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SENESCO TECHNOLOGIES INC  
Form 10QSB  
May 15, 2003

SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

-----  
FORM 10-QSB

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF  
THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended March 31, 2003  
Commission File No. 001-31326

SENESCO TECHNOLOGIES, INC.

-----  
(Exact Name of Small Business Issuer 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

-----  
(Issuer's Telephone Number, Including Area Code)

Check whether the Issuer: (1) filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the past 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: \_\_\_\_\_

State the number of shares outstanding of each of the Issuer's classes of common stock, as of April 30, 2003:

Class -----	Number of Shares -----
Common Stock, \$0.01 par value	11,880,045

Transitional Small Business Disclosure Format (check one):

Yes: \_\_\_\_\_

No: X  
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SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

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PART I. FINANCIAL INFORMATION.

ITEM 1. FINANCIAL STATEMENTS.

Certain information and footnote disclosures required under generally accepted accounting principles have been condensed or omitted from the following consolidated financial statements pursuant to the rules and regulations of the Securities and Exchange Commission. However, Senesco Technologies, Inc., a Delaware corporation, and its wholly owned subsidiary, Senesco, Inc., a New Jersey corporation (collectively, "Senesco" or the "Company"), believe that the disclosures are adequate to assure that the information presented is not misleading in any material respect.

The results of operations for the interim periods presented herein are not necessarily indicative of the results to be expected for the entire fiscal year.

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SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY  
 -----  
 (A DEVELOPMENT STAGE COMPANY)  
 -----  
 CONDENSED CONSOLIDATED BALANCE SHEET  
 -----

	March 31, 2003
	----- (unaudited)
ASSETS -----	
CURRENT ASSETS:	
Cash and cash equivalents.....	\$ 76,239
Short-term investments.....	3,045,108
Accounts receivable.....	--
Prepaid expenses and other current assets.....	170,917
	-----
Total Current Assets.....	3,292,264
Long-term investments.....	--
Property and equipment, net.....	82,867
Intangibles.....	465,614
Security deposit.....	7,187
	-----
TOTAL ASSETS.....	\$ 3,847,932 =====

LIABILITIES AND STOCKHOLDERS' EQUITY  
 -----

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CURRENT LIABILITIES:

Accounts payable.....	\$	62,131
Accrued expenses.....		365,524
		-----
Total Current Liabilities.....		427,655

Grant payable.....		90,150
		-----

TOTAL LIABILITIES.....		517,805
		-----

STOCKHOLDERS' EQUITY:

Preferred stock, \$0.01 par value; authorized 5,000,000 shares, no shares issued.....		--
Common stock, \$0.01 par value; authorized 30,000,000 shares, issued and outstanding 11,880,045 shares.....		118,800
Capital in excess of par.....		12,234,373
Deficit accumulated during the development stage.....		(9,023,046)
Deferred compensation related to issuance of options and warrants.....		--
		-----
Total Stockholders' Equity.....		3,330,127
		-----

TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY.....	\$	3,847,932
		=====

See Notes to Condensed Consolidated Financial Statements.

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SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

(unaudited)

	For the Three Months Ended March 31, 2003	For the Three Months Ended March 31, 2002	For the Nine Months Ended March 31, 2003
	-----	-----	-----
Revenue.....	\$ --	\$ --	\$ 10,000
	-----	-----	-----
Operating Expenses:			
General and administrative.....	294,403	300,400	1,056,416
Research and development.....	237,687	100,949	597,774
Stock-based compensation.....	--	94,146	137,177
	-----	-----	-----

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Total Operating Expenses.....	532,090	495,495	1,791,367
	-----	-----	-----
Loss From Operations.....	(532,090)	(495,495)	(1,781,367)
Sale of state income tax loss.....	--	--	130,952
Interest income, net.....	16,407	12,675	57,690
	-----	-----	-----
Net Loss.....	\$ (515,683)	\$ (482,820)	\$ (1,592,725)
	=====	=====	=====
Basic and Diluted Net Loss Per Common Share.....	\$ (0.04)	\$ (0.05)	\$ (0.13)
	=====	=====	=====
Basic and Diluted Weighted Average Number of Common Shares Outstanding.....	11,880,045	10,527,346	11,880,045
	=====	=====	=====

See Notes to Condensed Consolidated Financial Statements.

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SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

CONDENSED CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY

FROM INCEPTION ON JULY 1, 1998 THROUGH MARCH 31, 2003

(unaudited)

	Common Stock		Capital in Excess of Par Value	Deficit Accumulate During th Developmen Stage
	Shares	Amount		
	-----	-----	-----	-----
Common stock outstanding.....	2,000,462	\$ 20,005	\$ (20,005)	--
Contribution of capital.....	--	--	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)	--

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Issuance of common stock for cash on May 21, 1999 at \$2.63437 per share.....	759,194	7,592	1,988,390	--
Issuance of common stock for placement fees on May 21, 1999 at \$0.01 per share.....	53,144	531	(531)	--
Fair market value of options and warrants granted on September 7, 1999.....	--	--	252,578	--
Fair market value of warrants granted on October 1, 1999.....	--	--	171,400	--
Fair market value of warrants granted on December 15, 1999.....	--	--	331,106	--
Issuance of common stock for cash on January 26, 2000 at \$2.867647 per share.....	17,436	174	49,826	--
Issuance of common stock for cash on January 31, 2000 at \$2.87875 per share.....	34,737	347	99,653	--
Issuance of common stock for cash on February 4, 2000 at \$2.934582 per share.....	85,191	852	249,148	--

See Notes to Condensed Consolidated Financial Statements.

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SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY  
 -----  
 (A DEVELOPMENT STAGE COMPANY)  
 -----  
 CONDENSED CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY  
 -----  
 FROM INCEPTION ON JULY 1, 1998 THROUGH MARCH 31, 2003  
 -----  
 (unaudited)

Common Stock		Capital in Excess of Par Value	Deficit Accumulated During the Development Stage
Shares	Amount		
-----	-----	-----	-----
Issuance of common stock for cash on March 15, 2000 at			

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\$2.527875 per share.....	51,428	\$ 514	\$ 129,486	--
Issuance of common stock for cash on June 22, 2000 at \$1.50 per share.....	1,471,700	14,718	2,192,833	--
Commissions, legal and bank fees associated with issuances for the year ended June 30, 2000.....	--	--	(260,595)	--
Fair market value of warrants granted on October 2, 2000.....	--	--	80,700	--
Fair market value of warrants granted on September 4, 2001.....	--	--	41,800	--
Fair market value of warrants granted on October 15, 2001.....	--	--	40,498	--
Fair market value of options and warrants granted on November 1, 2001.....	--	--	138,714	--
Issuance of common stock and warrants for cash from November 30, 2001 through April 17, 2002.....	3,701,430	37,014	6,440,486	--
Fair market value of options and warrants granted on December 1, 2001.....	--	--	262,550	--

See Notes to Condensed Consolidated Financial Statements.

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SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

CONDENSED CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY

FROM INCEPTION ON JULY 1, 1998 THROUGH MARCH 31, 2003

(unaudited)

Common Stock		Capital in Excess of Par Value	Deficit Accumulate During the Developmen Stage
Shares	Amount		
-----	-----	-----	-----

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Issuance of common stock and warrants associated with bridge loan conversion on December 3, 2001.....	305,323	\$ 3,053	\$ 531,263	-
Fair market value of options vested and extended on January 1, 2002.....	--	--	94,146	-
Commissions, legal and bank fees associated with issuances for the year ended June 30, 2002.....	--	--	(846,444)	-
Fair market value of warrants vested on October 15, 2002.....	--	--	27,832	-
Fair market value of warrants vested on November 1, 2002.....	--	--	69,665	-
Fair value of options and warrants vested and change in fair value of options and warrants granted.....	--	--	118,695	-
Net loss.....	--	--	--	\$ (9,023,04)
	-----	-----	-----	-----
Balance at March 31, 2003.....	11,880,045	\$ 118,800	\$12,234,373	\$ (9,023,04)
	=====	=====	=====	=====

See Notes to Condensed Consolidated Financial Statements.

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SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

(A DEVELOPMENT STAGE COMPANY)

CONDENSED CONSOLIDATED STATEMENT OF CASH FLOWS

(unaudited)

	For the Nine Months End	
	March 31,	
	2003	20
	-----	-----
Cash flows from operating activities:		
Net loss.....	\$ (1,592,725)	\$ (1,
Adjustments to reconcile net loss to net cash used in operating activities:		
Noncash capital contribution.....	--	--



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Noncash conversion of accrued expenses into equity.....	--	
Issuance of common stock and warrants for interest.....	--	
Issuance and vesting of stock options and warrants for services.....	137,177	
Depreciation and amortization.....	30,138	
(Increase) decrease in operating assets:		
Accounts receivable.....	75,000	
Prepaid expense and other current assets.....	(115,145)	
Security deposit.....	--	
Increase (decrease) in operating liabilities:		
Accounts payable.....	(18,070)	
Accrued expenses.....	69,177	
	-----	-----
Net cash used in operating activities.....	(1,414,448)	(
	-----	-----
Cash flows from investing activities:		
Patent costs.....	(117,636)	(
Redemption (purchase) of investments, net.....	820,859	
Purchase of property and equipment.....	(33,425)	
	-----	-----
Net cash provided by (used in) investing activities.....	669,798	(
	-----	-----
Cash flows from financing activities:		
Proceeds from grant.....	22,178	
Proceeds from issuance of bridge notes.....	--	
Proceeds from issuance of common stock and warrants, net.....	--	4,
	-----	-----
Cash provided by financing activities.....	22,178	4,
	-----	-----
Net increase (decrease) in cash and cash equivalents.....	(722,472)	3,
Cash and cash equivalents at beginning of period.....	798,711	
	-----	-----
Cash and cash equivalents at end of period.....	\$ 76,239	\$ 3,
	=====	=====
Supplemental disclosure of cash flow information:		
Cash paid during the period for interest.....	\$ --	\$
	=====	=====
Supplemental schedule of noncash financing activity:		
Conversion of bridge notes into stock.....	\$ --	\$
	=====	=====

See Notes to Condensed Consolidated Financial Statements.

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SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

-----  
(A DEVELOPMENT STAGE COMPANY)  
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NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

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(unaudited)

NOTE 1 - BASIS OF PRESENTATION:

The financial statements included herein have been prepared by the Company, without audit, pursuant to the rules and regulations of the Securities and Exchange Commission. Certain information and footnote disclosures normally included in financial statements prepared in accordance with generally accepted accounting principles have been condensed or omitted pursuant to such rules and regulations. These unaudited condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and notes thereto included in the Company's Annual Report on Form 10-KSB for the year ended June 30, 2002.

In the opinion of the Company's management, the accompanying unaudited condensed consolidated financial statements contain all adjustments, consisting solely of those which are of a normal recurring nature, necessary to present fairly its financial position as of March 31, 2003 and as of June 30, 2002, the results of its operations for the three month periods ended March 31, 2003 and 2002, the results of its operations and cash flows for the nine month periods ended March 31, 2003 and 2002 and for the period from inception on July 1, 1998 through March 31, 2003.

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

Senesco is a development stage functional genomics company whose mission is to: (i) enhance the quality and productivity of fruits, flowers, vegetables and agronomic crops through the control of cell death in plants (senescence); and (ii) develop novel approaches to treat programmed cell death diseases in humans (apoptosis) (e.g., rheumatoid arthritis, macular degeneration, glaucoma, heart disease, Alzheimer's disease and Parkinson's disease), which are the result of premature cell death in humans, and cancer, a group of diseases in which apoptosis is blocked. Agricultural results to date include longer shelf life of perishable produce, increased seed and biomass yield and greater tolerance to environmental stress. Mammalian results to date include: determining the expression of the Company's patent-pending genes in both ischemic and non-ischemic heart tissue; correlating such genes to certain key immune regulators known as cytokines that have been found to be involved in apoptosis; and inducing apoptosis in human cancer cell lines derived from tumors.

NOTE 2 - LOSS PER SHARE:

Net loss per common share is computed by dividing the loss by the weighted average number of common shares outstanding during the period. Since September 7, 1999, the Company has had outstanding options and warrants to purchase its common stock, \$0.01 par value per share (the "Common Stock"); however, for the three months and nine months ended March 31, 2003 and 2002, shares to be issued upon the exercise of the options and warrants are not included in the computation of diluted loss per share as the effect is anti-dilutive.

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SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

-----  
(A DEVELOPMENT STAGE COMPANY)  
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NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

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(unaudited)

### NOTE 3 - STOCK OPTIONS AND WARRANTS:

The Company applies APB Opinion No. 25 and related interpretations in accounting for its stock option plan. Options to purchase Common Stock have been granted at or above the fair market value of the stock as of the date of grant. Accordingly, no compensation costs have been recognized for the stock option plan. Had compensation costs been determined based on the fair value as of the grant dates for those awards consistent with the method of FASB No. 123, the Company's net loss and net loss per share would have been increased to the pro forma amounts indicated below:

THREE MONTHS ENDED MARCH 31,	2003	2002
Net loss:		
As reported	\$ (515,683)	\$ (482,820)
Stock-based employee compensation costs	(200,625)	(136,500)
Pro forma	\$ (716,308)	\$ (619,320)
Loss per share:		
As reported	\$ (.04)	\$ (.05)
Stock-based employee compensation costs	(.02)	(.01)
Pro forma	\$ (.06)	\$ (.06)
NINE MONTHS ENDED MARCH 31,	2003	2002
Net loss:		
As reported	\$ (1,592,725)	\$ (1,588,861)
Stock-based employee compensation costs	(737,841)	(982,684)
Pro forma	\$ (2,330,566)	\$ (2,571,545)
Loss per share:		
As reported	\$ (.13)	\$ (.18)
Stock-based employee compensation costs	(.07)	(.11)
Pro forma	\$ (.20)	\$ (.29)

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The estimated grant date present value reflected in the above table is 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 for the three months and nine months ended March 31, 2003 and 2002 include the following: (i) an exercise price equal to the fair market value of the underlying stock on the dates of grant; (ii) an option term range of 5 to 10 years; (iii) a risk-free rate range of 3.00% to 4.22% and 4.24% to 5.18%, respectively, that represents the interest rate on a U.S. Treasury security with a maturity date corresponding to that of the option term; (iv) volatility of 147.83%; and (v) no annualized dividends paid with respect to a share of Common Stock at the date of grant. The ultimate values of the options will depend on the future price of the Common Stock, which cannot be forecast with reasonable accuracy.

### NOTE 4 - SIGNIFICANT EVENTS:

On March 28, 2003, the Company filed a registration statement with the Securities and Exchange Commission (the "SEC") to register all of the 3,000,000 shares of Common Stock underlying the Company's 1998 Stock Incentive Plan, as amended. The registration statement was deemed effective by the SEC upon filing.

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## ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.

### OVERVIEW

#### 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 the research, development and commercial exploitation of a potentially significant platform technology involving the identification and characterization of genes that we believe control the programmed cell death of plant cells, also known as senescence, and mammalian cells, also known as apoptosis.

#### AGRICULTURAL APPLICATIONS

Our technology goals for agricultural applications are to: (i) extend the shelf-life of perishable plant products; (ii) produce larger and leafier crops; (iii) increase yield in horticultural and agronomic crops; and (iv) reduce the harmful effects of environmental stress.

Senescence is the natural aging of plant tissues. Loss of cellular membrane integrity is an early event during the senescence of all plant tissues that prompts the deterioration of fresh flowers, fruits and vegetables. This loss of integrity, which is attributable to the formation of lipid metabolites in membrane bilayers that phase-separate, causes the membranes to become leaky. A decline in cell function ensues, leading to deterioration and eventual death, or spoilage, of the tissue. A delay in senescence increases shelf-life and extends the plant's growth timeframe, which allows the plant to devote more time to the photosynthetic process. We have shown that the additional energy gained in this period leads directly to increased seed production, and therefore increases crop yield. Seed production is a vital agricultural function. For example,

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oil-bearing crops store oil in their seeds. We have also shown that reducing premature senescence allows the plant to allocate more energy toward growth, leading to larger plants, with increased biomass, and more leafy crops. Most recently, we have demonstrated that reducing premature senescence results in crops which exhibit increased resilience to water deprivation and salt stress. Drought and salt resistant crops may ultimately be more cost effective due to reduced loss in the field and less time spent on crop management.

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 hence only has application to the limited number of plants that are ethylene-sensitive.

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, deoxyhypusine synthase, or DHS, gene and Factor 5A gene in certain species of plants. Our goal is to inhibit the expression of, or silence, these genes to delay senescence, which will in turn extend shelf-life, increase biomass, increase yield and increase resistance to environmental stress, thereby demonstrating proof of concept in each category of crop. 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.

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We are currently working with lettuce, melon, tomato, canola, Arabidopsis, a model plant that produces oil in a manner similar to canola, banana, certain species of trees and alfalfa, and have obtained proof of concept for the lipase, DHS and Factor 5A genes in several of these plants. Also, we have initiated field trials of lettuce and bananas with our respective partners. Near-term research and development initiatives include: (i) silencing or reducing the expression of DHS and Factor 5A genes in these plants; and (ii) propagation and testing of plants with our silenced genes. We have also completed our research and development initiative in carnation flower, which yielded a 100% increase in shelf-life through the inhibition of the DHS reaction.

### HUMAN HEALTH APPLICATIONS

#### Inhibiting Apoptosis

-----

We have also isolated the DHS and programmed cell death Factor 5A genes in mammalian tissue. Our preliminary research reveals that DHS and Factor 5A genes regulate apoptosis in animal and human cells. The mammalian apoptosis isoforms of the DHS and Factor 5A genes were first isolated from the ovarian tissue, specifically the corpus luteum, of rats, which undergoes apoptosis naturally at the end of the female reproductive cycle. The sequences of the mammalian apoptosis DHS and Factor 5A genes are very similar to those of the corresponding plant genes in keeping with their common functions. Moreover, inhibiting the function of the Factor 5A gene in rats has been shown to inhibit the induction of corpus luteum apoptosis. Apoptosis, as manifested by DNA fragmentation, was clearly detectable in super-ovulated control female rats within three hours of treatment with prostaglandin F2a. This hormone induces corpus luteum apoptosis naturally in mammals, but in super-ovulated animals in which the activation of Factor 5A had been inhibited, DNA fragmentation reflecting apoptosis was not apparent. Thus, just as these genes can be used to delay senescence in plants, this experiment shows that they may also be used to inhibit apoptosis in

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mammals. We believe that our technology has potential application as a means of controlling a broad range of diseases that are attributable to premature apoptosis, including neurodegenerative diseases, such as Alzheimer's disease and Parkinson's disease, retinal diseases, such as glaucoma and macular degeneration, heart disease, stroke and rheumatoid arthritis. We have commenced pre-clinical research on heart tissue samples from both ischemic and non-ischemic patients with heart disease and have found that Factor 5A is significantly upregulated in ischemic heart tissue. Ischemia is the restriction of blood supply to the heart that can result in heart attacks and damage to heart tissue. We have also found that upregulation of Factor 5A correlates to upregulation of two key inflammatory cytokines, Interleukin-1 and Interleukin-18, which are pro-inflammatory molecules and are indicated in numerous apoptotic diseases. In addition, we have initiated cell-line studies for applications of our technology to glaucoma.

### Accelerating Apoptosis

-----

Conversely, we have also established in pre-clinical studies that our apoptosis Factor 5A gene is able to kill cancer cells. Tumors arise when cells that have been targeted to undergo apoptosis are unable to do so because of an inability to activate the apoptotic pathways. When our apoptosis Factor 5A gene was introduced into RKO cells, a cell line derived from human carcinoma and COS7 cells, an immortal, cancer-like cell line from monkeys, virtually all cells expressing the Factor 5A gene underwent apoptosis. Moreover, just as the senescence Factor 5A gene appears to facilitate expression of the entire suite of genes required for programmed cell death in plants, the apoptosis Factor 5A gene appears to regulate expression of a suite of genes required for programmed cell

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death in mammals. For example, over-expression of apoptosis Factor 5A up regulates p53, an important tumor suppressor gene that promotes apoptosis in cells with damaged DNA and also down regulates bcl 2, a suppressor of apoptosis. Because the Factor 5A gene appears to function at the initiation point of the apoptotic pathways, we believe that our gene technology has potential application as a means of combating a broad range of cancers.

### AGRICULTURAL TARGET MARKETS

Our technology embraces crops that are reproduced both through seeds and propagation, which are the only two means of commercial crop reproduction. Propagation is a process whereby the plant does not produce fertile seeds and must reproduce through cuttings from the parent plant which are planted and become new plants. 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 plan to enter into licensing agreements or other strategic relationships with a variety of companies or other entities on a crop-by-crop basis.

In November 2001, we entered into a worldwide exclusive development and license agreement, referred to herein as the Harris Moran License, with Harris Moran Seed Company 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. In connection with the Harris Moran License, we received an initial license fee of \$125,000 in November 2001. Upon the completion of certain marketing and development benchmarks set forth in the Harris Moran License, we will receive an additional \$3,875,000 in development payments over a multi-year period along with royalties upon commercial introduction.

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To date, the development steps performed by Harris Moran and us have all been completed on schedule 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. Harris Moran foresees additional field trials of our technology by June 2003.

In June 2002, we entered into a three-year worldwide exclusive development and option agreement, referred to herein as the ArborGen Agreement, with ArborGen, LLC to develop our technology in certain species of trees. In connection with the ArborGen Agreement, we received an initial development fee of \$75,000 in July 2002. Upon the completion of certain development benchmarks set forth in the ArborGen Agreement, we will receive an additional \$225,000 in periodic development payments over the term of the ArborGen Agreement. The ArborGen Agreement also grants ArborGen an option to acquire an exclusive worldwide license to commercialize our technology in various other forestry products, and upon the execution of a license agreement, we will receive a license fee and royalties from ArborGen.

In September 2002, we entered into an exclusive development and license agreement, referred to herein as the Cal/West License, with Cal/West Seeds 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

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terms of the agreement. The Cal/West License also grants Cal/West an exclusive option to develop our technology in various other forage crops. In connection with the execution of the Cal/West License, we received an initial fee of \$10,000 from Cal/West. Upon the completion of certain development benchmarks, we will receive an additional \$20,000 in periodic payments, and upon the commercialization of certain products, we will receive royalty payments from Cal/West.

In October 2002, we entered into a non-exclusive sales representative agreement to market and promote our technology in the People's Republic of China. Under the terms of the agreement, we will pay a commission to the sales representative based on a percentage of the gross license fees we receive. With the assistance of the sales representative, in November 2002, we executed a non-binding letter of intent with the Tianjin Academy of Agricultural Sciences for the exclusive use of our technology in a variety of fruit and vegetable crops in China. We are currently in discussions with representatives of the Academy as well as government representatives from the city of Tianjin and from a central government department of China. We have also initiated discussions with a Chinese biotechnology seed company. Such a company would be necessary to secure the financing for the proposed agreement with the Academy and to commercialize the seeds developed with our technology under the proposed license. Due to the size and scope of the proposed agreement and the complexities of doing business in China, and in light of the current SARS health crisis in China, we anticipate that our ongoing discussions will continue over the course of the next several months.

### 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 diseases

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attributed to premature apoptosis, including stroke, heart disease, rheumatoid arthritis, retinal diseases such as glaucoma, and macular degeneration and neurodegenerative diseases such as Alzheimer's disease and Parkinson's disease. 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.

### COMPETITION

Competitors who are presently attempting to distribute their technology have generally utilized one of the following distribution channels: (i) licensing technology to major marketing and distribution partners; (ii) entering into strategic alliances; or (iii) 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 in which ethylene biosynthesis has been silenced. Such companies include, among others: Paradigm Genetics; Aventis Crop Science; Mendel Biotechnology; Bionova Holding Corporation; Renessen LLC; Exelixis Plant Sciences, Inc.; PlantGenix, Inc.; and Eden Bioscience.

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Companies working in the field of apoptosis research include, among others: Cell Pathways, Inc.; Trevigen, Inc.; Idun Pharmaceuticals; Novartis; Introgen Therapeutics, Inc.; Genta, Inc.; and Oncogene, Inc.

### MARKETING PROGRAM

Based upon our multi-faceted 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.

### RESEARCH PROGRAM

Our subsequent research and development initiatives include: (i) further developing the lipase, DHS and Factor 5A gene technology in lettuce, melon and banana, and implementing the technology in a variety of other commercially important agricultural crops such as tomato, alfalfa and trees; (ii) testing the resultant crops for new beneficial traits such as increased yield and increased tolerance to environmental stress; and (iii) assessing the role of the DHS and Factor 5A genes in human diseases through the accumulation of additional data from pre-clinical experiments with cell lines, mammalian tissue and animal models. Our strategy for agriculture focuses on various plants to allow flexibility that will accommodate different plant reproduction strategies among the different sectors of the broad agricultural and horticultural markets.

Our research and development is performed by third party researchers at our direction, pursuant to various research and license agreements. The primary research and development effort takes place at the University of Waterloo in Ontario, Canada, where the technology was developed, and at the University of Colorado. Additional research and development is performed by our partners in connection with the Harris Moran License, the ArborGen Agreement, the Cal/West License and the Anawah Agreement, as well as through the joint venture with Rahan Meristem Ltd. in Israel. During the three months ended March 31, 2003 and



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March 31, 2002, we incurred aggregate research and development expenses of \$237,687 and \$100,949, respectively. During the nine months ended March 31, 2003 and March 31, 2002, we incurred aggregate research and development expenses of \$597,774 and \$257,925, respectively. As of March 31, 2003, our aggregate research and development expenses since inception totaled \$2,097,350.

For the three months ended March 31, 2003, approximately 50% of our research and development expenses were incurred on mammalian research applications. Since our inception, the proportion of research and development expenses on mammalian applications has increased, as compared to plant applications. This change is primarily due to the fact that our research focus on mammalian applications has increased and some of our research costs for plant applications have shifted to our research partners.

### JOINT VENTURE

On May 14, 1999, we entered into a joint venture agreement with Rahan Meristem Ltd., an Israeli company engaged in the worldwide export marketing of banana germ-plasm, referred to herein as the Rahan Joint Venture. Rahan Meristem accounts for approximately 10% of the worldwide export of banana seedlings. We have contributed, by way of a limited, exclusive, world-wide license to the Rahan Joint Venture, access to our technology, discoveries, inventions

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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 we equally own the Rahan Joint Venture.

The Rahan Joint Venture applied for and received a conditional grant that totals approximately \$340,000, which constitutes 50% of the Rahan Joint Venture's research and development budget over a four-year period, ending on May 31, 2003, 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. As of March 31, 2003, we have directly received a total of \$90,150, \$11,089 of which was received during the current quarter, from the BIRD Foundation for research and development expenses we have incurred which are associated with the research and development efforts of the Rahan Joint Venture. We expect to receive an additional installment of the BIRD Grant as our expenditures associated with the Rahan Joint Venture increase above certain levels. Our portion of the Rahan Joint Venture's aggregate expenses totaled approximately \$25,000 and \$24,500 for the nine months ended March 31, 2003 and March 31, 2002, respectively, and is included in research and development expenses. As of March 31, 2003, our portion of the Rahan Joint Venture's aggregate expenses to date totaled approximately \$155,000.

All aspects of the Rahan Joint Venture's research and development initiative are proceeding on time, or are ahead of the original schedule laid out at the inception of the Rahan Joint Venture. 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. The resultant plants will be tested to assess extended shelf-life of banana fruit and enhanced tolerance to environmental stress. Banana plants containing our technology are currently

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being tested in field trials.

Consistent with our commercialization strategy, we intend to attract other companies interested in strategic partnerships, joint ventures or licensing our technology. The Harris Moran License, the ArborGen Agreement, the Cal/West License and the Rahan Joint Venture are the first successes toward the execution of our strategy.

### INTELLECTUAL PROPERTY

#### Research and Development -----

The inventor 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 of Research and Development. Dr. Thompson is also one of our directors and owns 4.8% of the outstanding shares of our common stock, \$0.01 par value, as of March 31, 2003. On September 1, 1998, we entered into a three-year research and development agreement with the University of Waterloo and Dr. Thompson as the principal inventor, referred to herein as the First Research and Development Agreement. Effective

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September 1, 2001 and 2002, we extended the First Research and Development Agreement for an additional one-year period and two-year period, respectively. Effective May 1, 2002, we entered into a new one-year research and development agreement with the University of Waterloo and Dr. Thompson, referred to herein as the Second Research and Development Agreement. The First Research and Development Agreement and the Second Research and Development Agreement are collectively referred to herein as the Research and Development Agreements.

The Research and Development Agreements provide 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. As of March 31, 2003, we have paid the University of Waterloo an aggregate of approximately US \$1,120,000 under the First Research and Development Agreement. Under the second extension to the First Research and Development Agreement, we are obligated to pay Can \$1,092,800, which represented approximately US \$744,000 as of March 31, 2003. Under the Second Research and Development Agreement, we are obligated to pay Can \$50,000, which represented approximately US \$34,000 as of March 31, 2003. During the three month periods ended March 31, 2003 and March 31, 2002, we incurred expenses of \$94,814 and \$66,075, respectively, in connection with the Research and Development Agreements. During the nine month periods ended March 31, 2003 and March 31, 2002, we incurred expenses of \$285,551 and \$180,225, respectively, in connection with the Research and Development Agreements.

Effective May 1, 1999, we entered into a consulting agreement for research and development with Dr. Thompson. On July 1, 2001, we renewed the consulting agreement with Dr. Thompson for an additional three year term as provided for under the terms and conditions of the agreement. Effective January 1, 2003, the agreement was amended to provide for an increase in the monthly payments to Dr. Thompson from \$3,000 to \$5,000 through June 2004. The agreement shall automatically renew for an additional three year term, unless either of the parties provides the other with written notice within six months prior to the end of the term.

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In September 2002, we entered into an exclusive worldwide collaboration agreement, referred to herein as the Anawah Agreement, with Anawah, Inc. (formerly Tilligen, Inc.) to establish a research alliance to develop and commercialize certain genetically enhanced species of produce. Under the Anawah Agreement, Anawah will license its proprietary technology to us and will also perform certain transformation functions in order to develop seeds in certain species of produce that have been enhanced with our technology. The Anawah Agreement 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. In connection with the execution of the Anawah Agreement, we incurred an initial research and development fee of \$200,000, which is being amortized over the term of the research to be performed under the agreement. Upon the completion of certain development benchmarks, we will incur additional research and development fees, and upon commercialization of the enhanced produce, we will make certain royalty payments to Anawah.

Our future research and development program focuses on the discovery and development of certain gene technologies which intend to extend shelf life and to confer other positive traits on fruits, flowers, vegetables and agronomic row crops and on expanding our mammalian

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research programs. Over the next twelve months, we are planning the following research and development initiatives: (i) the development of plants that possess new beneficial traits, such as protection against drought, with emphasis on lettuce, melon, corn, forestry products, alfalfa and the other species described below with several entities, including Anawah; (ii) the development of enhanced lettuce and melon plants through the Harris Moran License; (iii) the development of enhanced trees through the ArborGen Agreement; (iv) the development of enhanced alfalfa through the Cal/West License; (v) the isolation of new genes in the Arabidopsis, tomato, lettuce, soybean, canola seed and melon plants, among others, at the University of Waterloo; (vi) the isolation of new genes in the banana plant through the Rahan Joint Venture; (vii) the transformation of seed enhanced with our technology; and (viii) assessing the function of the DHS and Factor 5A genes in human diseases at the University of Waterloo and the University of Colorado. We may further expand our research and development program beyond the initiatives listed above.

### Patent and Patent Applications

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Dr. Thompson and his colleagues, Dr. Yuwen Hong and Dr. Katalin Hudak, filed a patent application on June 26, 1998, referred to herein as the Original Patent Application, to protect their invention, which is directed to methods for controlling senescence in plants. By assignment dated June 25, 1998 and recorded with the United States Patent and Trademark Office, or PTO, on June 26, 1998, Drs. Thompson, Hong and Hudak assigned all of their rights in and to the Original Patent Application and any other applications filed in the United States or elsewhere with respect to the invention and/or improvements thereto to Senesco, L.L.C. We succeeded to the assignment and ownership of the Original Patent Application. Drs. Thompson, Hong and Hudak filed an amendment to the Original Patent Application on February 16, 1999, referred to herein as the Amended Patent Application and together with the Original Patent Application, the First Patent Application, titled "DNA Encoding A Plant Lipase, Transgenic Plants and a Method for Controlling Senescence in Plants." The Amended Patent Application serves as a continuation of the Original Patent Application. Concurrent with the filing of the Amended Patent Application with the PTO and as in the case of the Original Patent Application, Drs. Thompson, Hong and Hudak assigned to us all of their rights in and to the Amended Patent Application and any other applications filed in the United States or elsewhere with respect to

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such invention and/or improvements thereto. Drs. Thompson, Hong and Hudak have received shares of our common stock in consideration for the assignment of the First Patent Application. The inventions, which were the subject of the First Patent Application, include a method for controlling senescence of plants, a vector containing a cDNA whose expression regulates senescence, and a transformed microorganism expressing the lipase of the cDNA. We believe that the inventions provide a means for delaying deterioration and spoilage, which could greatly increase the shelf-life of fruits, vegetables, and flowers by silencing or substantially repressing the expression of the lipase gene induced coincident with the onset of senescence.

We filed a second patent application, referred to herein as the Second Patent Application, and together with the First Patent Application, collectively, the Patent Applications, on July 6, 1999, titled "DNA Encoding A Plant Deoxyhypusine Synthase, Transgenic Plants and a Method for Controlling Programmed Cell Death in Plants." The inventors named on the patent are Drs. John E. Thompson, Tzann-Wei Wang and Dongen Lily Lu. Concurrent with the filing of the Second Patent Application with the PTO and as in the case of the First Patent Application, Drs. Thompson, Wang and Lu assigned to us all of their rights in and to the Second Patent

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Application and any other applications filed in the United States or elsewhere with respect to such invention and/or improvements thereto. Drs. Thompson, Wang and Lu have received options to purchase our common stock as consideration for the assignments of the Second Patent Application. The inventions include a method for the genetic modification of plants to control the onset of either age-related or stress-induced senescence, an isolated DNA molecule encoding a senescence induced gene, and an isolated protein encoded by the DNA molecule.

We have broadened the scope of our intellectual property protection by utilizing the Patent Cooperation Treaty to facilitate international filing and prosecution of the Patent Applications. The First Patent Application was published through the Patent Cooperation Treaty in August 2000, and then between August 2001 and October 2001, was filed in Australia, Canada, China, Japan, Korea, New Zealand and Europe through the European Patent Office, which has twenty member states. Israel and Mexico are the last remaining countries in which we have opted to file that have yet to issue a filing date. The Patent Cooperation Treaty published the Second Patent Application in January 2001.

We have filed several new Continuations in Part and Divisional Patent Applications on both the First Patent Application and the Second Patent Application to protect our intellectual property pertaining to new technological developments. We have also filed one additional application (the "Third Patent Application") followed by a substantial Continuation in Part, in addition to those listed above, which pertain to the possible mammalian applicability of our technology. The Third Patent Application is focused on suppressing cell death as a prospective therapy for a wide range of diseases and the Continuation in Part focuses on accelerating cell death as a means of treating cancer. We have filed a second Continuation in Part on the Third Patent Application based on data we gathered in studies of ischemic heart tissue. We intend to continue our strategy of enhancing these new patent applications through the addition of data as it is collected.

On March 25, 2003, we were granted Patent No. 6,538,182, entitled "DNA Encoding a Plant Deoxyhypusine Synthase, A Plant Eukaryotic Initiation Factor 5A, Transgenic Plants and A Method For Controlling Senescence and Programmed Cell Death in Plants", from the PTO. This patent represents successful prosecution of some of the claims set forth in the Second Patent Application. Further divisional applications which cover other claims from the Second Patent

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Application are currently being reviewed by the PTO.

### GOVERNMENT REGULATION

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

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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 mammalian technology.

### EMPLOYEES

In addition to the scientists performing funded research for us at the University of Waterloo and the University of Colorado, as of March 31, 2003 and currently, we have four employees and one consultant, four of whom are executive officers and are involved in our management.

The officers are assisted by a Scientific Advisory Board that consists of prominent experts in the fields of plant and mammalian cell biology. Alan Bennett, Ph.D., who serves as the Chairman of the Scientific Advisory Board, is the Executive Director 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. Russell L. Jones, Ph.D., who serves as a member of the Scientific Advisory Board, is a professor at the University of California, Berkeley and an expert in plant cell biology and cell death. Dr. Jones is also an editor of *Planta*, *Annual Review of Plant Physiology and Plant Molecular Biology* as well as *Research Notes in Plant Science*. Additionally, he has held positions on the editorial boards of *Plant Physiology* and *Trends in Plant Science*.

In addition to his service on the Scientific Advisory Board, we utilize Dr. Bennett as a consultant experienced in plant transformation. Effective November 1, 2001, we had entered into a one-year consulting agreement with Dr. Bennett, which provided for monthly payments of \$2,400 to Dr. Bennett through October 31, 2002. Effective November 1, 2002, we entered into another one-year consulting

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agreement with Dr. Bennett on the same terms and conditions.

Furthermore, pursuant to the Research and Development Agreements, the majority of our research and development activities are conducted at the University of Waterloo under the supervision of Dr. Thompson. We utilize the University's substantial research staff including graduate and post-graduate researchers.

We have also undertaken pre-clinical apoptosis research at the University of Colorado under the supervision of Dr. Dinarello. 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.

We may hire additional employees over the next twelve months to meet the needs created by possible expansion of our operations.

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### SAFE HARBOR STATEMENT

The statements contained in this Quarterly Report on Form 10-QSB 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 Anawah Agreement and the Research and Development Agreements, the successful implementation of the Rahan Joint Venture, the conversion of the letter of intent with the Tianjin Academy of Agricultural Sciences into an executed agreement, statements relating to our Patent Applications, the anticipated longer term growth of our business, and the timing of the projects and trends in future operating performance are examples of such forward-looking statements. The forward-looking statements include risks and uncertainties, including, but not limited to, the timing of revenues due to the variability in size, scope and duration of research projects, regulatory delays, research study results which lead to cancellations of research projects, and other factors, including general economic conditions and regulatory developments, not within our control. The factors discussed herein and expressed from time to time in our filings with the Securities and Exchange Commission could cause actual results and developments to be materially different from those expressed in or implied by such statements. The forward-looking statements are made only as of the date of this filing, and we undertake no obligation to publicly update such forward-looking statements to reflect subsequent events or circumstances.

### FACTORS THAT MAY AFFECT OUR BUSINESS, FUTURE OPERATING RESULTS AND FINANCIAL CONDITION

The more prominent risks and uncertainties inherent in our business are described below. However, additional risks and uncertainties may also impair our

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business operations. If any of the following risks actually occur, our business, financial condition or results of operations may suffer.

WE HAVE A LIMITED OPERATING HISTORY AND HAVE INCURRED SUBSTANTIAL LOSSES AND EXPECT FUTURE LOSSES.

We are a developmental 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 \$9,023,046 at March 31, 2003. We have generated minimal revenues by licensing certain of our technology 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 over the next two to three 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.

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WE DEPEND ON A SINGLE PRINCIPAL TECHNOLOGY.

Our primary business is the development and commercial exploitation of technology to identify, isolate, characterize, and silence genes which control the aging and death of cells in plants and mammals. Our future revenue and profitability critically depend upon our ability to successfully develop senescence and apoptosis gene technology and later market and license such technology at a profit. We have conducted experiments on certain crops with favorable results and have conducted certain preliminary cell-line 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 all crops or mammalian 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 plants or mammals 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.

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 developed, at the University of Colorado, at Anawah, Inc., formerly known as Tilligen, Inc., 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, would have a material adverse effect on our ability to develop and exploit our technology.

WE HAVE SIGNIFICANT FUTURE CAPITAL NEEDS.

As of March 31, 2003, we had cash and highly-liquid investments valued at \$3,121,347 and working capital of \$2,864,609. We believe that we can operate according to our current business plan for at least twelve months using our available reserves. To date, we have generated minimal revenues and anticipate

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that our operating costs will exceed any revenues generated over the next several years. Therefore, we anticipate that we will be required to raise additional capital in the future in order to operate according to our current business plan. We may require additional funding in less than twelve months, and additional funding may not be available on favorable terms, if at all. In addition, in connection with such 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 granted, as of March 31, 2003, we had 12,131,802 shares of common stock authorized but unissued, which may be issued from time

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to time by our board of directors without stockholder approval. 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 inception, we have financed all of our operations through private equity financings. Our future capital requirements depend on numerous factors, including:

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

OUR BUSINESS DEPENDS ON OUR PATENTS, LICENSES AND PROPRIETARY RIGHTS AND THE ENFORCEMENT OF THESE RIGHTS.

As a result of the substantial length of time and expense associated with developing products and bringing them to the marketplace in the agricultural and biotechnology 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:

- o our ability to obtain patent protection for technologies, products and processes;
- o our ability to preserve trade secrets; and
- o 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 one patent by the PTO. We have also filed patent applications in the United States for our technology, which technology is vital to our primary business, as well as several Continuations in Part on these patent applications. Our success depends in part upon the enforcement of our



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patent rights and whether patents are granted for our pending patent applications.

Furthermore, although we believe that our technology is unique and will not violate or infringe upon the proprietary rights of any third party, there can be no assurance that such 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 guarantee that:

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- o our patent applications will result in the issuance of patents;
- o any patents issued or licensed to us will be free from challenge and that if challenged, would be held to be valid;
- o any patents issued or licensed to us will provide commercially significant protection for our technology, products and processes;
- o other companies will not independently develop substantially equivalent proprietary information which is not covered by our patent rights;
- o other companies will not obtain access to our know-how;
- o other companies will not be granted patents that may prevent the commercialization of our technology; or
- o 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.

If any relevant claims of third-party patents which 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 guarantee that such licenses would be available or, if available, would be on acceptable terms.

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.

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.

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

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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.

Our success also 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 guarantee adequate protection for our trade secrets, know-how or other proprietary information against unauthorized use or disclosure. We occasionally provide information to research collaborators in academic institutions and request the collaborators to conduct certain tests. We cannot guarantee 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

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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 have a material adverse effect on our business and financial results.

WE WILL HAVE TO PROPERLY MANAGE OUR GROWTH.

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. Although we do not presently intend to 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. Our failure to effectively respond to changes brought about by our growth may have a material adverse effect on our business and financial results.

WE HAVE NO MARKETING OR SALES HISTORY AND DEPEND ON THIRD-PARTY MARKETING PARTNERS.

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, such 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, we will not be able to generate significant revenue.

WE DEPEND ON PARTNERS TO DEVELOP AND MARKET PRODUCTS.

In its current state of development, our technology is not ready to be

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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 AGRICULTURAL AND BIOTECHNOLOGY INDUSTRIES IS INTENSE AND TECHNOLOGY IS CHANGING RAPIDLY.

Many agricultural and 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

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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. Such companies include: Paradigm Genetics; Aventis Crop Science; Mendel Biotechnology; Renessen LLC; Exelixis Plant Sciences, Inc.; PlantGenix, Inc.; and Eden Bioscience, among others. Some of the companies involved in apoptosis research include: Cell Pathways, Inc.; Trevigen, Inc.; Idun Pharmaceuticals; Novartis; Introgen Therapeutics, Inc.; Genta, Inc.; and Oncogene, 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.

OUR BUSINESS IS SUBJECT TO VARIOUS GOVERNMENT REGULATIONS.

At present, the U.S. federal government regulation of biotechnology is divided among three agencies: (i) 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; (ii) the EPA regulates activity related to the invention of plant pesticides and herbicides, which may include certain kinds of transgenic plants; and (iii) 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.

We believe that our current activities, which to date have been confined to

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research and development efforts, do not require licensing or approval by any governmental regulatory agency. However, federal, state and foreign regulations relating to crop protection products and human health applications developed through biotechnology are subject to public concerns and political circumstances, and, as a result, regulations have changed and may change substantially in the future. Accordingly, we may become subject to governmental regulations or approvals or become subject to licensing requirements in connection with our research and development efforts. We may also be required to obtain such licensing or approval from the governmental regulatory agencies described above, or from state agencies, prior to the commercialization of our genetically transformed plants and mammalian technology. In addition, our marketing partners who utilize our technology or sell products grown with our technology may be subject to government regulations. The imposition of unfavorable governmental regulations on our technology or the failure to obtain licenses or approvals in a timely manner would have a material adverse effect on our business.

THE HUMAN HEALTH APPLICATIONS OF OUR TECHNOLOGY ARE SUBJECT TO A LENGTHY AND UNCERTAIN REGULATORY PROCESS.

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 mammalian technology must be approved by the regulatory agencies of

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foreign governments. Prior to filing a new drug application or biologics license application with the FDA, we would have to perform extensive pre-clinical testing and clinical trials, which could take several years and may require substantial expenditures. Any failure to obtain regulatory approval could delay or prevent us from commercializing our mammalian technology.

CLINICAL TRIALS ON OUR HUMAN HEALTH APPLICATIONS MAY BE UNSUCCESSFUL IN DEMONSTRATING EFFICACY AND SAFETY, WHICH COULD DELAY OR PREVENT REGULATORY APPROVAL.

Clinical trials may reveal that our mammalian technology is ineffective or harmful, 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 pre-clinical, 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.

CONSUMERS MAY NOT ACCEPT OUR TECHNOLOGY.

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.

We are highly dependent on our scientific advisors, consultants and

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third-party research partners. Dr. Thompson is the inventor of our technology and the driving force behind our current research. The loss of Dr. Thompson would severely hinder our technological development. 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. We do not maintain key person life insurance on any member of management. The failure to attract and retain key personnel could limit our growth and hinder our research and development efforts.

CERTAIN PROVISIONS OF OUR CHARTER, BY-LAWS AND DELAWARE LAW COULD MAKE A TAKEOVER DIFFICULT.

Certain provisions of our certificate of incorporation and by-laws could make it more difficult for a third party to acquire control of us, even if the change in control would be beneficial to stockholders. Our certificate of incorporation authorizes our board of directors to issue, without stockholder approval, except as may be required by the rules of the American Stock Exchange, 5,000,000 shares of preferred stock with voting, conversion and other rights and preferences that could adversely affect the voting power or other rights of the holders of our common stock. Similarly, our by-laws do not restrict our board of directors from issuing preferred stock without stockholder approval.

In addition, we are subject to the Business Combination Act of the Delaware General Corporation Law which, subject to certain exceptions, restricts certain transactions and business combinations between a corporation and a stockholder owning 15% or more of the corporation's

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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.

OUR MANAGEMENT AND OTHER AFFILIATES HAVE SIGNIFICANT CONTROL OF OUR COMMON STOCK AND COULD CONTROL OUR ACTIONS IN A MANNER THAT CONFLICTS WITH OUR INTERESTS AND THE INTERESTS OF OTHER STOCKHOLDERS.

As of March 31, 2003, our executive officers, directors and affiliated entities together beneficially own approximately 45.7% of the outstanding shares of our common stock, assuming the exercise of options and warrants which are currently exercisable, held by these stockholders. As a result, these stockholders, acting together, will be able to exercise considerable 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 OUTSTANDING OPTIONS AND WARRANTS TO PURCHASE OUR COMMON STOCK.

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As of March 31, 2003, we have granted options outside of our stock option plan to purchase 10,000 shares of our common stock and warrants to purchase 4,207,153 shares of our common stock. In addition, as of March 31, 2003, we have reserved 3,000,000 shares of our common stock for issuance upon the exercise of options granted pursuant to our stock option plan, 1,771,000 of which have been granted and 1,229,000 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.

### SHARES ELIGIBLE FOR PUBLIC SALE.

As of March 31, 2003, we had 11,880,045 shares of our common stock issued and outstanding, of which approximately 8,000,000 shares are registered pursuant to a registration statement on Form S-3, which was deemed effective on June 28, 2002, and the remainder of which are in the public float. In addition, we have registered 3,000,000 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 adversely affect the market price of our common stock.

### OUR STOCK HAS A LIMITED TRADING MARKET.

Our common stock is quoted on the American Stock Exchange and currently has a limited trading market. We cannot assure 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.

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### OUR STOCK PRICE MAY FLUCTUATE.

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:

- o quarterly variations in operating results;
- o the progress or perceived progress of our research and development efforts;
- o changes in accounting treatments or principles;
- o announcements by us or our competitors of new technology, product and service offerings, significant contracts, acquisitions or strategic relationships;
- o additions or departures of key personnel;
- o future offerings or resales of our common stock or other securities;
- o stock market price and volume fluctuations of publicly-traded companies in general and development companies in particular; and
- o general political, economic and market conditions.

IF OUR COMMON STOCK IS DELISTED FROM THE AMERICAN STOCK EXCHANGE, IT MAY BE SUBJECT TO THE "PENNY STOCK" REGULATIONS WHICH MAY AFFECT THE ABILITY OF OUR STOCKHOLDERS TO SELL THEIR SHARES.

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 Nasdaq 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 the American Stock Exchange delists our common stock, it could be deemed a penny stock, which imposes additional sales practice requirements on broker-dealers that sell such securities to persons other than certain qualified investors. For transactions

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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 common stock were subject to the rules on penny stocks, the market liquidity for our common stock could be severely and adversely affected. Accordingly, the ability of holders of our common stock to sell their shares in the secondary market may also be adversely affected.

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 terrorist attacks of September 11, 2001, the conflict in Iraq, the current crisis in the Middle East and the outbreak of SARS in China, 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 crisis in Israel continues to escalate, the Rahan Joint Venture could be adversely affected. In addition, the SARS crisis could continue to affect the pace of discussions related to the letter of intent with the Tianjin Academy of Agricultural Sciences.

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### LIQUIDITY AND CAPITAL RESOURCES

#### OVERVIEW

As of March 31, 2003, our cash balance and investments totaled \$3,121,347, and we had working capital of \$2,864,609. As of March 31, 2003, we had a federal tax loss carry-forward of approximately \$7,012,000 and a state tax loss carry-forward of approximately \$3,053,000 to offset future taxable income. There can be no assurance, however, that we will be able to take advantage of any or all of such tax loss carry-forwards, if at all, in future fiscal years.

#### FINANCING NEEDS

We have research and development agreements with the University of Waterloo, which provide for research and development services to be performed at the direction of our company and Dr. Thompson. Effective September 1, 2002, we extended our First Research and Development Agreement for an additional two-year period, in the amount of Can \$1,092,800, which represented approximately US \$744,000 as of March 31, 2003. Effective May 1, 2002, we entered into a Second Research and Development for a one-year period, under which we are obligated to pay Can \$50,000, which represented approximately US \$34,000 as of March 31, 2003.

In September 2002, we entered into the Anawah Agreement, which provides us with a license to use their technology to develop and commercialize enhanced species of produce. The agreement 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. In connection with the execution of the agreement, we incurred an initial fee of \$200,000, which is being amortized over the term of the research to be performed under the agreement. Upon the completion of certain benchmarks, we will incur additional research and development fees and will make certain royalty payments to Anawah.

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We lease office space in New Brunswick, New Jersey for a monthly rental fee of \$2,838, subject to certain escalations for our proportionate share of increases in the building's operating costs. The lease expires in May 2006.

We have employment agreements with certain employees, some of whom are also our stockholders, which provide for a base compensation and additional amounts, as set forth in each agreement. The agreements expire between January 2004 and October 2004. As of March 31, 2003, future base compensation to be paid under the agreements through October 2004 totals \$355,021.

We have consulting agreements with each of Dr. Thompson and Dr. Bennett, which provide for monthly payments in exchange for research and development services. The agreement with Dr. Thompson provides for monthly payments of \$5,000 through June 2004, and is automatically renewable unless terminated by either party within six months prior to the end of the term. The agreement with Dr. Bennett provides for monthly payments of \$2,400 until November 2003.

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In February 2002, we entered into scientific advisory board agreements with each of Dr. Russell A. Jones and Dr. Charles A. Dinarello, which provide for payments of \$10,000 per year, payable in quarterly installments, to each of Drs. Jones and Dinarello, respectively, through February 28, 2005 and may be terminated by either party within 90 days written notice.

In December 2002, we entered into a six-month financial consulting agreement with Perrin, Holden & Davenport Capital Corp. The agreement was effective on February 1, 2003 and provides for monthly payments of \$5,000.

The following table lists our cash contractual obligations as of March 31, 2003:

Contractual Obligations	Total	Payments Due by Period		
		Less than 1 year	1 - 3 years	4 - 5 years
Research and Development Agreements (1)	\$ 491,417	\$ 347,667	\$ 143,750	\$ -
Facility, Rent and Operating Leases (2)	\$ 105,006	\$ 34,056	\$ 68,112	\$ 2,838
Employment, Consulting and Scientific Advisory Board Agreements (3)	\$ 538,487	\$ 390,154	\$ 148,333	\$ -
<b>Total Contractual Cash Obligations</b>	<b>\$ 1,134,910</b>	<b>\$ 771,877</b>	<b>\$ 360,195</b>	<b>\$ 2,838</b>

(1) Certain of our research and developments agreements disclosed herein provide that payment is to be made in Canadian dollars and, therefore, the



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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 sales and marketing efforts.

### CAPITAL RESOURCES

Since inception, we have generated revenues of \$210,000 in connection with the initial fees received under the Harris Moran License, the ArborGen Agreement and the Cal/West License, none of which was generated during the three months ended March 31, 2003. 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

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commercialization of our technology. While we do not expect to generate significant revenues from the licensing of our technology in the near future, 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.

In November 2001, we entered into a worldwide exclusive development and license agreement with Harris Moran Seed Company 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. In connection with the Harris Moran License, we received an initial license fee of \$125,000 in November 2001. Upon the completion of certain marketing and development benchmarks set forth in the Harris Moran License, we will receive an additional \$3,875,000 in development payments over a multi-year period along with certain royalties upon commercial introduction.

In June 2002, we entered into a three-year worldwide exclusive development and option agreement with ArborGen to develop our technology in certain species of trees. In connection with the ArborGen Agreement, we received an initial development fee of \$75,000 in July 2002. Upon the completion of certain development benchmarks set forth in the ArborGen Agreement, we will receive an additional \$225,000 in periodic development payments over the term of the ArborGen Agreement. The ArborGen Agreement also grants ArborGen an option to acquire an exclusive worldwide license to commercialize our technology in various forestry products, and upon the execution of a license agreement, we will receive a license fee and royalties from ArborGen.

In September 2002, we entered into an exclusive development and license agreement with Cal/West to develop 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

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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. In connection with the execution of the Cal/West License, we received an initial fee of \$10,000 in September 2002. Upon the completion of certain development benchmarks, we will receive an additional \$20,000 in periodic payments, and upon the commercialization of certain products, we will receive royalty payments from Cal/West.

In each of September 2002 and February 2003, we received a payment of \$11,089 from the BIRD Foundation for research and development expenses that we have incurred in connection with the Rahan Joint Venture. We anticipate receiving one additional payment from the BIRD Grant in the future to assist in funding the Rahan Joint Venture, subject to the Rahan Joint Venture achieving its stated research and development objectives.

In December 2002, pursuant to the New Jersey Technology Tax Credit Transfer Program (the "Program"), we received approval from the New Jersey Economic Development Authority (the "EDA") to sell our New Jersey net operating loss tax benefit in the amount of \$151,390 for the fiscal year ended June 30, 2001. In December 2002, we sold our entire New Jersey net operating loss tax benefit and received net proceeds of \$130,952. We may apply to participate in the Program to sell our New Jersey net operating loss tax benefit in the amount of approximately \$132,000 for the fiscal year ended June 30, 2002. An application must be submitted to the EDA by June 30, 2003. However, there can be no assurance that we will be approved to participate in

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the Program for the fiscal year ended June 30, 2002 or if approved, that we will be able to sell all or part of our New Jersey net operating loss tax benefit.

We anticipate that, based upon our current cash and investments, that we will be able to fund operations for at least the next twelve 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 the milestones set forth in our current licensing agreements, and through the consummation of additional licensing agreements for our technology.

### CHANGES TO CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Our critical accounting policies and estimates are set forth in our Annual Report on Form 10-KSB for the fiscal year ended June 30, 2002, as updated by our Quarterly Reports on Form 10-QSB for the quarterly periods ended September 30, 2002 and December 31, 2002. The following sets forth changes to such critical accounting policies and estimates:

We are amortizing the cost of an initial \$200,000 non-refundable payment made under a research agreement over the estimated eighteen-month term of the project. As of March 31, 2003, \$133,333, which will be amortized over the remaining estimated twelve months of the research project, is included in our balance sheet as a prepaid expense.

As of March 31, 2003, we have determined that the estimated future undiscounted cash flows related to our patent and patent applications will be sufficient to recover their carrying value.

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### RESULTS OF OPERATIONS

Three Months Ended March 31, 2003 and Three Months Ended March 31, 2002  
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We are a development stage company. We had no revenue during the three-month periods ended March 31, 2003 and March 31, 2002.

Operating expenses consist of general and administrative expenses, research and development expenses and stock-based compensation. Operating expenses for the three-month periods ended March 31, 2003 and March 31, 2002 were \$532,090 and \$495,495, respectively, an increase of \$36,595, or 7.4%. This increase in operating expenses was primarily the result of an increase in research and development expenses, partially offset by a decrease in general and administrative expenses and stock-based compensation.

General and administrative expenses consist primarily of payroll and benefits, professional and consulting services, investor relations, office rent and corporate insurance. General and administrative expenses for the three-month periods ended March 31, 2003 and March 31, 2002 were \$294,403 and \$300,400, respectively, a decrease of \$5,997, or 2.0%. This decrease was primarily the result of a decrease in payroll and professional fees, mostly offset by an increase in investor relations fees and depreciation and amortization. Payroll decreased during the three-month period ended March 31, 2003, primarily as a result of an adjustment to the amount of compensation that had been accrued to a former employee. Professional fees decreased during the three-month period ended March 31, 2003, primarily as a result of a decrease in legal and accounting fees. During the three-month period ended March 31, 2002, we incurred additional professional fees related to our listing on the American Stock Exchange. In connection with our strategy to increase our recognition in the public market, expenses related to investor relations increased during the three-month period ended March 31, 2003, primarily as a result of fees incurred for our investor relations firm, listing fees for the American Stock Exchange, financial consulting fees and costs associated with presentations to various analysts, money managers and funds, all of which were not incurred during the three months ended March 31, 2002. Also, in connection with our strategy to increase our recognition in the public market, during the three months ended March 31, 2003, we abandoned our original corporate website and initiated a new and more user-friendly corporate website. As a result, we fully depreciated the remaining cost of the original website during the three months ended March 31, 2003.

Research and development expenses consist primarily of fees associated with the Research and Development Agreements, costs associated with the research being performed at the University of Colorado, amortization of the initial fee in connection with the Anawah Agreement and consulting fees to the Scientific Advisory Board, Dr. Thompson and Dr. Bennett. Research and development expenses for the three-month periods ended March 31, 2003 and March 31, 2002 were \$237,687 and \$100,949, respectively, an increase of \$136,738, or 135.5%. This increase was primarily the result of an increase in the research and development costs incurred in connection with the expanded research undertaken by the University of Waterloo, the implementation of our mammalian cell research programs and the implementation of new plant research being conducted in connection with the Anawah Agreement.

Stock-based compensation consists of non-employee stock options and warrants granted and vesting as consideration for certain professional, consulting, legal and advertising services. Stock-based compensation for the three-month periods ended March 31, 2003 and March 31, 2002 was \$0 and \$94,146, respectively, a decrease of \$94,146, or 100.0%. The decrease was

primarily the result of a decrease in stock options granted and becoming vested to members of the Scientific Advisory Board and consultants and warrants granted and becoming vested to certain financial advisors during the three-month period ended March 31, 2003.

Nine Months Ended March 31, 2003 and Nine Months Ended March 31, 2002  
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Revenue for the nine-month period ended March 31, 2003 was \$10,000, which represented the initial license fee in connection with the Cal/West License. Revenue for the nine-month period ended March 31, 2002 was \$125,000, which represented the initial license fee in connection with the Harris Moran License.

Operating expenses consist of general and administrative expenses, research and development expenses and stock-based compensation. Operating expenses for the nine-month periods ended March 31, 2003 and March 31, 2002 were \$1,791,367 and \$1,869,639, respectively, a decrease of \$78,272, or 4.2%. This decrease in operating expenses was primarily the result of a decrease in stock-based compensation which was mostly offset by an increase in general and administrative and research and development expenses.

General and administrative expenses consist primarily of payroll and benefits, professional and consulting services, investor relations, office rent and corporate insurance. General and administrative expenses for the nine-month periods ended March 31, 2003 and March 31, 2002 were \$1,056,416 and \$976,528, respectively, an increase of \$79,888, or 8.2%. This increase was primarily the result of an increase in payroll and benefits and investor relations, partially offset by a decrease in consulting services and recruiting costs. Consulting services decreased during the nine-month period ended March 31, 2003, as a result of the hiring of Mr. Galton on October 4, 2001, as our President and Chief Executive Officer. From July 1, 2001 through October 4, 2001, the positions of President and CEO were held by two non-employee board members and accordingly, their compensation for those functions was categorized as consulting services. The decrease in consulting services was partially offset by an increase in employee payroll and benefits during the nine-month period ended March 31, 2003 as a result of the President and CEO compensation being classified as payroll instead of consulting services. In connection with our strategy to increase our recognition in the public market, expenses related to investor relations increased during the nine-month period ended March 31, 2003, primarily as a result of fees incurred for our investor relations firm, listing fees for the American Stock Exchange, financial consulting fees and costs associated with presentations to various analysts, money managers and funds, all of which were not incurred during the nine months ended March 31, 2002.

Research and development expenses consist primarily of fees associated with the Research and Development Agreements, costs associated with the research being performed at the University of Colorado, amortization of the initial fee in connection with the Anawah Agreement and consulting fees to the Scientific Advisory Board, Dr. Thompson and Dr. Bennett. Research and development expenses for the nine-month periods ended March 31, 2003 and March 31, 2002 were \$597,774 and \$257,925, respectively, an increase of \$339,849, or 131.8%. This increase was primarily the result of an increase in the research and development costs incurred in connection with the expanded research undertaken by the University of Waterloo, the implementation of our mammalian cell research programs and the implementation of new plant research being conducted in connection with the Anawah Agreement.

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Stock-based compensation consists of non-employee stock options and warrants granted and vesting as consideration for certain professional, consulting, legal and advertising services. Stock-based compensation for the nine-month periods ended March 31, 2003 and March 31, 2002 was \$137,177 and \$635,186, respectively, a decrease of \$498,009, or 78.4%. The decrease was primarily the result of a decrease in stock options granted and becoming vested to members of the Scientific Advisory Board and consultants and warrants granted and becoming vested to certain financial advisors during the nine-months ended March 31, 2003.

Period From Inception on July 1, 1998 through March 31, 2003  
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From inception of operations on July 1, 1998 through March 31, 2003, we had revenues of \$210,000, which consisted of the initial license fees in connection with our various development and license agreements.

We have incurred losses each year since inception and have an accumulated deficit of \$9,023,046 at March 31, 2003. We expect to continue to incur losses as a result of expenditures on research, product development and administrative activities.

We do not expect to generate significant revenues from product sales for approximately the next two 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 Agreement and the Cal/West License to develop and commercialize our technology in certain varieties of lettuce, melons, trees and alfalfa. These agreements provide that, upon the achievement of certain benchmarks, we will receive an aggregate of \$4,130,000 in development payments over a multi-year period. The Harris Moran License and the Cal/West License also provide for royalty payments to us upon commercial introduction. The ArborGen Agreement contains an option for ArborGen to execute a license to commercialize developed products, and upon the execution of a license agreement, we will receive a license fee and royalties from ArborGen. The Cal/West License contains an option for Cal/West to develop our technology in various other forage crops.

Consistent with our commercialization strategy, we intend to attract other companies interested in strategic partnerships or licensing our technology that 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 commercializable technology.

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### ITEM 3. CONTROLS AND PROCEDURES.

#### EVALUATION OF DISCLOSURE CONTROLS AND PROCEDURES

Based on their evaluation of our disclosure controls and procedures, as defined in Rules 13a-14(c) and 15d-14(c) under the Securities Exchange Act of 1934, as of a date within 90 days of the filing date of this Quarterly Report on Form 10-QSB, our President and Chief Executive Officer, considered our principal executive officer, and our Chief Financial Officer, considered our principal financial and accounting officer, have concluded that our disclosure controls and procedures are designed to ensure that information we are required to disclose in the reports we file or submit under the Securities Exchange Act of

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1934 is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and are operating in an effective manner.

CHANGES IN INTERNAL CONTROLS

There were no significant changes in our internal controls or in other factors that could significantly affect these controls subsequent to the date of their most recent evaluation.

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PART II. OTHER INFORMATION.  
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ITEM 5. OTHER INFORMATION.

None.

ITEM 6. EXHIBITS AND REPORTS ON FORM 8-K.

(a) Exhibits.

99.1 Certification of principal executive officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. 1350.

99.2 Certification of principal financial and accounting officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. 1350.

(b) Reports on Form 8-K.

None.

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SIGNATURES

In accordance with the requirements of the Securities Exchange Act of 1934, the registrant caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

SENESCO TECHNOLOGIES, INC.

DATE: May 15, 2003

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

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DATE: May 15, 2003

By: /s/ Joel Brooks

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Joel Brooks, Chief Financial Officer  
and Treasurer  
(Principal Financial and Accounting Officer)

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CERTIFICATION

I, Bruce C. Galton, certify that:

1. I have reviewed this quarterly report on Form 10-QSB of Senesco Technologies, Inc.;
2. Based on my knowledge, this quarterly report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this quarterly report;
3. Based on my knowledge, the financial statements, and other financial information included in this quarterly report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this quarterly report;
4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures, as defined in Exchange Act Rules 13a-14 and 15d-14, for the registrant and we have:
  - a) designed such disclosure controls and procedures to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this quarterly report is being prepared;
  - b) evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this quarterly report; and
  - c) presented in this quarterly report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of a date within 90 days prior to the filing date of this quarterly report;
5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of the registrant's board of directors, or persons performing the equivalent function:
  - a) all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to

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record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and

b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and

6. The registrant's other certifying officers and I have indicated in this quarterly report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: May 15, 2003

/s/ Bruce C. Galton

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

### CERTIFICATION

I, Joel Brooks, certify that:

1. I have reviewed this quarterly report on Form 10-QSB of Senesco Technologies, Inc.;
2. Based on my knowledge, this quarterly report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this quarterly report;
3. Based on my knowledge, the financial statements, and other financial information included in this quarterly report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this quarterly report;
4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures, as defined in Exchange Act Rules 13a-14 and 15d-14, for the registrant and we have:
  - a) designed such disclosure controls and procedures to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this quarterly report is being prepared;
  - b) evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this quarterly report; and
  - c) presented in this quarterly report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of a date within 90 days prior to the filing date of



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this quarterly report;

5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of the registrant's board of directors, or persons performing the equivalent function:
  - a) all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and
  - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and
6. The registrant's other certifying officers and I have indicated in this quarterly report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: May 15, 2003

/s/ Joel Brooks

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Joel Brooks  
Chief Financial Officer and Treasurer  
(principal financial and accounting officer)