SENESCO TECHNOLOGIES INC
Form 10-K
September 28, 2007

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

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

For the fiscal year ended June 30, 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: Portions of the registrant s definitive Proxy Statement for its 2007 Annual Meeting of Stockholders are incorporated by reference into Part III of this Report.

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PART I

Item 1. # Business.

Our Business

The primary business of Senesco Technologies, Inc., a Delaware corporation incorporated in 1999, and its wholly-owned subsidiary, Senesco, Inc., a New Jersey corporation incorporated in 1998, collectively referred to as Senesco, we, us or our, is to utilize our patented and patent-pending genes, primarily eucaryotic translation initiation Factor 5A, or Factor 5A, and deoxyhypusine synthase, or DHS, 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

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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.

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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 Annual Report on Form 10-K that are not historical facts are forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, and the Private Securities Litigation Reform Act of 1995. Such forward-looking statements may be identified by, among other things, the use of forward-looking terminology such as believes, expects, may, will, should, or anticipates or the negative thereof or other variations thereon or comparable terminology, or by discussions of strategy that involve risks and uncertainties. In particular, our statements regarding the anticipated growth in the markets for our technologies, the continued advancement of our research, the approval of our patent applications, the possibility of governmental approval in order to sell or offer for sale to the general public a genetically engineered plant or plant product, the successful implementation of our commercialization strategy, including the success of the Harris Moran License, the ArborGen Agreement, the Cal/West License, The Scotts 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.

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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

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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

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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.

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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

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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.

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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

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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

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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

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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.

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

We have fifteen issued patents from the United States Patent and Trademark Office, or PTO, and twelve issued pat

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.

We have fifteen issued patents from the United States Patent and Trademark Office, or PTO, and twelve issued pat

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.

Item 4. Submission of Matters to a Vote of Security Holders. 32

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.

Quarter Ended	Common Stock High	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.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*

Among Senesco Technologies, Inc., The MAEX Composite Index

And The RDG MicroCap Biotechnology Index

* $100 invested on 6/30/02 in stock or index including reinvestment of dividends. Fiscal year ending June 30.

	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.

Item 6. # Selected Financial Data.

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

SELECTED FINANCIAL DATA

	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 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.

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 Annual Report on Form 10-K. A list of the financial statements filed herewith is found at Item 15. Exhibits, Financial Statement Schedules.

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

None.

Item 9A. Controls and Procedures.

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.

The information relating to our directors, nominees for election as directors and executive officers under the headings Election of Directors and Executive Officers in our definitive proxy statement for the 2007 Annual Meeting of Stockholders is incorporated herein by reference to such proxy statement.

Item 11. Executive Compensation.

The discussion under the heading Executive Compensation in our definitive proxy statement for the 2007 Annual Meeting of Stockholders is incorporated herein by reference to such proxy statement.

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

The discussion under the heading Security Ownership of Certain Beneficial Owners and Management in our definitive proxy statement for the 2007 Annual Meeting of Stockholders is incorporated herein by reference to such proxy statement.

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

The discussion under the heading Certain Relationships and Related Transactions in our definitive proxy statement for the 2007 Annual Meeting of Stockholders is incorporated herein by reference to such proxy statement.

Item 14. Principal Accounting Fees and Services.

The discussion under the heading Principal Accountant Fees and Services in our definitive proxy statement for the 2007 Annual Meeting of Stockholders is incorporated herein by reference to such proxy statement.

Item 15. Exhibits, Financial Statement Schedules.

(a) (1) Financial Statements.

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

(a) (2) Financial Statement Schedules.

None.

(a) (3) Exhibits.

Reference is made to the Exhibit Index on Page 50.

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized this 28th day of September 2007.

SENESCO TECHNOLOGIES, INC.

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

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

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

Signature	Title	Date
/s/ Ruedi Stalder Ruedi Stalder	Chairman and Director	September 28, 2007
/s/ Bruce C. Galton Bruce C. Galton	President and Chief Executive Officer (principal executive officer) and Director	September 28, 2007
/s/ Joel Brooks Bruce C. Galton	Chief Financial Officer and Treasurer (principal financial and accounting officer)	September 28, 2007
/s/ John E. Thompson John E. Thompson	Executive Vice President, Chief Scientific Officer and Director	September 28, 2007
/s/ Christopher Forbes Christopher Forbes	Director	September 28, 2007
/s/ Thomas C. Quick Thomas C. Quick	Director	September 28, 2007
/s/ David Rector David Rector	Director	September 28, 2007
/s/ Jack Van Hulst Jack Van Hulst	Director	September 28, 2007
/s/ John Braca John Braca	Director	September 28, 2007

SENESCO TECHNOLOGIES, INC.

AND SUBSIDIARY

(a development stage company)

CONSOLIDATED FINANCIAL STATEMENTS

JUNE 30, 2007

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(a development stage company)

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors of

Senesco Technologies, Inc.

We have audited the accompanying consolidated balance sheets of Senesco Technologies, Inc. and Subsidiary (a development stage company) as of June 30, 2007 and 2006, and the related consolidated statements of operations, stockholders equity, and cash flows for each of the three years in the period ended June 30, 2007 and cumulative amounts from July 1, 1998 (inception) to June 30, 2007. These consolidated financial statements are the responsibility of the Company s management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with the Standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall consolidated financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Senesco Technologies, Inc. and Subsidiary as of June 30, 2007 and 2006, and the results of their operations and their cash flows for each of the three years in the period ended June 30, 2007 and cumulative amounts from July 1, 1998 (inception) to June 30, 2007 in conformity with United States generally accepted accounting principles.

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the consolidated financial statements, the Company is a development stage company and has incurred recurring losses from operations that raise substantial doubt about its ability to continue as a going concern. Management s plan in regard to these matters is also described in Note 1. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ GOLDSTEIN GOLUB KESSLER LLP

GOLDSTEIN GOLUB KESSLER LLP

New York, New York

September 26, 2007

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(a development stage company)

CONSOLIDATED BALANCE SHEET

	June 30, 2007	**2006**
ASSETS		
Current Assets:		
Cash and cash equivalents	$ 408,061	$ 318,473
Short-term investments	250,000	850,000
Prepaid expenses and other current assets	104,526	139,584
Total current assets	762,587	1,308,057
Property and Equipment, net	7,526	10,318
Intangibles, net	2,544,447	2,209,796
Deferred Income Tax Asset, net of valuation allowance of $7,719,000 and $6,523,000, respectively		
Security Deposit	7,187	7,187
Total Assets	$ 3,321,747	$ 3,535,358
LIABILITIES AND STOCKHOLDERS EQUITY		
Current Liabilities:		
Accounts payable	$ 109,258	$ 77,695
Accrued expenses	377,359	329,884
Deferred revenue	16,667	41,667
Total current liabilities	503,284	449,246
Grant Payable	99,728	99,728
Other Liability	29,196	34,418
Total liabilities	632,208	583,392
Commitments		
Stockholders Equity:		
Preferred stock - $0.01 par value; authorized 5,000,000 shares, no shares issued		
Common stock - $0.01 par value; authorized 60,000,000 and 30,000,000 shares, respectively, issued and outstanding 17,473,694 and 15,477,388, respectively	174,737	154,774
Capital in excess of par	28,136,342	25,167,035
Deficit accumulated during the development stage	(25,621,540)	(22,369,843)
Stockholders equity	2,689,539	2,951,966
Total Liabilities and Stockholders Equity	$ 3,321,747	$ 3,535,358

See Notes to Consolidated Financial Statements

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(a development stage company)

CONSOLIDATED STATEMENT OF OPERATIONS

	Year ended June 30, 2007	2006	2005	Cumulative Amounts from Inception
Revenue	$ 300,000	$ 66,666	$ 125,000	$ 718,333
Operating expenses:				
General and administrative	2,412,679	1,919,740	2,029,400	19,434,193
Research and development	1,208,321	1,566,267	1,417,337	8,193,169
Total operating expenses	3,621,000	3,486,007	3,446,737	27,627,362
Loss from operations	(3,321,000)	(3,419,341)	(3,321,737)	(26,909,029)
Noncash income			135,632	321,259
Sale of state income tax loss - net			153,160	586,442
Interest income - net	69,303	104,456	54,027	379,788
Net loss	$ (3,251,697)	$ (3,314,885)	$ (2,978,918)	$ (25,621,540)
Basic and diluted net loss per common share	$ (.19)	$ (.21)	$ (.21)	
Basic and diluted weighted-average number of common shares outstanding	16,916,918	15,469,881	14,053,808	

See Notes to Consolidated Financial Statements

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(a development stage company)

CONSOLIDATED STATEMENT OF STOCKHOLDERS EQUITY

Period from July 1, 1998 (date of inception) to June 30, 2007

	Common Stock Number of Shares	Amount	Capital in Excess of Par	Deficit Accumulated During the Development Stage	Deferred Compensation Related to Issuance of Options and Warrants	Total Stockholders Equity (Deficiency)
Common stock outstanding	2,000,462	$ 20,005	$ (20,005)			
Contribution of capital		85,179				$ 85,179
Issuance of common stock in reverse merger on January 22, 1999 at $0.01 per share	3,400,000	34,000	(34,000)			
Issuance of common stock for cash on May 21, 1999 for $2.63437 per share	759,194	7,592	1,988,390			1,995,982
Issuance of common stock for placement fees on May 21, 1999 at $0.01 per share	53,144	531	(531)			
Net loss				$ (1,168,995)		(1,168,995)
Balance at June 30, 1999	6,212,800	62,128	2,019,033	(1,168,995)		912,166
Issuance of common stock for cash on January 26, 2000 for $2.867647 per share	17,436	174	49,826			50,000
Issuance of common stock for cash on January 31, 2000 for $2.87875 per share	34,737	347	99,653			100,000
Issuance of common stock for cash on February 4, 2000 for $2.924582 per share	85,191	852	249,148			250,000
Issuance of common stock for cash on March 15, 2000 for $2.527875 per share	51,428	514	129,486			130,000
Issuance of common stock for cash on June 22, 2000 for $1.50 per share	1,471,700	14,718	2,192,833			2,207,551
Commissions, legal and bank fees associated with issuances for the year ended June 30, 2000			(260,595)			(260,595)
Fair market value of options and warrants granted and vested during the year ended June 30, 2000			1,656,659		$ (180,732)	1,475,927
Net loss				(3,346,491)		(3,346,491)
Balance at June 30, 2000	7,873,292	78,733	6,136,043	(4,515,486)	(180,732)	1,518,558

See Notes to Consolidated Financial Statements

	Common Stock Number of Shares	Amount	Capital in Excess of Par	Deficit Accumulated During the Development Stage	Deferred Compensation Related to Issuance of Options and Warrants	Total Stockholders Equity (Deficiency)
Fair market value of options and warrants granted and vested during the year ended June 30, 2001			$ 392,182		$ (83,563)	$ 308,619
Net loss				$ (2,033,890)		(2,033,890)
Balance at June 30, 2001	7,873,292	$ 78,733	6,528,225	(6,549,376)	(264,295)	(206,713)
Issuance of common stock and warrants for cash from November 30, 2001 through April 17, 2002 at $1.75 per unit	3,701,430	37,014	6,440,486			6,477,500
Issuance of common stock and warrants associated with bridge loan conversion on December 3, 2001	305,323	3,053	531,263			534,316
Commissions, legal and bank fees associated with issuances for the year ended June 30, 2002			(846,444)			(846,444)
Fair market value of options and warrants granted and vested during the year ended June 30, 2002			1,644,913		203,813	1,848,726
Net loss				(3,021,709)		(3,021,709)
Balance at June 30, 2002	11,880,045	118,800	14,298,443	(9,571,085)	(60,482)	4,785,676
Fair market value of options and warrants granted and vested during the year ended June 30, 2003			788,360		60,482	848,842
Net loss				(2,778,004)		(2,778,004)
Balance at June 30, 2003	11,880,045	118,800	15,086,803	(12,349,089)		2,856,514
Issuance of common stock and warrants for cash from January 15, 2004 through February 12, 2004 at $2.37 per unit	1,536,922	15,369	3,627,131			3,642,500
Allocation of proceeds to warrants			(2,099,090)			(2,099,090)
Reclassification of warrants			1,913,463			1,913,463
Commissions, legal and bank fees associated with issuances from January 15, 2004 through February 12, 2004			(378,624)			(378,624)

See Notes to Consolidated Financial Statements

	Common Stock Number of Shares	Amount	Capital in Excess of Par	Deficit Accumulated During the Development Stage	Deferred Compensation Related to Issuance of Options and Warrants	Total Stockholders Equity (Deficiency)
Fair market value of options and warrants vested during the year ended June 30, 2004			$ 1,826,514			$ 1,826,514
Options and warrants exercised during the year ended June 30, 2004 at exercise prices ranging from $1.00 - $3.25	370,283	$ 3,704	692,945			696,649
Net loss				$ (3,726,951)		(3,726,951)
Balance at June 30, 2004	13,787,250	137,873	20,669,142	(16,076,040)		4,730,975
Issuance of common stock and warrants for cash on May 9, 2005 at $2.11 per unit	1,595,651	15,957	3,350,872			3,366,829
Allocation of proceeds to warrants			(1,715,347)			(1,715,347)
Reclassification of warrants			1,579,715			1,579,715
Commissions, legal and bank fees associated with issuance on May 9, 2005			(428,863)			(428,863)
Fair market value of options and warrants vested during the year ended June 30, 2005			974,235			974,235
Options and warrants exercised during the year ended June 30, 2005 at exercise prices ranging from $1.50 - $3.25	84,487	844	60,281			61,125
Net loss				(2,978,918)		(2,978,918)
Balance at June 30, 2005	15,467,388	154,674	24,490,035	(19,054,958)		5,589,751
Fair market value of options and warrants vested during the year ended June 30, 2006			677,000			677,000
Warrants exercised during the year ended June 30, 2006 at an exercise price of $0.01	10,000	100				100
Net loss				(3,314,885)		(3,314,885)
Balance at June 30, 2006	15,477,388	154,774	25,167,035	(22,369,843)		2,951,966

See Notes to Consolidated Financial Statements

	Common Stock Number of Shares	Amount	Capital in Excess of Par	Deficit Accumulated During the Development Stage	Deferred Compensation Related to Issuance of Options and Warrants	Total Stockholders Equity (Deficiency)
Issuance of common stock and warrants for cash on October 10, 2006 at $1.135 per unit	1,986,306	19,863	2,229,628			2,249,491
Commissions, legal and bank fees associated with issuance on October 10, 2006			(230,483)			(230,483)
Warrants exercised during the year ended June 30, 2007 at an exercise price of $0.01	10,000	100				100
Fair market value of options and warrants vested during the year ended June 30, 2007			970,162			970,162
Net loss				(3,251,697)		(3,251,697)
Balance at June 30, 2007	17,473,694	$ 174,737	$ 28,136,342	$ (25,621,540)		$ 2,689,539

See Notes to Consolidated Financial Statements

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(a development stage company)

CONSOLIDATED STATEMENT OF CASH FLOWS

	Year ended June 30, 2007	2006	2005	Cumulative Amounts from Inception
Cash flows from operating activities:				
Net loss	$ (3,251,697)	$ (3,314,885)	$ (2,978,918)	$ (25,621,540)
Adjustments to reconcile net loss to net cash used in operating activities:				
Noncash capital contribution				85,179
Noncash conversion of accrued expenses into equity				131,250
Noncash income related to change in fair value of warrant liability			(135,632)	(321,259)
Issuance of common stock and warrants for interest				9,316
Issuance of stock options and warrants for services	970,162	677,000	974,235	8,798,775
Depreciation and amortization	166,172	40,112	43,719	363,841
(Increase) decrease in operating assets:				
Prepaid expenses and other current assets	35,058	16,960	(62,577)	(104,526)
Security deposit				(7,187)
Increase (decrease) in operating liabilities:				
Accounts payable	31,563	(139,874)	148,561	109,258
Accrued expenses	47,475	149,882	(107,624)	377,359
Deferred revenue	(25,000)	8,334		16,667
Other liability	(5,222)	32,082	2,336	29,196
Net cash used in operating activities	(2,031,489)	(2,530,389)	(2,115,900)	(16,133,671)
Cash flows from investing activities:				
Patent costs	(495,852)	(792,069)	(531,988)	(2,745,707)
Redemption (purchase) of investments, net	600,000	3,339,395	(239,621)	(250,000)
Purchase of property and equipment	(2,179)		(5,972)	(170,107)
Net cash provided by (used in) investing activities	101,969	2,547,326	(777,581)	(3,165,814)
Cash flows from financing activities:				
Proceeds from grant		9,578		99,728
Proceeds from issuance of bridge notes				525,000
Proceeds from issuance of common stock and warrants, net and exercise of warrants and options	2,019,108	100	2,999,091	19,082,818
Net cash provided by financing activities	2,019,108	9,678	2,999,091	19,707,546
Net increase in cash and cash equivalents	89,588	26,615	105,610	408,061
Cash and cash equivalents at beginning of period	318,473	291,858	186,248	
Cash and cash equivalents at end of period	$ 408,061	$ 318,473	$ 291,858	$ 408,061
Supplemental disclosure of cash flow information:				
Cash paid during the period for interest	$	$	$	$ 22,317
Supplemental schedule of noncash financing activity:				
Conversion of bridge notes into stock	$	$	$	$ 534,316

See Notes to Consolidated Financial Statements

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(a development stage company)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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

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

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

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

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

As shown in the accompanying consolidated financial statements, the Company has a history of losses with a deficit accumulated during the development stage from July 1, 1998 (inception) through June 30, 2007 of $25,621,540. These conditions raise substantial doubt about the Company s ability to continue as a going concern. The Company s continuation as a going concern is dependent upon its ability to ultimately attain profitable operations, generate sufficient cash flow to meet its obligations and / or obtain additional financing as may be required and complying with regulatory requirements. The outcome of these uncertainties cannot be assured.

The American Stock Exchange requires the Company to meet minimum financial requirements in order to maintain its listing. Currently, the Company does not meet the $6,000,000 minimum net worth continued listing requirement of the American Stock Exchange and the Company has received a notice of noncompliance from the American Stock Exchange. The Company submitted a plan to the American Stock Exchange discussing how it intends to regain compliance with the continued listing requirements. The American Stock Exchange has accepted the Company s plan and has given it until March 1, 2008 to effectuate the plan and regain compliance with the continued listing requirements.

The Company s ability to maintain sufficient liquidity in the future is dependent on raising additional capital. As disclosed in Note 14, on August 1, 2007 and August 29, 2007, the Company entered into agreements that will provide sufficient working capital to fund its operations for approximately the next two years. However, if the Company does not meet all or some of the funding milestones, then the Company cannot provide assurance that it will continue as a going concern.

Cash equivalents consist of investments which are readily convertible into cash with original maturities of three months or less. The Company maintains its cash

in money market and bank deposit accounts which, at times, may exceed federally insured limits. The Company believes that there is no significant credit risk with respect to these accounts.

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

Property and equipment are stated at cost, less accumulated depreciation and amortization. Depreciation of property and equipment is provided for by the straight-line method over the estimated useful lives of the assets. Leasehold improvements are amortized over the lesser of the assets useful lives or the remaining term of the lease.

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

The length of time that it takes for an initial patent application to be approved is generally between four to six years, however, due to the unique nature of each patent application, the actual length of time may vary. If a patent application is denied, the associated cost of that application would be written off. However, the Company has not had any patent applications denied as of the date of this Report on Form 10-K. Additionally, should a patent application become impaired during the application process, the Company would write down or write off the associated cost of that patent application.

The Company had determined that the economic benefit of the patent applications did not begin until they were issued. As such, the Company 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 the Company has entered into, the Company has determined that it is now receiving the economic benefit of certain patent applications as well as the issued patents and has begun amortizing the patent application costs during the year ended June 30, 2007.

Patent costs are being amortized over a period of 17 years, the life of the patent.

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

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

- changes in technology and the appearance of competing technology.

If the Company s review determines that the future discounted cash flows related to these assets will not be sufficient to recover their carrying value, the Company will reduce the carrying values of these assets down to its estimate of fair value and continue amortizing them over their remaining useful lives. To date, the Company has not recorded any impairment of intangible assets.

Deferred income tax assets and liabilities are recognized for the future tax consequences attributable to differences between financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted rates expected to apply when the differences are expected to be realized.

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

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

Loss per common share is computed by dividing the loss by the weighted-average number of common shares outstanding during the period. Shares to be issued upon the exercise of the outstanding options and warrants aggregating 7,790,315 and 8,296,591 as of June 30, 2007 and 2006, respectively, are not included in the computation of loss per share as their effect is anti-dilutive.

Certain amounts have been reclassified in the prior year s consolidated financial statements to conform with the June 30, 2007 presentation.

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and judgments that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. The critical accounting policies that require management s most significant estimate and judgment are the assessment of the recoverability

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

In June 2006, the Financial Accounting Standards Board (FASB) issued FASB Interpretation No. 48, Accounting for Uncertainty in Income Taxes an interpretation of FASB Statement No. 109 (FIN 48). FIN 48 clarifies the accounting for uncertainty in income taxes recognized in a company s financial statements in accordance with SFAS No. 109, Accounting for Income Taxes . FIN 48 prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. FIN 48 is effective for fiscal years beginning after December 15, 2006. The Company is currently evaluating the effect, if any, that FIN 48 will have on its consolidated financial position or results of operations.

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

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

In September 2006, the SEC issued Staff Accounting Bulletin No. 108 Considering the Effects of Prior Year Misstatements when Quantifying Misstatements in Current Year Financial Statements (SAB No. 108). SAB No. 108 provides guidance on the consideration of the effects of prior year misstatements in quantifying current year misstatements for the purpose of determining whether the current year s financial statements are materially misstated. SAB No. 108 is effective as of the end of the Company s 2007 fiscal year, allowing a one-time transitional cumulative effect adjustment to beginning

retained earnings as of July 1, 2006, for errors that were not previously deemed material, but are material under the guidance in SAB No. 108. SAB No. 108 did not have a material effect on its consolidated financial position or results of operations for the year ended June 30, 2007.

In December 2006, the FASB issued FASB Staff Position No. EITF 00-19-2. This FSP addresses an issuer s accounting for registration payment arrangements and specifies that the contingent obligation to make future payments or otherwise transfer consideration under a registration payment arrangement should be separately recognized and measured in accordance with FASB No. 5. The guidance in this FSP amends FASB Statements 133 and 150 and FASB Interpretation No. 45 to include scope exceptions for registration payment arrangements. This FSP further clarifies that a financial instrument subject to a registration payment arrangement should be accounted for without regard to the contingent obligation to transfer consideration pursuant to the registration payment arrangement. This guidance is effective for financial statements issued for fiscal years beginning after December 15, 2006 and for transactions entered on or after December 22, 2006. The standard did not impact the Company s consolidated financial position or results of operations for the year ended June 30, 2007.

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

2. INVESTMENTS:

At June 30, 2007 and 2006, the amortized cost basis, aggregate fair value, gross unrealized gains and maturity by majority security type were as follows:

	Gross Unrealized Gain / (Loss)	Aggregate Fair Value	Amortized Cost Basis
June 30, 2007			
Held-to-maturity securities:			
Corporate debt securities (maturing within one year)	$ -0-	$ 250,000	$ 250,000
June 30, 2006			
Held-to-maturity securities:			
Corporate debt securities (maturing within one year)	$ -0-	$ 850,000	$ 850,000
	$ -0-	$ 850,000	$ 850,000

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

3. PREPAID EXPENSES AND OTHER CURRENT ASSETS:

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

	June 30, 2007	2006
Prepaid insurance	$ 34,361	$ 34,800
Prepaid license fee		45,833
Prepaid research	11,796	19,635
Prepaid legal	41,051	13,391
Prepaid other	17,318	25,925
	$ 104,526	$ 139,584

4. PROPERTY AND EQUIPMENT:

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

	June 30, 2007	2006	Estimated Useful Life
Company Web site	$	$ 26,500	3 years
Equipment	32,953	38,872	4 years
Furniture and fixtures	67,674	67,674	7 years
	100,627	133,046	
Accumulated depreciation and amortization	(93,101)	(122,728)	
	$ 7,526	$ 10,318	

Depreciation and amortization expense aggregated $4,971, $19,720, $27,636 and $162,581 for the years ended June 30, 2007, 2006, 2005, and cumulatively from inception through June 30, 2007, respectively.

5. INTANGIBLE ASSETS:

Intangible assets, at cost, consists of the following at:

	June 30, 2007	2006
Patents approved	$ 473,847	$ 379,371
Patents pending	2,271,860	1,870,484
	2,745,707	2,249,885

Accumulated amortization	(201,260)	(40,059)
	$ 2,544,447	$ 2,209,796

Amortization expense amounted to $161,201, $20,392, $16,083 and $201,260 for the years ended June 30, 2007, 2006, 2005, and cumulatively from inception through June 30, 2007, respectively.

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

Year ending June 30,	
2008	$ 165,000
2009	165,000
2010	165,000
2011	165,000
2012	165,000

6. ACCRUED EXPENSES:

The following are included in accrued expenses at:

	June 30,	
	2007	2006
Accrued research	$271,000	$228,265
Accrued accounting	40,000	40,000
Accrued patent costs	45,000	28,202
Accrued legal	10,186	33,417
Accrued other	11,173	
	$ 377,359	$ 329,884

7. STOCKHOLDERS EQUITY:

In February 2004, the Company completed a private placement to certain accredited investors (the 2004 Accredited Investor Private Placement) for an aggregate amount of 1,536,922 shares of Common Stock and warrants to purchase 768,459 shares of Common Stock for the aggregate cash consideration of $3,642,500. The 2004 Accredited Investor Private Placement offered units of one share of Common Stock and a five-year warrant to purchase 0.50 shares of Common Stock at a price equal to $2.37 per unit. The warrants were issued at an exercise price equal to $3.79 per share, with such warrants vesting on the date of grant. The costs associated with the 2004 Accredited Investor Private Placement totaled $378,624. The Company did not engage a placement agent for the sale of such securities.

Two directors of the Company participated in the 2004 Accredited Investor Private Placement. Specifically, such directors of the Company purchased, in the aggregate, 63,292 shares of Restricted Common Stock on the same terms and conditions as all purchasers hereunder.

On March 17, 2004, the Company filed a registration statement with the SEC on Form S-3 to register all of the shares and the shares underlying the warrants acquired by the purchasers and finders (see below) in the 2004 Accredited Investor Private Placement. The registration statement was declared effective by the SEC on May 14, 2004, and remained in effect until February 2, 2006.

Due to the Company s obligation to file a registration statement to register for resale the shares underlying the warrants under the Securities Act of 1933, as amended, in accordance with EITF 00-19, Accounting for Derivative Financial

Instruments Indexed To, and Potentially Settled In a Company s Own Common Stock, the value of the warrants amounting to $2,099,090 was recorded as a liability until the filing was made. The decrease in market value of the Common Stock from the closing of its financing to March 17, 2004, the date of filing the registration statement, resulted in noncash other income to reflect the decrease in Black-Scholes value of the warrants between those two dates. As a result, the Company incurred a decrease in liability and other noncash income of $185,627 as of March 17, 2004. Upon the Company meeting its obligation to file a registration statement, the fair value of the warrants amounting to $1,913,463, was reclassified to equity.

Sands Brothers and Stanford Group Company acted as co-managing finders of the 2004 Accredited Investor Private Placement, and certain consultants to the Company provided financial advisory services in connection with the 2004 Accredited Investor Private Placement. As consideration for their services to the Company, such finders were issued warrants to purchase an aggregate of 73,682 shares of Common Stock, on the same terms and conditions as the warrants issued to the purchasers in the 2004 Accredited Investor Private Placement.

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

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

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

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

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

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

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

Plan. On January 26, 2007, the Company amended the registration statement to register an additional 3,000,000 shares of Common Stock underlying the Plan. The registration statement and amendment was deemed effective upon filing.

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

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

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

	Year Ended June 30,		
	2007	**2006**	**2005**
Estimated life in years	6-10	6-10	10
Risk-free interest rate (1)	4.2%-4.65%	4.2%-4.5%	4.2%
Volatility	70%-80%	70%-111%	111%-148%
Dividend paid	None	None	None

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

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

Stock option activity under the Plan is summarized as follows:

	Shares	Weighted-average Exercise Price
Options outstanding at July 1, 2004	1,878,500	$ 2.64
Granted	295,500	$ 3.45
Exercised	(22,500)	$ 2.05
Expired	(40,000)	$ 3.85
Options outstanding at June 30, 2005	2,111,500	$ 2.74
Granted	318,000	$ 1.40
Exercised		
Expired	(3,000)	$ 3.48
Options outstanding at June 30, 2006	2,426,500	$ 2.56
Granted	338,000	$ 1.08
Exercised		
Expired	(118,500)	$ 3.42
Options outstanding at June 30, 2007	2,646,000	$ 2.33
Options exercisable at June 30, 2005	1,834,508	$ 2.68
Options exercisable at June 30, 2006	2,181,337	$ 2.64
Options exercisable at June 30, 2007	2,396,334	$ 2.45
Weighted-average fair value of options granted during the year ended June 30, 2005		$ 3.23
Weighted-average fair value of options granted during the year ended June 30, 2006		$ 0.92
Weighted-average fair value of options granted during the year ended June 30, 2007		$ 0.85

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

	Number of Options	Weighted-average Grant-Date Fair Value
Non-vested stock options at July 1, 2004	342,500	$ 2.46
Granted	295,500	$ 3.23
Vested	(361,008)	$ 2.69
Forfeited		
Non-vested stock options at June 30, 2005	276,992	$ 2.98
Granted	318,000	$ 0.92
Vested	(349,162)	$ 2.05
Forfeited	(667)	$ 3.23
Non-vested stock options at June 30, 2006	245,163	$ 1.47
Granted	338,000	$ 0.86
Vested	(328,497)	$ 1.30
Forfeited	(5,000)	$ 0.87
Non-vested stock options at June 30, 2007	249,666	$ 1.07

The following table summarizes information about stock options outstanding at June 30, 2007:

	Options Outstanding			Options Exercisable	
Ranges of Exercise Prices	Number Outstanding at June 30, 2007	Weighted -average Remaining Contractual Life (Years)	Weighted-average Exercise Price	Number Exercisable at June 30, 2007	Weighted-average Exercise Price

$1.05 - $1.65	743,500	8.40	$ 1.27	493,834	$ 1.28
$2.05 - $2.35	1,025,000	3.90	$ 2.12	1,015,000	$ 2.12
$3.15 - $4.00	877,500	5.30	$ 3.49	887,500	$ 3.49
$1.05 - $4.00	2,646,000	5.65	$ 2.33	2,396,334	$ 2.45

As of June 30, 2007, the aggregate intrinsic value of stock options outstanding was $23,610, with a weighted-average remaining term of 5.7 years. The

aggregate intrinsic value of stock options exercisable at that same date was $9,787, with a weighted-average remaining term of 5.3 years. As of June 30, 2007, the Company has 3,264,000 shares available for future stock option grants.

As of June 30, 2007, total compensation expense not yet recognized related to stock option grants amounted to $223,037, which will be recognized over the next 18 months.

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

The following table represents warrants outstanding as of:

Exercise Price	June 30, 2007	2006
$ 7.00	10,000	10,000
3.79	842,141	842,141
3.59	237,600	237,600
3.50	280,000	280,000
3.45	15,000	15,000
3.38	965,380	965,380
3.25	750,000	1,779,203
3.15	20,000	20,000
2.35	15,000	15,000
2.15	110,000	110,000
2.00	750,000	1,570,767
1.40	5,000	5,000
1.18	993,153	
1.08	2,500	
1.07	139,041	
0.01		10,000
	5,134,815	5,860,091

As of June 30, 2007, 5,131,482 of the above warrants are exercisable expiring at various dates through 2016. At June 30, 2007, the weighted-average exercise price on the above warrants was $2.48.

The following stock-based compensation expense of $970,162, $677,000, $974,235 and $8,798,776 was recognized for the years ended June 30, 2007, 2006, 2005 and cumulatively from inception through June 30, 2007, respectively:

	Year Ended June 30, 2007	2006	2005	Cumulative From Inception
General and administrative expenses	$ 909,848	$ 488,000	$ 691,843	$ 7,536,940
Research and development expenses	60,314	189,000	282,392	1,261,835
Total stock-based compensation expense	$ 970,162	$ 677,000	$ 974,235	$ 8,798,775
Basic and diluted loss per common share	$ .06	$ .04	$ .07	

8. INCOME TAXES:

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

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

Year ended June 30,	2007		2006		2005	
Federal statutory rate	(34	)%	(34	)%	(34	)%
Valuation allowance	34		34		34	
	-0-	%	- 0 -	%	- 0 -	%

The deferred income tax asset consists of the following at:

	June 30, 2007	2006
Deferred tax asset:		
Net operating loss carryforward	$ 6,443,000	$ 5,531,000
Stock-based compensation		