the difference between the monies actually received upon termination and 1.0 times his annual base salary.

Grants of Plan-Based Awards

The following Grants of Plan Based Awards table provides additional information about stock and option awards and equity incentive plan awards granted to our named executive officers during the fiscal year ended June 30, 2007.

Name	Grant Date	Estimated Future Payouts Under Non-Equity Incentive Plan Awards			Estimated Future Payouts Under Equity Incentive Plan Awards			All Other Stock Awards: Number of Shares of Stock or Units	All Other Option Awards: Number of Securities Underlying Options	Exercise or Base Price of Option Awards	Grant Date Fair Value of Equity Awards
		Threshold	Target	Maximum	Threshold	Target	Maximum				
(a)	(b)	($) (c)	($) (d)	($) (e)	(#) (f)	(#) (g)	(#) (h)	(#) (i)	(#) (j)(1)	($/Sh) (k)(2)	($) (l)(3)
Bruce C. Galton	12/14/2006								40,000	$ 1.08	$ 34,000
Joel Brooks	12/14/2006								25,000	$ 1.08	$ 21,250
Richard Dondero	12/14/2006								25,000	$ 1.08	$ 21,250
Sascha P. Fedyszyn	12/14/2006								25,000	$ 1.08	$ 21,250
John E. Thompson Ph.D.	12/14/2006								25,000	$ 1.08	$ 21,250

(1) One-third of such options were exercisable on the date of grant, one-third of such options will become exercisable on December 14, 2007 and one-third of such options will become exercisable on December 14, 2008.

(2) Represents the closing market price on December 13, 2007.

(3) Represents the black-sholes value of such options on the date of grant.

Outstanding Equity Awards at Year-End

The following table summarizes the equity awards we have made to our named executive officers which are outstanding as of June 30, 2007.

	Option Awards					Stock Awards			
Name (a)	Number of Securities Underlying Unexercised Options (#) Exercisable (b)	Number of Securities Underlying Unexercised Options (#) Unexer-cisable (c)	Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Options (#) (d)	Option Exercise Price ($) (e)	Option Expiration Date (f)	Number of Shares or Units of Stock That Have Not Vested (#) (g)	Market Value of Shares or Units of Stock That Have Not Vested ($) (h)	Equity Incentive Plan Awards: Number of Unearned Shares, Units or Other Rights That Have Not Vested (#) (i)	Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units of Other Rights That Have Not Vested ($) (j)
Bruce C. Galton	130,000			$ 2.10	10/05/2011				
	300,000			$ 2.05	12/01/2011				
	50,000			$ 2.16	06/19/2013				
	30,000								