# UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

	FORM	10-QSB	
(Mark (	one)		
[ X ]		Section 13 or 15(d) of the Securit	ies
	Exchange Act of 1934 For the quarterly period ended	December 31, 2003	
[ ]	Transition Report pursuant to Exchange Act of 1934	Section 13 or 15(d) of the Securit	ies
	For the transition period from	to	
	Commission Fil	e No. 001-31326	
		OLOGIES, INC.	
		suer as Specified in Its Charter)	
г	Delaware	84-1368850	
	or Other Jurisdiction of oration or Organization)	(I.R.S. Employer Identification No.)	
	orge Street, Suite 420, New Brunsw		3901
		l Executive Offices)	
	(732) 2	96-8400	
	(Issuer's Telephone Numb	er, Including Area Code)	
Sectior months	n 13 or 15(d) of the Securities (or for such shorter period that	led all reports required to be filed Exchange Act of 1934 during the past the registrant was required to file s uch filing requirements for the past	t 12 such
	Yes: X	No:	
	ate the number of shares outstan stock, as of February 9, 2004:	ding of each of the Issuer's classes	of
	Class	Number of Shares	
Common	Stock, \$0.01 par value	13,108,243	
	-		
TI	cansitional Small Business Disclos		
	Yes: 	No: X 	
	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.

(A DEVELOPMENT STAGE COMPANY)

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### CONDENSED CONSOLIDATED BALANCE SHEET

December 31, June 30. 2003 2003 (unaudited) ASSETS CURRENT ASSETS: \$ 315,55 2,099,295 280,967 1,301,095 Cash and cash equivalents..... Short-term investments..... 65,297 Prepaid expenses and other current assets..... 185,535 1,647,359 2,604,760 Total Current Assets..... 62,935 75,203 Property and equipment, net..... 742,342 578,810 Intangibles, net..... 7,187 Security deposit..... 7,187 \$ 2,459,823 \$ 3,265,960 TOTAL ASSETS.... -----\_\_\_\_\_ LIABILITIES AND STOCKHOLDERS' EQUITY CURRENT LIABILITIES: 27,014 56,136 Accounts payable..... 402,799 263,160 Accrued expenses.... 429,813 Total Current Liabilities..... 319,296 90.150 90.150 Grant payable.... TOTAL LIABILITIES.... 519,963 409,446 STOCKHOLDERS' EQUITY: Preferred stock, \$0.01 par value; authorized 5,000,000 shares, issued and outstanding 11,992,179 and 11,880,045 shares..... 119,922 118,800 Capital in excess of par..... 13,515,265 12,234,373 Deficit accumulated during the development stage..... (11,695,327) (9,496,659)Total Stockholders' Equity..... 1,939,860 2,856,514 TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY..... 2,459,823 3,265,960

### (A DEVELOPMENT STAGE COMPANY)

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (unaudited)

	For the Three Months Ended December 31, 2003	For the Three Months Ended December 31, 2002	For the Six Months Ended December 31, 2003	For the Six Months Ended December 31, 2002	From Inception on July 1, 1998 through December 31, 2003
Revenue	\$ 	\$ 	\$ 	\$ 10,000 	\$ 210,000
Operating Expenses:  General and administrative  Research and development	597,527 301,144	496,286 215,803	1,736,919 573,145	884,310 374,967	9,312,890 3,164,391
Total Operating Expenses	898 <b>,</b> 671	712,089	2,310,064	1,259,277	12,477,281
Loss From Operations	(898,671)	(712,089)	(2,310,064)	(1,249,277)	(12,267,281)
Sale of state income tax loss Interest income, net	91,448 9,037	130,952 18,727	91,448 19,948	130,952 41,283	433,282 138,672
Net Loss	\$ (798,186) =======	\$ (562,410) =======	\$(2,198,668) =======	\$ (1,077,042) =======	\$ (11,695,327) ========
Basic and Diluted Net Loss Per Common Share	\$ (0.07)	\$ (0.05)	\$ (0.18)	\$ (0.09) =====	
Basic and Diluted Weighted Average Number of Common Shares Outstanding	11,950,053	11,880,045	11,915,049	11,880,045	

#### (A DEVELOPMENT STAGE COMPANY)

CONDENSED CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY

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

(unaudited)

Deficit Accumulated Capital in During the Development Stage Excess of Common Stock Par Value Total ----------Shares Amount Common stock outstanding...... 2,000,462 \$ 20,005 (20,005) Contribution of capital..... 85.179 85,179 Issuance of common stock in reverse merger on January 22, 1999 at \$0.01 per share........... 3,400,000 34.000 (34,000) Issuance of common stock for cash on May 21, 1999 at 7,592 1,988,390 1.995.982 Issuance of common stock for placement fees on May 21, 1999 at 53,144 531 (531) \$0.01 per share..... Issuance of common stock for cash on January 26, 2000 at \$2.867647 per share..... 17,436 174 49,826 50,000 Issuance of common stock for cash on January 31, 2000 at \$2.87875 per share..... 34,737 347 99,653 100,000 Issuance of common stock for cash on February 4, 2000 at 2.934582 per share..... 852 250,000 85,191 249,148 Issuance of common stock for cash on March 15, 2000 at \$2.527875 per share..... 51,428 514 129,486 130,000 Issuance of common stock for cash on June 22, 2000 at \$1.50 per 14,718 2,192,833 2,207,551

(continued)

### (A DEVELOPMENT STAGE COMPANY)

CONDENSED CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY FROM INCEPTION ON JULY 1, 1998 THROUGH DECEMBER 31, 2003

(unaudited)

	Common	Stock	Capital in Excess of Par Value	Deficit Accumulated During the Development Stage	Total
	Shares	Amount			
Commissions, legal and bank fees associated with issuances for the year ended June 30, 2000			\$ (260,595)		\$ (260,595)
Fair market value of options and warrants vested during the year ended June 30, 2000			873 <b>,</b> 779		873,779
Fair market value of warrants vested during the year ended June 30, 2001			80,700		80,700
Issuance of common stock and warrants for cash from November 30, 2001 through April 17, 2002	3,701,430	\$ 37,014	6,440,486		6,477,500
Issuance of common stock and warrants associated with bridge loan conversion on December 3, 2001	305,323	3,053	531,263		534,316
Commissions, legal and bank fees associated with issuances for the year ended June 30, 2002			(846,444)		(846,444)
Fair market value of options and warrants vested during the year ended June 30, 2002			577,708		577 <b>,</b> 708
Fair market value of options and warrants vested during the year ended June 30, 2003			97,497		97,497

(continued)

### (A DEVELOPMENT STAGE COMPANY)

CONDENSED CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY FROM INCEPTION ON JULY 1, 1998 THROUGH DECEMBER 31, 2003

(unaudited)

	Commor	n Stock	Capital in Excess of Par Value	*	Total
	Shares	Amount			
Fair market value of options and warrants vested during the six month period ended December 31, 2003			\$ 1,084,888		\$ 1,084,888
and other transactions during the six month period ended December 31, 2003	112,134	\$ 1 <b>,</b> 122	196,004		197,126
Net loss				\$ (11,695,327) 	(11,695,327)
Balance at December 31, 2003	11,992,179 ======	\$ 119 <b>,</b> 922	\$ 13,515,265 =======	\$ (11,695,327)	\$ 1,939,860

### (A DEVELOPMENT STAGE COMPANY)

### CONDENSED CONSOLIDATED STATEMENT OF CASH FLOWS

(unaudited)

Cash flows from operating activities: Net loss	\$ (2,198,668)	\$ (1,077,042)	\$ (11,695,327)	
to net cash used in operating activities: Noncash capital contribution Noncash conversion of accrued expenses into equity Issuance of common stock and warrants for interest Issuance and vesting of stock options and warrants	  	  	85,179 131,250 9,316	
for services  Depreciation and amortization (Increase) decrease in operating assets:	1,084,888 15,331	137,177 12,237	2,583,323 98,744	
Accounts receivable	120,238	75,000 (161,260) 	(65,297) (7,187)	
Accounts payable	(29,122) 139,639	(32,720) 2,854	27,014 402,799	
Net cash used in operating activities	(867,694)	(1,043,754)	(8,430,186)	
Cash flows from investing activities: Patent costs	(164,876) 798,200 (1,719) 631,605	(56,458) 729,176 (1,980) 670,738	(744,582) (1,301,095) (159,439) (2,205,116)	
Cash flows from financing activities:  Proceeds from grant  Proceeds from issuance of bridge notes  Proceeds from issuance of common stock and warrants, net	  197,126	11,089	90,150 525,000 10,301,119	
Cash provided by financing activities	197,126	11,089	10,916,269	
Net increase (decrease) in cash and cash equivalents	(38,963)	(361,927)	280,967	
Cash and cash equivalents at beginning of period	319,930	798,711 		
Cash and cash equivalents at end of period	\$ 280,967	\$ 436,784 =======	\$ 280,967	
Supplemental disclosure of cash flow information:  Cash paid during the period for interest	\$ 	\$ ========	\$ 22,317	
Supplemental schedule of noncash financing activity: Conversion of bridge notes into stock	\$ =	\$ =	\$ 534,316	

(A DEVELOPMENT STAGE COMPANY)

### NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(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 fiscal year ended June 30, 2003.

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 December 31, 2003, the results of its operations for the three-month periods ended December 31, 2003 and 2002, the results of its operations and cash flows for the six-month periods ended December 31, 2003 and 2002, and for the period from inception on July 1, 1998 through December 31, 2003.

The Company had previously reported stock-based  $\,$  compensation as a separate category in its consolidated statement of operations. Beginning in fiscal 2004, the Company no longer reports stock-based compensation as a separate category and has included such stock-based compensation in general and administrative and research and development expenses, as applicable. Therefore, certain reclassifications have been made to the prior year consolidated financial statements in order to conform to the current year's classification.

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

### 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, as of December 31, 2003 and 2002, shares to be issued upon the exercise of options and warrants aggregating 6,308,094 and 5,840,653, respectively, at an average exercise price of \$2.67 and \$2.62, respectively, are not included in the computation of diluted loss per share as the effect is anti-dilutive.

#### 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 cost been determined based on the fair value at 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 MONTH PERIODS ENDED DECEMBER 31,	2003	2002
Net loss:		
As reported	\$(798,186)	\$(562,410)
Stock-based employee compensation costs	(164,645)	(200,789)
Pro forma	\$ (962,831)	\$(763,199)
Loss per share:		
As reported	\$ (0.07)	\$ (0.05)
Pro forma	\$ (0.08)	\$ (0.06)
SIX MONTH PERIODS ENDED DECEMBER 31,	2003	2002
Net loss:		
As reported	\$(2,198,668)	\$(1,077,042)
Stock-based employee compensation costs	(308,146)	(430,290)
Pro forma	\$(2,506,814)	\$(1,507,332)
Loss per share:		
As reported	\$ (0.18)	\$ (0.09)
Pro forma	\$ (0.21)	\$ (0.13)

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 and six-month periods ended December 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 of 5 and 10 years; (iii) a risk-free rate range of 3.80% to 4.24% and 3.00% to 4.22%, 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 Company's Common Stock, which cannot be forecast with reasonable accuracy.

### NOTE 4 - SIGNIFICANT EVENTS:

In connection with the one-year financial advisory agreement entered into by the Company with Sands Brothers International Ltd. ("Sands Brothers") in September 2003, Sands Brothers was issued a five-year warrant to purchase 237,600 shares of the Company's Common Stock at an exercise price equal to \$3.59 per share. During the six-month period ended December 31, 2003, the Company recorded stock-based compensation in the amount of \$843,480 related to the issuance of such warrant.

On December 15, 2003, the Board unanimously approved and the Company subsequently granted, effective December 16, 2003: (i) options under the 1998 Stock Incentive Plan, as

amended (the "Plan"), to purchase an aggregate of 85,000 shares of Common Stock to certain members of the Board at an exercise price equal to \$3.15 per share, with one-half of such options exercisable on the date of grant and one-half of such options becoming exercisable on the first anniversary from the date of grant; (ii) options under the Plan to purchase an aggregate of 130,000 shares of Common Stock to the members of the Company's Scientific Advisory Board, certain research consultants and executive officers of the Company, at an exercise price equal to \$3.15 per share, with one-third of such options exercisable on the date of grant and one-third of such options becoming exercisable on each of the first and second anniversaries from the date of grant; and (iii) a warrant to purchase 20,000 shares of Common Stock to Forbes, Inc. at an exercise price equal to \$3.15 per share, with one-third of such options exercisable on the date of grant and one-third of such options becoming exercisable on the date of grant and one-third of such options becoming exercisable on each of the first and second anniversaries from the date of grant.

Pursuant to the New Jersey Technology Tax Credit Transfer Program, the Company sold its entire New Jersey net operating loss tax benefit for the fiscal year ended June 30, 2002 in the amount of \$105,720 and received net proceeds of \$91,448.

#### NOTE 5 - SUBSEQUENT EVENT:

In February 2004, the Company completed a private placement to certain accredited investors (the "Private Placement") for an aggregate amount of 1,536,922 shares of Common Stock and warrants to purchase 768,459 shares of Common Stock for the aggregate cash consideration of \$3,642,500. The Private Placement offered units of one share of Common Stock and a five-year warrant to purchase 0.50 shares of Common Stock at a price equal to \$2.37 per unit. The warrants were issued at an exercise price equal to \$3.79 per share, with such warrants vesting on the date of grant. The estimated costs associated with the Private Placement totaled approximately \$330,000. The Company did not engage a placement agent for the sale of such securities. In addition, the Company entered into a Registration Rights Agreement with these purchasers. The Registration Rights Agreement requires the Company to file a registration statement on Form S-3 for the shares by March 18, 2004, to register the securities acquired by the purchasers in the Private Placement. If the Company fails to file a registration statement by that date, it is required to pay to each purchaser in the Private Placement. If the Company for the purchaser in the Private Placement purchase price paid by such purchaser.

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

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

The following discussion and analysis should be read in conjunction with our condensed consolidated financial statements and the related notes thereto included in the Quarterly Report on Form 10-QSB. The discussion and analysis may contain forward-looking statements that are based upon current expectations and entail various risks and uncertainties. Our actual results and the timing of events could differ materially from those anticipated in the forward-looking statements as a result of various factors, including those set forth under "Factors That May Affect Our Business, Future Operating Results and Financial Condition" and elsewhere in this report.

#### OVERVIEW

We are a development stage biotechnology company whose mission is to utilize its patent-pending genes (primarily DHS and Factor 5A) 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 (A) programmed cell death diseases in humans (apoptosis) (e.g., rheumatoid arthritis, macular degeneration, glaucoma, and heart disease), which are the result of premature cell death in humans, and (B) 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 our 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; reducing cytokine induced apoptosis in human optic nerve cell lines and in epithelial cells of the intestine and reducing cytokine expression in human liver cell lines; and inducing apoptosis, while retarding cell proliferation, in human cancer cell lines derived from tumors.

We do not expect to generate significant revenues for approximately the next two to three years, during which time we will engage in significant research and development efforts.

We are currently working with lettuce, melon, tomato, canola, Arabidopsis (a model plant that is similar to canola), banana, alfalfa and certain species of trees, and have obtained proof of concept for the lipase, DHS and Factor 5A genes in several of these plants. Also, we have completed a first round of field trials of lettuce and bananas with our respective partners and are moving into a second round. These field trials have shown that our technology effectively reduces browning in cut lettuce and extends the shelf life of banana fruit by 100%. 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.

Our preliminary research reveals that DHS and Factor 5A genes regulate apoptosis in animal and human cells. In humans, we have shown that Factor 5A encodes for proteins with similar structures but that serve different functions (isoforms). There are two different isoforms of Factor 5A: the apoptosis isoform, which causes cell death and the growth isoform, which causes cell proliferation.

We believe that our technology downregulating the apoptosis isoforms of Factor 5A may have potential application as a means of controlling a broad range of diseases that are attributable to premature apoptosis. Apoptotic diseases include neurodegenerative diseases, retinal diseases, such as glaucoma and macular degeneration, heart disease, stroke, Crohn's disease and rheumatoid arthritis, among others. We have commenced pre-clinical research on diseased heart tissue as well as cell-line studies to determine Factor 5A's ability to regulate key inflammatory cytokines, including Interleukin-1, Interleukin-18 and TNF-a, which are indicated in numerous apoptotic diseases. In addition, we have initiated cell-line studies for applications of our technology to glaucoma, surface ocular diseases and cells of the intestines and on liver cell-lines. These preclinical tests have shown that Factor 5A appears to control expression of the suite of proteins required for apoptosis. Such proteins include p53, interleukins, caspases, tumor necrosis factor (TNF-alpha) and Interferon gamma. Expression of these cell death proteins is required for the execution of apoptosis.

Conversely, we have also established in pre-clinical studies that apoptosis upregulation of the 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. 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 and have initiated studies with in vivo cancer models to determine Factor 5A's ability to shrink human tumors grafted onto mice. In addition, we have also shown that suppression of the growth isoform of Factor 5A in cancer cells reduces proliferation of cancer cells. This will allow us to pursue cancer treatments which simultaneously cause cancer cells to die and not allow them to divide further.

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 United States Patent and Trademark Office, or PTO. In addition to this patent, we have a wide variety of patent applications (including divisional applications and continuations-in-part) in process with the PTO and internationally. We intend to continue our strategy of enhancing these new patent applications through the addition of data as it is collected.

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.

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

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

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 \$11,695,327 at December 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.

#### 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 two research hospitals in Canada, at Anawah, 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 December 31, 2003, we had cash and highly-liquid investments valued at \$1,582,062 and working capital of \$1,217,546. In January 2004 and February 2004, we received aggregate net proceeds of approximately \$3,300,000 from a private placement of our equity securities. Using our available reserves as of December 31, 2003 and the net proceeds from the private equity financing, we believe that we can operate according to our current business plan for at least the next twelve months. To date, we have generated minimal revenues and anticipate

that our operating costs may exceed any revenues generated over the next several years. Therefore, we may be required to raise additional capital in the future in order to operate according to our current business plan, and such 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 December 31, 2003, we had 11,699,728 shares of common stock authorized but unissued, which may be issued from time to time by our board of directors without stockholder approval. In connection with our private placement of equity securities, in January 2004 and February 2004, we issued an aggregate of an additional 1,536,922 shares of common stock and warrants to purchase 842,141 shares of common stock. Therefore, assuming the exercise of all options and warrants  $\,$  granted as of February 13, 2004, we had 9,320,665 shares of common stock authorized but unissued, which may be issued from time 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 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:

- 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 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 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.

In its current state of development, our technology is not ready to be marketed to consumers. We intend to follow a multi-faceted commercialization strategy that involves the licensing of our technology to business partners for the purpose of further technological development, marketing and distribution. We are seeking business partners who will share the burden of our development costs while our technology is still being developed, and who will pay us royalties when they market and distribute products incorporating our technology upon commercialization. The establishment of joint ventures and strategic alliances may create future competitors, especially in certain regions abroad where we do not pursue patent protection. If we fail to establish beneficial business partners and strategic alliances, our growth will suffer and the continued development of our technology may be harmed.

COMPETITION IN THE 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 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 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 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 are highly dependent on our scientific advisors, consultants and 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 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 December 31, 2003, our executive officers, directors and affiliated entities together beneficially own approximately 37.5% of the outstanding shares of our common stock, assuming the exercise of options and warrants which are currently exercisable, held by these stockholders. As of February 13, 2004, upon the closing of our private placement of equity securities, our executive officers, directors and affiliated entities together beneficially own approximately 35.5% 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.

As of December 31, 2003, we have granted options outside of our stock option plan to purchase 10,000 shares of our common stock and outstanding warrants to purchase 4,358,194 shares of our common stock. In addition, as of December 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, 1,946,000 of which have been granted and 1,054,000 of which may be granted in the future. As of February 13, 2004, upon the closing of our private placement of equity securities, we have outstanding warrants to purchase 5,135,961 shares of our common stock. 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 December 31, 2003, we had 11,992,179 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. As of February 13, 2004, upon the closing of our private placement of equity securities, we had 13,593,475 shares of our common stock issued and outstanding. Pursuant to the terms of such equity offering, we are obligated to file a registration statement on Form S-3 by March 18, 2004 to register such shares of common stock. 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.

#### 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 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 and the current crisis in the Middle East, can be expected to put further pressure on economic conditions in the United States and worldwide. These political, social and economic conditions may make it difficult for us to plan future business activities. Specifically, if the current crisis in Israel continues to escalate, the Rahan Joint Venture could be adversely affected.

#### LIOUIDITY AND CAPITAL RESOURCES

#### OVERVIEW

As of December 31, 2003, our cash balance and investments totaled \$1,582,062, and we had working capital of \$1,217,546. In addition, upon the closings of our private equity financing on January 16, 2004 and February 2, 2004, we received aggregate proceeds of \$3,642,500. As of December 31, 2003, we had a federal tax loss carry-forward of approximately \$8,583,000 and a state tax loss carry-forward of approximately \$3,263,000 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.

#### CONTRACTUAL OBLIGATIONS

The following table lists our cash  $\,$  contractual  $\,$  obligations as of December 31, 2003:

- ------

Payments	Due	bv	Period

#### Contractual Obligations

	 Total	Less than 1 year	1 -	- 3 years	4 -	5 years	than years
Research and Development Agreements (1)	\$ 280,000	\$ 280,000	\$		\$		\$ 
Facility, Rent and Operating Leases (2)	\$ 79 <b>,</b> 464	\$ 34,056	\$	45,408	\$		\$ 
Employment, Consulting and Scientific Advisory Board Agreements (3)	\$ 627,416	\$ 437,083	\$	190,333	\$		\$ 
Total Contractual Cash Obligations	\$ 986,880	\$ 751 <b>,</b> 139	\$	235,741	\$		\$ 

- (1) Certain of our research and development agreements disclosed herein provide that payment is to be made in Canadian dollars and, therefore, the contractual obligations are subject to fluctuations in the exchange rate.
- (2) The lease for our office space in New Brunswick, New Jersey is subject to certain escalations for our proportionate share of increases in the building's operating costs.
- (3) Certain of our employment and consulting agreements provide for automatic renewal (which is not reflected in the table), unless terminated earlier by the parties to the respective agreements.

We expect our capital requirements to increase significantly over the next several years as we commence new research and development efforts, increase our business and administrative infrastructure and embark on developing in-house business capabilities and facilities. Our future liquidity and capital funding requirements will depend on numerous factors, including, but not limited to, the levels and costs of our research and development initiatives and the cost and timing of the expansion of our business development and administrative staff.

### CAPITAL RESOURCES

Since inception, we have generated revenues of \$210,000 in connection with the initial fees received under our license and development agreements. We have not been profitable since inception, we will continue to incur additional operating losses in the future, and we will require additional financing to continue the development and subsequent commercialization of our technology. While we do not expect to generate significant revenues from the licensing of our technology 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. We may also receive revenues from contract research, or other related revenue.

In February 2004, we completed a private placement to certain accredited investors for an aggregate amount of 1,536,922 shares of common stock and warrants to purchase 768,459 shares of common stock for the aggregate cash consideration of \$3,642,500. The private placement offered units of one share of common stock and a five-year warrant to purchase 0.50 shares of common stock at a price equal to \$2.37 per unit. The warrant was offered with an exercise price equal to \$3.79 per share, with such warrant vesting on the date of grant. The estimated costs associated with the private placement totaled approximately \$330.000.

Pursuant to the New Jersey Technology Tax Credit Transfer Program, the Company sold its entire New Jersey net operating loss tax benefit for the fiscal year ended June 30, 2002 in the amount of \$105,720\$ and received net proceeds of \$91.448

We anticipate that, based upon our current cash and investments, 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 (i) utilizing our current cash balance and investments, (ii) achieving some of the milestones set forth in our current licensing agreements, and (iii) through the execution 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, 2003. There have been no changes to such critical accounting policies and estimates.

RESULTS OF OPERATIONS

Three Months Ended December 31, 2003 and Three Months Ended December 31, 2002

We had no revenue during the three-month periods ended December 31, 2003 and December 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 December 31, 2003 and December 31, 2002 were \$898,671 and \$712,089, respectively, an increase of \$186,582, or 26.2%. This increase in operating expenses was primarily the result of an increase in stock-based compensation, research and development expenses, and other general and administrative expenses.

General and administrative expenses consist primarily of stock-based compensation and other general and administrative costs, which include payroll and benefits, professional services, investor relations, office rent and corporate insurance. General and administrative expenses for the three-month periods ended December 31, 2003 and December 31, 2002 were \$597,527 and \$496,286, respectively, an increase of \$101,241, or 20.4%. This increase was primarily the result of an increase in stock-based compensation related to the issuance and vesting of stock options and warrants as well as an increase in other general and administrative expenses, investor relations expenses and corporate insurance, which were mostly offset by a decrease in payroll and benefits, and professional fees.

	Three	months 2003	ended	Decer	mber 31, 2002	
Stock-based compensation Other general and administrative expenses		189,740 407,787		\$	97,497 398,789	
Total general and administrative expenses	\$	597 <b>,</b> 527		\$	496,286	
	====	======		===	_======	

The increase in stock-based compensation was primarily the result of an increase in the number of options and warrants that became exercisable during the three-month period ended December 31, 2003 as well as an increase in the Black-Scholes valuation of each option and warrant becoming exercisable during the three-month period ended December 31, 2003. The increase in other general and administrative expenses was primarily the result of an increase in investor relations expenses and insurance, which was mostly offset by a decrease in professional fees and payroll and benefits. The increase in investor relations expenses during the three-month period ended December 31, 2003 was primarily the result of an increase in financial consulting costs. Insurance costs increased during the three-month period ended December 31, 2003 primarily because we increased the policy limit on our directors' and officers' liability insurance policy. Professional fees decreased during the three-month period ended December 31, 2003, primarily as a result of a decrease in legal fees related to the preparation of our proxy and Form 10-QSB. Payroll and benefits decreased during the three-month period ended December 31, 2003, primarily as a result of the termination of an employee in June 2003.

Research and development expenses consist primarily of fees associated with a research and development agreement with the University of Waterloo, costs associated with the research being performed at the University of Colorado, amortization of the initial fee in connection with a research agreement with Anawah, Inc., consulting fees to the Scientific Advisory Board and other consultants and stock-based compensation. Research and development expenses for the three-month periods ended December 31, 2003 and December 31, 2002 were \$301,144 and \$215,803, respectively, an increase of \$85,341, or 39.5%. This increase was primarily the result of an increase in stock-based compensation as well as an increase in the research and development costs incurred in connection with the expanded research undertaken by the University of Waterloo and the implementation of our mammalian cell research programs.

	Three months ended 2003	December 31, 2002	
Stock-based compensation Other research and development expenses	\$ 51,668 249,476	\$ 215,803	
Total research and development expenses	\$ 301,144 ======	\$ 215,803	

Six Months Ended December 31, 2003 and Six Months Ended December 31, 2002

We had no revenue during the six-month periods ended December 31, 2003 and December 31, 2002.

Operating expenses for the six-month periods ended December 31, 2003 and December 31, 2002 were \$2,310,064 and \$1,259,277, respectively, an increase of \$1,050,787, or 83.4%. This increase in operating expenses was primarily the result of an increase in stock-based compensation and research and development expenses, partially offset by a decrease in other general and administrative expenses.

General and administrative expenses for the six-month periods ended December 31, 2003 and December 31, 2002 were \$1,736,919 and \$884,310, respectively, an increase of \$852,609, or 96.4%. This increase was primarily the result of an increase in stock-based compensation related to the issuance and vesting of stock options and warrants which was partially offset by a decrease in other general and administrative expenses.

	Six months ended 2003	d December 31, 2002
Stock-based compensation Other general and administrative expenses	\$ 1,033,220 703,699	\$ 122,297 762,013
Total general and administrative expenses	\$ 1,736,919	\$ 884,310

The increase in stock-based compensation was primarily the result of a warrant being granted, in connection with a financial advisory agreement, to a financial advisor during the six-month period ended December 31, 2003. The decrease in other general and administrative expenses was primarily from a decrease in professional fees and payroll, which was partially offset by an increase in investor relations expenses and corporate insurance. Professional fees decreased during the six-month period ended December 31, 2003, primarily as a result of a decrease in legal fees. During the six-month period ended December 31, 2002, we had incurred additional professional fees related to our filing of registration statements with the Securities and Exchange Commission on Forms S-3 and S-8 as well as a decrease in professional fees associated with our Form 10-KSB and proxy statement. Payroll and benefits decreased during the six-month period ended December 31, 2003, primarily as a result of the termination of an employee in June 2003. The increase in investor relations expenses during the six-month period ended December 31, 2003, was primarily the result of an increase in financial consulting costs. Insurance costs increased during the six-month period ended December 31, 2003 primarily because we increased the policy limit on our directors' and officers' liability insurance policy.

Research and development expenses for the six-month periods ended December 31, 2003 and December 31, 2002 were \$573,145 and \$374,967, respectively, an increase of \$198,178, or 52.9%. This increase was primarily the result of an increase in stock-based compensation as well as 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 agreement with Anawah, Inc.

	Six months ended 2003	Decer	mber 31, 2002
Stock-based compensation Other research and development expenses	\$ 51,668 521,477	\$	14,880 360,087
Total research and development expenses	\$ 573 <b>,</b> 145	\$	374 <b>,</b> 967

Period From Inception on July 1, 1998 through December 31, 2003

From inception of operations on July 1, 1998 through December 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 \$11,695,327 at December 31, 2003. We expect to continue to incur losses as a result of expenditures on research, product development and administrative activities.

#### TTEM 3. CONTROLS AND PROCEDURES.

Our management, with the participation of our chief executive officer and chief financial officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of December 31, 2003. Based on this evaluation, our chief executive officer and chief financial officer concluded that as of December 31, 2003, our disclosure controls and procedures were (1) designed to ensure that material information relating to us, including our consolidated subsidiaries, is made known to our chief executive officer and chief financial officer by others within those entities, particularly during the period in which this report was being prepared and (2) effective, in that they provide reasonable assurance that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. No change in our internal controls over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) occurred during the three months ended December 31, 2003 that has materially affected, or is reasonably likely to materially affect, our internal controls over financial reporting.

### PART II. OTHER INFORMATION.

ITEM 2. CHANGES IN SECURITIES AND SMALL BUSINESS ISSUER PURCHASES OF EQUITY SECURITIES.

During the three months ended December 31, 2003, options and warrants to purchase an aggregate of 112,134 shares of our common stock were exercised for a total aggregate proceeds of \$195,024.

On December 15, 2003, our Board of Directors unanimously approved and we subsequently granted, effective December 16, 2003: (i) options under the our stock option plan to purchase an aggregate of 85,000 shares of common stock to certain members of the Board of Directors at an exercise price equal to \$3.15 per share, with one-half of such options exercisable on the date of grant and one-half of such options becoming exercisable on the first anniversary from the date of grant; (ii) options under our stock option plan to purchase an aggregate of 130,000 shares of common stock to the members of our Scientific Advisory Board, certain research consultants and executive officers of our Company, at an exercise price equal to \$3.15 per share, with one-third of such options exercisable on the date of grant and one-third of such options becoming exercisable on each of the first and second anniversaries from the date of grant; and (iii) a warrant to purchase 20,000 shares of common stock to Forbes, Inc. at an exercise price equal to  $$3.15\ \mathrm{per}$  share, with one-third of such options exercisable on the date of grant and one-third of such options becoming exercisable on each of the first and second anniversaries from the date of grant.

In February 2004, we completed a private placement to certain accredited investors for an aggregate amount of 1,536,922 shares of common stock and warrants to purchase 768,459 shares of common stock for the aggregate cash consideration of \$3,642,500. The private placement offered units of one share of common stock and a five-year warrant to purchase 0.35 shares of common stock at a price equal to \$2.37 per unit. The warrants were issued at an exercise price equal to \$3.79 per share, with such warrants vesting on the date of grant. The estimated costs associated with the private placement totaled approximately \$330,000. We did not engage a placement agent for the sale of such securities. In addition, we entered into a registration rights agreement with these purchasers. The registration rights agreement requires us to file a registration statement on Form S-3 by March 18, 2004, to register the securities acquired by the purchasers in the private placement. If we fail to file a registration statement by that date, we are required to pay to each purchaser 1.5% of the aggregate purchase price paid by such purchaser.

Sands Brothers and Stanford Group Company acted as co-managing finders of such private placement and certain consultants provided financial advisory services in connection with such private placement. As consideration for their services, we issued warrants to such finders to purchase an aggregate of 73,682 shares of our common stock, on the same terms and conditions as the warrants issued to the purchasers in the private placement.

We did not employ an underwriter in connection with the issuance of the securities described above. We believe that the issuance of the foregoing securities was exempt from registration under Section 4(2) of the Securities Act of 1933, as amended, as transactions not involving a public offering. Each of the recipients acquired the securities for investment purposes only and not with a view to distribution and had adequate information about our company.

#### ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS.

- (a) Our annual meeting of stockholders was held on December 15, 2003.
- (b) The following is a complete list of our current directors, each of whom was elected to a one-year term at the meeting, and whose term of office continued after the meeting.

Ruedi Stalder
Bruce C. Galton
John E. Thompson, Ph.D.
Christopher Forbes
Thomas C. Quick
David Rector
John Braca

(c) There were 7,637,502 shares of common stock present at the meeting in person or by proxy, out of a total number of 11,887,979 shares of common stock issued and outstanding and entitled to vote at the meeting.

The proposals and results of the vote of the stockholders taken at the meeting by ballot and by proxy as solicited by us on behalf of our Board of Directors were as follows:

(A) For the election of the nominees for our Board of Directors:

Nominee	For	Against	Withheld
Ruedi Stalder	7,637,222	280	_
Bruce C. Galton	7,637,222	280	=
John E. Thompson, Ph.	7,637,222	280	=
Christopher Forbes	7,637,222	280	=
Thomas C. Quick	7,637,222	280	=
David Rector	7,637,222	280	_
John Braca	7,637,222	280	=

(D) For the proposal to ratify the appointment of Goldstein Golub and Kessler, LLP as our independent auditors for the fiscal year ending June 30, 2004:

For	Against	Abstain
7,614,592	4,000	18,910

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

#### (a) Exhibits.

- 4.1 Form of Warrant issued to certain accredited investors (with attached schedule of parties and terms thereto).

  Incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K, filed on February 3, 2004.
- 10.1\* Investment Banking Agreement dated November 28, 2003, by and between Senesco Technologies, Inc., Sands Brothers International Ltd. and Stanford Group Company.
- 10.2\* Research Agreement dated November 6, 2003, by and among University Health Network, Dr. Fei-Fei Liu and the Company.
- 10.3 Form of Securities Purchase Agreement by and between the Company and certain accredited investors (with attached schedule of parties and terms thereto). Incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed on February 3, 2004.
- 10.4 Form of Registration Rights Agreement by and between the Company and certain accredited investors (with attached schedule of parties and terms

thereto). Incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K, filed on February 3, 2004.

- Amendment No. 1 to the Securities Purchase Agreement by and between the Company and Crestview Capital Master, L.L.C. Incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed on February 13, 2004.
- 10.6 Amendment No. 1 to the Registration Rights Agreement by and between the Company and Crestview Capital Master, L.L.C. Incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K, filed on February 13, 2004.
- 31.1\* Certification of principal executive officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
- 31.2\* Certification of principal financial and accounting officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
- 32.1\* Certification of principal executive officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. 1350.
- 32.2\* 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.

The Company filed a Current Report on Form 8-K on February 3, 2004, which included as exhibits thereto the Securities Purchase Agreement and Registration Rights Agreement.

The Company filed a Current Report on Form 8-K on February 13, 2004, which included as exhibits thereto Amendment No. 1 to the Securities Purchase Agreement and Amendment No. 1 to the Registration Rights Agreement.

\* Filed herewith.

#### 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: February 17, 2004 By: /s/ Bruce C. Galton

Bruce C. Galton, President and Chief Executive Officer

(Principal Executive Officer)

By: /s/ Joel Brooks DATE: February 17, 2004

\_\_\_\_\_

\_\_\_\_\_

Joel Brooks, Chief Financial Officer and Treasurer

(Principal Financial and Accounting Officer)

November 28, 2003

Michael C. Caska, President Sands Brothers International, Ltd. 90 Park Avenue New York, New York 10016

Ronald Stein, Senior Vice President Investment Banking/Capital Markets Stanford Group Company 201 South Biscayne Boulevard Suite 1200 Miami, Florida 33131

Dear Sirs:

This letter agreement (this "Agreement") confirms our understanding that each of the undersigned, Sands Brothers International, Ltd. ("Sands") and Stanford Group Company ("Stanford") (Sands and Stanford are referred to herein individually as a "Finder" and collectively as the "Finders"), have been engaged by Senesco Technologies, Inc. (the "Company"), to act as co-managing finders in connection with a private offering and sale of the Company's common stock, \$0.01 par value per share (the "Common Stock"), and warrants to purchase shares of Common Stock (the "Warrants"), having an aggregate offering amount of a minimum of \$3,000,000 and a maximum of \$3,500,000, with an overallotment option of \$1,000,000, exercisable at the sole discretion of the Company (the "Offering").

### 1. Services.

- 1.1 The Finders shall use their reasonable commercial efforts to introduce the Company to qualified institutional buyers and accredited investors (referred to herein as a "Purchaser" or collectively, the "Purchasers"), which may purchase Common Stock and Warrants of the Company (the "Securities"), on the following terms and conditions (a "Transaction"):
- (a) Common Stock, offered at a 25% discount to the Company's public market price, which shall be calculated by computing the volume-weighted average closing price of the Common Stock for a period of ten days prior to the date upon which all parties hereto have executed this Agreement (the "ten-day VWAP");
- (b) Warrants to purchase shares of Common Stock in an amount equivalent to 35% of the number of shares of Common Stock issued to the Purchaser, with a term of five (5) years and immediately exercisable at an exercise price of 120% of the ten-day VWAP.
- 1.2 All services provided by the Finders under this Agreement shall be at the Finders' cost and risk. The Finders' sole compensation, if any, shall be the compensation as set forth in Section 3 below.
- 1.3 The Company acknowledges that the Finders' responsibilities shall be limited to the foregoing, and that the Finders (i) shall have no authority to enter into any Transaction with a Purchaser, (ii) shall have no responsibility to participate or assist in any negotiations between any potential Purchaser and the Company, and (iii) shall have no responsibility for fulfilling any reporting or filing requirements of the Company pursuant to applicable federal and state securities laws. In addition, the Company expressly acknowledges and agrees that the Finders' obligations hereunder are on a reasonable commercial efforts basis only and that the execution of this Agreement does not constitute a commitment by the Finders to purchase the Securities or any other securities of the Company and does not ensure the successful sale of the Securities.
- 1.4 Notwithstanding anything in this Agreement to the contrary, the Company shall have the sole and absolute discretion to accept or not accept the terms of any Transaction. Neither the Company nor any of its affiliates shall have any liability whatsoever to the Finders or any other person or entity resulting from its decision not to enter into a proposed Transaction, regardless of the terms of the proposed Transaction.

### 2. Term and Termination.

- 2.1 This Agreement shall take effect as of the date written below, provided that it is executed by the Finders and delivered to the Company pursuant to Section 9 below, and shall continue until the earlier of (i) the date of the closing of the Offering or (ii) December 31, 2003. Thereafter, this
  - 2.2 This Agreement may be terminated:
    - (a) By a Finder, but only with respect to such Finder,

Agreement may be extended in writing at the election of the Company.

- (i) without cause, upon thirty (30) days' written notice of termination to the Company; or
- (ii) if the Company breaches any of its obligations under this Agreement and fails to remedy such breach within fifteen (15) days after written notice of such breach is provided to the Company; and

- (b) By the Company, with respect to a particular Finder,
  - (i) without cause, upon thirty (30) days' written notice of termination to such Finder; or
  - (ii) if such Finder breaches any of its obligations under this Agreement and fails to remedy such breach within fifteen (15) days after written notice of such breach is provided to such Finder.
- 2.3 It is specifically understood by the Finders and by the Company that if one party shall duly exercise its right of termination under Section 2.2, none of the parties shall be entitled to any compensation or claim for goodwill or other loss, cost or expense which either of them

may suffer or claim to have suffered by reason of termination of this Agreement.

2.4 Following termination of this Agreement, the Company shall have no further responsibility to the Finders except to (i) pay commissions then due, and (ii) pay when they become due commissions on any Transaction accepted by the Company prior to termination, which is scheduled to close and is actually closed within thirty (30) days of the effective date of termination of this Agreement. Except as expressly stated herein, the Company shall have no liability for commissions with respect to any Transaction entered into by the Company after the effective date of termination of this Agreement.

### Compensation.

In consideration of the Finders' services, the Finders shall be entitled to receive, and the Company hereby agrees to pay to the Finders, the following:

- 3.1 Upon the closing of a Transaction with a Purchaser directly attributable to an introduction made by a Finder to the Company, such Finder shall receive the following (the "Transaction Fee"):
- (a) five percent (5%) of the aggregate gross proceeds raised by such Finder, payable in cash as the proceeds are received by the Company from each Transaction; and
- (b) warrants to purchase such number of shares of Common Stock equivalent to five percent (5%) of the aggregate number of shares of Common Stock sold by such Finder. Such warrants shall be issued upon the closing of the Offering, shall have a term of five years, and shall be immediately exercisable, at an exercise price equal to 120% of the ten-day VWAP.
- 3.2 For purposes of clarity, each Finder shall only be entitled to receive a Transaction Fee relating to that portion of the aggregate gross proceeds invested by Purchasers directly attributable to an introduction made by that particular Finder to the Company. In the event of a dispute between the Finders, the Company shall make the final determination with respect to the allocation of the Transaction Fee between Finders. In no event shall the Company be obligated to pay an aggregate Transaction Fee to the Finders greater than the amounts set forth in Section 3.1 above.
- 3.3 The Finder's Transaction Fee shall have been earned upon consummation of a Transaction with a Purchaser that occurs as a result of this Agreement; provided, that, the Transaction is consummated during the term of this Agreement ------ or within thirty (30) days from the termination of this Agreement.
- 3.4 All parties shall be responsible for their own expenses incurred in connection with the execution of this Agreement and the transactions contemplated hereby.
- 3.5 The Company agrees to pay the reasonable, documented, actual fees and expenses of the Lead Investor (as defined below), including reasonable legal fees and expenses for which a detailed billing statement is provided, up to a maximum aggregate amount of \$10,000. For purposes of this Section 3.5, the Lead Investor shall be the first Purchaser to close a Transaction with aggregate gross proceeds to the Company of at least \$1,000,000. The Company shall reimburse the Lead Investor only after receiving the proceeds from such Transaction, upon receipt of adequate documentation for such fees and expenses.

### 4. Information.

In connection with the Finders' engagement hereunder, the Company will furnish the Finders and any prospective Purchaser with any information concerning the Company that the Company reasonably deems appropriate and will provide the Finders and any prospective Purchaser with reasonable access to the Company's officers and directors, subject to the execution of the Company's standard form of non-disclosure agreement. In addition, the Finders shall be kept fully informed of any events that are reasonably likely to have a material effect on the financial condition of the Company. The Company acknowledges that the Finders will not undertake any "due diligence" investigation and will be using and relying upon the information supplied by the Company and its officers, agents and others, and any other publicly available information concerning the Company.

### 5. Confidentiality.

Whereas it is desirable and necessary to exchange documents and information with respect to the business and products of the Company and the business and products of the Finders, the parties hereby shall and do subscribe to the terms of confidentiality set forth in Schedule A attached hereto.

### 6. Restrictive Covenants.

arrangements as those described herein.

6.1 Each party acknowledges and agrees that the rights granted to the other in this Agreement are non-exclusive, and that, without limiting the generality of the foregoing, nothing in this Agreement shall be deemed or construed to prohibit either party herein from participating in similar business

6.2 Except as expressly set forth in Section 6.3, neither this Agreement nor any Transaction contemplated by this Agreement shall be construed as granting to the Finders any license or right in or to any patent, copyright,

granting to the finders any license or right in or to trademark or other proprietary right of the Company.

- 6.3 Each Finder shall conduct its business under its own name. The Finders shall not use any trademarks or tradenames of the Company in any manner, except as authorized in writing by the Company or in connection with the use of literature supplied by the Company. The Finders shall discontinue such usage upon the termination of this Agreement.
- 6.4 All originals and photocopies or any other forms of records, computer records and printouts, and any other material and/or equipment furnished to and/or maintained by the Finders in connection with the performance of services under this Agreement shall remain the property of the Company and shall be returned to the Company upon demand or immediately upon termination of this Agreement.
- 6.5 Each of the Finders, severally and not jointly, represents and warrants that its performance of all the terms of this Agreement and its duties as an independent contractor will not breach any invention assignment agreement, confidential information agreement, non-competition agreement or other agreement or other obligation with any present or former client or other party. Each of the Finders, severally and not jointly, further represents and warrants that it has not and will not bring to the Company or use in the performance of their duties for the Company any documents or materials of a present or former client or other party that are not generally available to the public.

# 7. Independent Contractor Status.

- 7.1 Each of the Finders expressly understands and agrees that its relationship to the Company is that of an independent contractor and not that of an employee, officer, agent or otherwise. The Finders shall have no restrictions on their ability to provide services to companies other than the Company, except as stated herein. The Finders have no authority to accept any order or to bind or obligate the Company in any way or to renew any debt or obligation for or on account of the Company without the Company's prior written consent. The Finders will not, without specific prior written authority from the Company, act in any way, either directly or indirectly, as the Company's agent or representative.
- 7.2 In addition to Section 8 below, each of the Finders, severally and not jointly, represents and warrants to the Company that it has complied and hereafter will comply with all federal, state and local laws and regulations governing such Finder's business and the performance of such Finder's obligations hereunder, including, without limitation, obtaining and maintaining all licenses and permits required to conduct such Finder's business. The Finders shall comply with all laws that are in effect in any jurisdiction in which they operate.
- 7.3 The Finders expressly understand and agree that the Company will not make any deductions whatsoever from amounts due to the Finders pursuant to this Agreement for federal, state or local taxes, FICA, FUTA, state unemployment tax or any other tax, withholding or payment obligation. Each of the Finders, severally and not jointly, represents and warrants to the Company that it has complied and hereafter will comply with all applicable income and other tax laws of any federal, state or local government authority. The Finders will indemnify and hold the Company harmless for any damage, loss, cost and expense, including reasonable attorney fees, arising from the Finders' breach of Section 7.2 and this Section 7.3.
- 7.4 The Finders expressly understand and agree that the Company will provide no benefits of any nature whatsoever to the Finders. Without limiting the generality of the foregoing, the Finders expressly understand and agree that the Company will not provide to the Finders any health insurance, pension benefits, paid vacation, holidays or sick leave, disability insurance or any other benefit that may be made available to the Company's employees from time to time.

# 8. Compliance with Law.

Each of the Finders has not taken, and will not take, any action, directly or indirectly, that may cause an Transaction to fail to be entitled to exemption from registration under the U.S. federal securities laws, or applicable state securities or "blue sky" laws, or the applicable laws of the foreign countries in which the Securities will be offered or sold. Each of the Finders, severally and not jointly, further represents that, pursuant to Section 15 of the Securities Exchange Act of 1934, as amended (the "1934 Act"), it is a registered broker or dealer as those terms are defined under Section 3(a) of the 1934 Act. The Company shall be responsible for any costs and expenses associated with filings, applications or registrations with any governmental or regulatory body, including, without limitation, those associated with any sales pursuant to Regulation D under the 1933 Act, "blue sky" laws, and the laws of the foreign countries in which the Securities will be offered or sold that are required to be made by the Company.

# 9. Notices; No Waiver.

9.1 All notices and other communications hereunder shall be deemed given upon (a) the sender's confirmation of receipt of a facsimile transmission to the recipient's facsimile number set forth below, (b) confirmed delivery by a standard overnight carrier to the recipient's address set forth below, or (c) delivery by hand to the recipient's address set forth below (or, in each case, to or at such other facsimile number or address for a party as such party may specify by notice given in accordance with this Section 9.1):

(a) If to the Company, to:

Bruce C. Galton President and Chief Executive Officer Senesco Technologies, Inc. 303 George Street, Suite 420 New Brunswick, New Jersey 08901 Fax: (732) 296-9292

With a copy to:

John F. Cinque, Esq. Hale and Dorr LLP 650 College Road East Princeton, New Jersey 08540 Fax: (609) 750-7700

(b) If to the Finders, to:

Michael C. Caska, President Sands Brothers International, Ltd. 90 Park Avenue New York, New York 10016 Fax: (212) 697-8035

Ronald Stein, Senior Vice President Investment Banking/Capital Markets Stanford Group Company 201 South Biscayne Boulevard Suite 1200 Miami, Florida 33131 Fax: (305) 347-9116

9.2 Neither the failure nor any delay by either the Company or the Finders to exercise any right, remedy, power or privilege under this Agreement shall operate or be construed as a waiver thereof, nor shall any single or partial exercise of any right, remedy, power or privilege preclude any other or further exercise of the same or of any other right, remedy, power or privilege, nor shall any waiver with respect to any occurrence be construed as a waiver with respect to any other occurrence. No waiver of any right, remedy, power or privilege under this Agreement shall be effective unless such waiver is in writing signed by the party to be charged thereby.

### 10. General Provisions.

- 10.1 This Agreement contains the entire agreement and understanding between the parties with respect to the subject matter hereof, and supersedes any and all prior and contemporaneous agreements and understandings. This Agreement may not be amended or modified except in writing signed by the parties to the Agreement.
- 10.2 Each party to this Agreement represents, agrees and warrants that it will perform all other acts and execute and deliver all other documents that may be necessary or appropriate to carry out the intent and purpose of this Agreement.
- 10.3 The provisions of this Agreement are independent of and separable from each other, and no provision shall be affected by or rendered invalid or unenforceable because any other provision of this Agreement may be held to be invalid or unenforceable in whole or in part.
- $10.4\ {\rm The}\ {\rm Company}\$  agrees to indemnify the Finders and related persons in accordance with the indemnification  $\$  provisions annexed hereto as Schedule B,

the provisions of which are incorporated herein in their entirety.

- 10.5 This Agreement shall be deemed to have been made and delivered in New York City and shall be governed as to validity, interpretation, construction, effect and in all other respects by the internal laws of the State of New York. Each party hereto (a) agrees that any legal suit, action or proceeding arising out of or relating to this letter shall be instituted exclusively in New York State Supreme Court, County of New York, or in the United States District Court for the Southern District of New York, (b) waives any objection, which any party may have now or hereafter to the venue of any such suit, action or proceeding, and (c) irrevocably consents to the jurisdiction of the New York State Supreme Court, County of New York, and the United States District Court for the Southern District of New York in any such suit, action or proceeding. The parties hereto further agree to accept and acknowledge service of any and all process which may be served in any such suit, action or proceeding in the New York State Supreme Court, County of New York, or in The United States District Court for the Southern District of New York, or in The United States District Court for the Southern District of New York. THE PARTIES HERETO AGREE TO WAIVE THEIR RESPECTIVE RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF THIS AGREEMENT OR ANY DOCUMENT OR AGREEMENT CONTEMPLATED HEREBY.
- 10.6 Each of the Finders acknowledges that the Company is entering into this Agreement in reliance upon the personal reputation, qualifications and abilities of the present owner or owners of their business and operations, and accordingly, they may not assign their rights or obligations under this Agreement, either voluntarily or by operation of law, except with the prior written consent of the Company. A Change in Control (as defined below) shall be deemed to be an assignment for this purpose.

For purposes of this Section 10.6, Change in Control shall mean (a) a merger or consolidation in which (i) the Finder is a constituent party, or (ii) a subsidiary of the Finder is a constituent party and the Finder issues shares of its capital stock pursuant to such merger or consolidation, except any such merger or consolidation involving the Finder or a subsidiary of the Finder in which the holders of capital stock of the Finder immediately prior to such merger or consolidation continue to hold immediately following such merger or consolidation more than

50% by voting power of the capital stock of or ownership interest in (A) the surviving or resulting entity or (B) if the surviving or resulting entity is a wholly owned subsidiary of another entity immediately following such merger or consolidation, the parent entity of such surviving or resulting entity; or (b) the sale, in a single transaction or series of related transactions, (i) by the Finder of all or substantially all the assets of the Finder (except where such sale is to a wholly owned subsidiary of the Finder) or (ii) by the stockholders of the Finder of more than 50% by voting power of the then-outstanding capital stock of the Finder.

- 10.7 Stanford acknowledges and agrees that this Agreement satisfies the Company's obligation to provide it with the opportunity to act as the exclusive managing agent of the Company in the event the Company proposes to sell, exchange, pledge, hypothecate or dispose of any equity or debt securities through a private placement or public offering, as set forth in that certain Securities Purchase Agreement by and between the Company and Stanford Venture Capital Holdings, Inc., dated January 16, 2002, and hereby forever releases the Company from any and all claims arising under such agreement with respect to the matters contemplated hereunder.
- 10.8 The covenants and agreements of the Finders and the Company set forth in this Agreement shall survive the termination of this Agreement, which covenants and agreements shall remain in full force and effect thereafter in accordance with the terms hereof.
- 10.9 This Agreement may be executed in any number of counterparts, each of which shall be deemed an original, which together shall constitute one and the same agreement.

\* \* \* \* \* \* \*

copy of this letter to my attention.

Very truly yours,

SENESCO TECHNOLOGIES, INC.

By: /s/ Bruce C. Galton

Name: Bruce C. Galton
Title: President and Chief Executive Officer

AGREED AND ACCEPTED:

SANDS BROTHERS INTERNATIONAL LTD.

By: /s/ Michael C. Caska

Name: Michael C. Caska Title: President

STANFORD GROUP COMPANY

By: /s/ Ronald Stein

Name: Ronald Stein Title: Senior Vice President

#### INFORMATION TO BE SUPPLIED; CONFIDENTIALITY

In connection with the Finders' activities on behalf of the Company, the Company will furnish the Finders with all financial and other information regarding the Company that the Finders reasonably believe appropriate to their assignment (all such information so furnished by the Company, whether furnished before or after the date of this Agreement, being referred to herein as the "Information"). The Company will provide the Finders with reasonable access to the officers, directors and employees of the Company. The Company recognizes and agrees that the Finders (i) will use and rely primarily on the Information and information available from generally recognized public sources in performing the services contemplated by this Agreement without independently verifying the Information or such other information, (ii) do not assume responsibility for the accuracy of the Information or such information, and (iii) will not make an appraisal of any assets or liabilities owned or controlled by the Company or its market competitors.

For the purpose of, the Agreement, "Information" shall mean and include all contracts and agreements and the terms thereof, to which the Company may be a party; all internal non-public business and financial information, analyses, forecasts and projections of the business of the Company and any direct or indirect operating subsidiary, all business plans of the Company and its subsidiaries; all pending or proposed proposals for new or renewed contracts, including responses by the Company to RFPs; the names, business and financial arrangements of any contract to which the Company is a party; the names and terms of employment relationships between the Company and any of its operating subsidiaries with any employees; all detail and back up information relating to actual, pro forma or forecasted operations; and all data or information prepared by the Company at the request of the Finders.

The Finders will maintain the confidentiality of the Information and, unless and until such information shall have been made publicly available by the Company or by others without breach of a confidentiality agreement, shall disclose the information only as authorized by the Company or as required by law or by order of a governmental authority or court of competent jurisdiction. In the event that the Finders are legally required to make disclosure of any of the Information, the Finders will give notice to the Company prior to such disclosure, to the extent that the Finders can practically do so.

The foregoing paragraph shall not apply to information that:

- o at the time of disclosure by the Company is, or thereafter becomes, generally available to the public or within the industries in which the Company or the Finders or their affiliates conduct business, other than as a direct result of a breach by the Finders of their obligations under this Agreement;
- o prior to or at the time of disclosure by the Company, was already in the possession of, or conceived by, the Finders or any of their affiliates, or could have been developed by them from information then in their possession, by the application of other

information or techniques in their possession, generally available to the public, or available to the Finders or their affiliates other than from the Company;

- o at the time of disclosure by the Company or thereafter, is obtained by the Finders or any of their affiliates from a third party who the Finders reasonably believe to be in possession of the information not in violation of any contractual, legal or fiduciary obligation to the Company with respect to that information; or
- o is independently developed by the Finders or their affiliates.

Nothing in this Agreement shall be construed to limit the ability of the Finders or their affiliates to pursue, investigate, analyze, invest in, or engage in investment banking, financial advisory or any other business relationship with entities other than the Company, notwithstanding that such entities may be engaged in a business which is similar to or competitive with the business of the Company, and notwithstanding that such entities may have actual or potential operations, products, services, plans, ideas, customers or suppliers similar or identical to the Company's, or may have been identified by the Company as potential merger or acquisition targets or potential candidates for some other business combination, cooperation or relationship. The Company expressly acknowledges and agrees that it does not claim any proprietary interest in the identity of any other entity in its industry or otherwise, and that the identity of any such entity is not confidential information.

#### INDEMNIFICATION

Recognizing that matters of the type contemplated in this engagement sometimes result in litigation and that the role of the Finders is advisory, the Company agrees to indemnify and hold harmless each of the Finders, their affiliates and their respective officers, directors, employees, agents and controlling persons (collectively, the "Indemnified Parties"), from and against any losses, claims, damages and liabilities, joint or several, related to or arising in any manner out of any transaction, financing, proposal or any other matter (collectively, the "Matters") contemplated by the engagement of the Finders hereunder, and will promptly reimburse the Indemnified Parties for all expenses (including fees and expenses of legal counsel) as incurred in connection with the investigation of, preparation for or defense of any pending or threatened claim related to or arising in any manner out of Matters contemplated by the engagement of the Finders hereunder, or any action or proceeding arising therefrom (collectively, "Proceedings"), whether or not such Indemnified Party is a formal party to any such Proceeding. Notwithstanding the foregoing, the Company shall not be liable in respect of any losses, claims, damages, liabilities or expenses that a court of competent jurisdiction shall have determined by final judgment resulted solely from the gross negligence or willful misconduct of an Indemnified Party. The Company further agrees that it will not, without the prior written consent of the Finders, settle, compromise or consent to the entry of any judgment in any pending or threatened Proceeding in respect of which indemnification may be sought hereunder (whether or not the Finders or any Indemnified Party is an actual or potential party to such Proceeding), unless such settlement, compromise or consent includes an unconditional release of a Finder and each other Indemnified Party hereunder from all liability arising out of such Proceeding.

The Company agrees that if any indemnification or reimbursement sought pursuant to this letter were for any reason not to be available to any Indemnified Party or insufficient to hold it harmless as and to the extent contemplated by this letter, then the Company shall contribute to the amount paid or payable by such Indemnified Party in respect of losses, claims, damages and liabilities in such proportion as is appropriate to reflect the relative benefits to the Company and its stockholders on the one hand, and the Finders on the other, in connection with the Matters to which such indemnification or reimbursement relates or, if such allocation is not permitted by applicable law, not only such relative benefits but also the relative faults of such parties as well as any other equitable considerations. It is hereby agreed that the relative benefits to the Company and/or its stockholders and to the Finders with respect to the Finders' engagement shall be deemed to be in the same proportion as (i) the total value paid or received or to be paid or received by the Company and/or its stockholders pursuant to the Matters (whether or not consummated) for which the Finders are engaged to render financial advisory services bears to (ii) the fees paid to the Finders in connection with such engagement. In no event shall the Indemnified Parties contribute or otherwise be liable for an amount in excess of the aggregate amount of fees actually received by the Finders pursuant to such engagement (excluding amounts received by the Finders as reimbursement of expenses).

The Company further agrees that no Indemnified Party shall have any liability (whether direct of indirect, in contract or tort or otherwise) to the Company for or in connection with the Finders' engagement hereunder except for losses, claims, damages, liabilities or expenses that a court of competent jurisdiction shall have determined by final judgment resulted solely from the gross negligence or willful misconduct of such Indemnified Party. The indemnity, reimbursement and contribution obligations of the Company shall be in addition to any liability which the Company may otherwise have and shall be binding upon and inure to the benefit of any successors. assigns, heirs and personal representatives of the Company or an Indemnified Party.

The indemnity, reimbursement, contribution provisions set forth herein shall remain operative and in full force and effect regardless of (i) any withdrawal, termination or consummation of or failure to initiate or consummate the Matters referred to herein, (ii) any investigation made by or on behalf of any party hereto or any person controlling (within the meaning of Section 15 of the Securities Act of 1933, as amended, or Section 20 of the Securities Exchange Act of 1934, as amended) any party hereto, (iii) any termination or the completion or expiration of the Agreement or the Finders' engagement and (iv) whether or not the Finders shall, or shall not, be called upon to render any formal or informal advice in the course of such engagement.

RESEARCH AGREEMENT

between

UNIVERSITY HEALTH NETWORK and Dr. Fei-Fei Liu

and

### SENESCO TECHNOLOGIES, INC.

This Agreement is made as of November 6, 2003 ("Effective Date") between the following parties: the University Health Network, located at 610 University Avenue, Suite 7-504, Toronto, Ontario M5G 2M9 (hereinafter "UHN"), Senesco Technologies, Inc., a New Jersey Corporation having a principal place of business at 303 George Street, Suite 420, New Brunswick, NJ 08901 (hereinafter referred to as "Senesco"), and Dr. Fei-Fei Liu (hereinafter referred to as the "Principal Investigator").

WHEREAS Senesco has conceived of, developed and is continuing to develop proprietary technology relating to initiation factor eIF5A and DHS and is the owner of proprietary rights thereto, including patent applications filed thereon on a worldwide basis;

WHEREAS UHN maintains laboratories directed by the Principal Investigator; and

WHEREAS Senesco wishes to fund research performed by Principal Investigator relating to the evaluation of potential efficacy of elF5A and DHS in human nasopharyngeal carcinoma.

NOW THEREFORE, in consideration of the mutual covenants herein contained, the parties hereby agree as follows:

DEFINITIONS.

- 1.1 "Budget" shall mean the budget  $\$ prepared by UHN and agreed to by Senesco to support the work to be performed  $\$ under the Research Plan in Each Research Year, attached hereto as Schedule B.
- 1.2 "Confidential Information" shall mean all terms of this Agreement, all Inventions, Invention disclosure reports, Research Information and Research Information reports as well as all information Exchanged between the parties pursuant to the Research Plan, including all technical information, ideas, data, compounds, molecules, cell lines, techniques, methods, processes, uses, composites, skills, trade secrets, and business and marketing information, as further defined in Article VII herein.

-1-

- 1.3 "Field" shall mean products relating to the treatment, prevention, or detection/diagnosis of nasopharyngeal carcinoma, within the scope of the Research Plan.
- 1.4 "Invention" shall mean any patented new and useful process, machine, manufacture or composition of matter conceived of or first reduced to practice, in whole or in part, during the term of this Agreement in the performance of research under the Research Plan.
- 1.5 "Researchers" shall mean the Principal Investigator and any other individuals conducting Research under this Agreement
- 1.6 "Research Information" shall mean all information, know-how, and materials (including any chemical compound or substances, biological cell, or component thereof, whether derived from biological material or synthesized) developed in the course of research under the Research Plan, but which does not constitute an Invention.
- 1.7 "Research Plan" shall mean the research to be performed under the direction of the Principal Investigator relating to the evaluation of eIF5A and DHS in human nasopharyngeal carcinoma, as detailed in Schedule A attached hereto.
- 1.8 "Net Sales" shall mean the total revenue received by Senesco for sales of products in the Field excluding standard industry discounts, refunds and taxes, all as determined from the books and records of the Senesco, or its parent and subsidiaries, maintained in accordance with Generally Accepted Accounting Principles consistently applied;
- 1.9 "Background Intellectual Property" shall mean all Inventions, Research Information, technical information, ideas, data, compounds, molecules, cell lines, techniques, methods, processes, uses, composites, skills, trade secrets, and business and marketing information, that was in the possession of either party prior to this Agreement.
- II. SCOPE OF WORK.
- 2.1 UHN shall conduct research under the supervision of the Principal Investigator in a laboratory at UHN in accordance with the Research Plan attached hereto as Schedule A. The scope of research conducted pursuant to the terms of this Agreement shall be limited to the parameters described in the Research Plan, subject to any amendments thereto made in writing and agreed to in writing signed by all parties. All research will be done in accordance with the good laboratory practice established by UHN. Any inconsistent or conflicting provisions between this Agreement and the Research Plan shall be governed by the terms of this Agreement.

3.1 Principal Investigator. The Principal Investigator shall be Dr. Fei-Fei Liu. If Dr. Liu shall for any reason cease to conduct the research herein in accordance with the

Research Plan in Schedule A, Senesco may, at its option, terminate this Agreement or request that UHN appoint a new Principal Investigator acceptable to Senesco. No new investigator shall be appointed by UHN without the prior approval of Senesco.

- 3.2 UHN Staff. UHN represents that it has the professional staff, research capabilities and facilities necessary to perform the work in accordance with this Agreement and the Research Plan. UHN shall supply all necessary personnel in order for it to perform the work in accordance with the Research Plan, and shall require all such personnel to abide by the terms of Articles VI, VII, VIII and X herein.
- IV. PERIOD OF PERFORMANCE.
- 4.1 The period of performance of this Agreement is contemplated to be two (2) years, at a cost as set forth in the set forth in the Budget set forth in Schedule B, unless sooner terminated or extended as elsewhere provided herein or by mutual agreement.
- V. BUDGET AND SUPPORT FOR RESEARCH.
- 5.1 During the Research period, beginning on the Effective Date of this Agreement, Senesco will pay UHN for its costs incurred in the performance of this Research Plan. Said payment shall be made based upon the Budget prepared by UHN and agreed to by Senesco. The proposed Budget is attached as Schedule B. Any amendments to the Budget agreed to in writing by the parties shall be appended hereto as an amendment to Schedule B.

Payments to UHN under this Agreement shall made payable as follows:

Date	Amount
30-Jan-04	\$42,154
1-Apr-04	\$42,154
1-Jul-04	\$42,154
1-Oct-04	\$42,154
1-Jan-05	\$33,387
1-Apr-05	\$33,387
1-Jul-05	\$33,387
1-Oct-05	\$33,387
TOTAL	\$302,164

Payments made to the UHN under this Agreement shall be sent to:

University Health Network 7-504 University Ave. Toronto, Ontario, Canada M5G 2M9

Attn: Bob McArthur, Director, Research Business Development

#### VI. REPORTS OF RESEARCH.

- 6.1 The Principal Investigator on behalf of all Researchers shall report to UHN, who will then report to Senesco any and all Inventions or Research Information. Such reports shall take the form of an Invention disclosure report to Senesco.
- 6.2 The Principal Investigator shall furnish Senesco a bi-annual written report summarizing research activity not previous reported pursuant to Section 6.1 hereof, which shall include a Research Information report with respect to all Research Information, as well as any Inventions not previously disclosed under Section 6.1 thereof. During the term and performance of this agreement, the Principal Investigator will provide "Updates," every three (3) months, concerning the progress of the Research Project to Dr. John Thompson. Such Updates may take the form of telephone call, meeting, or email. UHN will furnish Senesco with a written report of all Inventions and Research Information bi-annually, and a final written report within thirty (30) days following the end of the term of this Agreement.

### VII. CONFIDENTIALITY.

- 7.1 All terms of this Agreement, all Inventions, Invention disclosure reports, Research Information and Research Information reports as well as all information exchanged between the parties pursuant to the Research Plan, including all technical information, ideas, data, compounds, molecules, cell lines, techniques, methods, processes, uses, composites, skills, trade secrets, and business and marketing information, shall be considered Confidential Information.
- 7.2 Senesco possesses all right, title and interest to all Confidential Information, whether disclosed by Senesco or developed under this Agreement, with the exception of Background Intellectual Property owned by UHN.
- 7.3 Except as provided herein, UHN and Principal Investigator will not disclose or make available Confidential Information to third parties without Senesco's written consent during the term of this Agreement and for a period of five years thereafter.
- 7.4 UHN 's and Principal Investigator's obligations of confidentiality under this Section do not apply to any information which (a) is established by written records to be in the public domain other than as a consequence of an act of UHN or Principal Investigator; (b) was in UHN's or Principal Investigator's possession prior to the disclosure by Senesco and is demonstrated through written records that such information was in UHN 's or Principal Investigator's possession prior to disclosure from Senesco, and was not the subject of any earlier confidential relationship with Senesco; or (3) was rightfully acquired by UHN or Principal Investigator from a third party who was lawfully in possession of such information and was under no obligation to Senesco to maintain its confidentiality.
- $7.5\,$  UHN and Principal Investigator each agree to use Confidential Information only

for the uses as agreed upon in this Agreement and only in connection with the Research Plan or for other uses mutually agreeable to the parties.

- 7.6 Prior to the commencement of work under this Agreement, each UHN employee to undertake work hereunder shall agree to be bound by the Confidentiality and noncompete provisions of this Agreement by signing a copy of the form Acknowledgement attached as Schedule C.
- 7.7 Senesco, recognizes that UHN, may be desirous of publishing information as part of UHN's policy and function as a university to disseminate information for the purpose of scholarship. UHN and Principal Investigator recognize that such publication may jeopardize the protection of intellectual property rights contemplated under this Agreement. Senesco agrees that UHN personnel shall be permitted to present at symposia, national or regional professional meetings, and to publish in journals, theses or dissertations, or otherwise of their own choosing, methods and results of the Research Plan, PROVIDED that Senesco shall have been provided copies of any proposed publication or presentation at least sixty (60) days in advance of the submission of such proposed publication or presentation to allow Senesco to file patent application(s) or seek other protection for its proprietary subject matter contained in the proposed presentation or publication. Senesco retains the right to postpone publication for an additional thirty (30) days should meaningful protection not be obtained in a timely manner, but will not unreasonably withhold the right to publish or present. Under no circumstances will UHN or Principal Investigator be allowed to disclose Confidential Information without providing Senesco prior written notice as set forth under the procedure herein. The Principal Investigator will be allowed to retain a copy of all data for the purposes of presentation and publication only.

### VIII. PATENT RIGHTS.

- 8.1 UHN and Principal Investigator hereby assign and agree to assign to Senesco all right, title and interest to any Inventions and Research Information made, conceived of or arising under this Agreement within the scope of the Research Plan related to eIF5A and/or DHS. In consideration of the assignment granted herein, Senesco agrees to pay UHN a royalty of 2% of Net Sales in the Field, which include, in whole or in part, the Inventions and/or is manufactured using the Inventions. Payments to UHN will be made quarterly (every 3 months).
- 8.2 Senesco has the sole discretion for the selection of the means for intellectual property protection for the Inventions and Research Information related to eIF5A and/or DHS, whether to maintain trade secret protection or seek protection by patent. Senesco has the sole discretion for the selection of the technology to protect by patent and will make all decisions regarding the scope of protection sought.
- $8.3\,$  Senesco has the sole discretion to select patent counsel or other legal representatives to help secure patent rights to any Inventions and Research Information related to eIF5A and/or DHS arising out of this Agreement.

- 8.4 If Senesco decides that a patent application is to be filed related to eIF5A and/or DHS, Senesco, shall, at its own cost, prepare, file and prosecute such application. Designation of inventors in a patent application is a matter of patent law and shall be solely within the discretion of qualified patent counsel or other legal representative for Senesco.
- 8.5 UHN and Principal Investigator shall, at the request and expense of Senesco, at any time during or after the termination of this Agreement, execute all documents and perform all such acts as Senesco may deem necessary or advisable to confirm Senesco's sole and exclusive ownership right, title and interest in such Inventions and Research Information related to eIF5A and/or DHS in any country. UHN and Principal Investigator each agree to do all acts and execute all documents at the expense and request of Senesco, that Senesco may deem necessary to enforce its rights to the Inventions and Research Information, including but not limited to assisting in the preparation of patent applications, assisting in litigation, appearing for depositions and appearing as trial witnesses.

### IX. PUBLICITY.

- 9.1 UHN and Principal Investigator shall not disclose this Agreement with Senesco in any publicity, advertising or news release without the prior written approval of an authorized representative of Senesco. Senesco will not use the name of UHN or the Principal Investigator in any publicity, advertising or news release without the prior written approval of UHN.
- 9.2 Senesco may, at its own discretion, provide information relating to or arising from this Agreement to investors, licensees, relevant government agencies and other such parties.

#### X. NOTIFICATION OF COMPETING PROJECTS

- 10.1 Notwithstanding any provisions of this Agreement to the contrary, the parties agree that UHN independently works on many projects which may be similar in some respects to the subject matter set forth in the Research Plan. The parties agree that UHN shall not be precluded from pursuing such projects through its own personnel; EXCEPT:
- (a) Principal Investigator agrees not to conduct any research, act as a consultant or perform any other services, either directly or indirectly, for any entity in the world which is competitive with Senesco relating to the subject matter of the Research Plan related to eIF5A and/or DHS during the term of this Agreement and for a period of two (2) years after the termination of this Agreement; and
- (b) Each person working on this project agrees to first notify Senesco prior to accepting employment or undertaking services for any entity in the world which is

competitive with Senesco relating to the subject matter provided in the Research Plan related to eIF5A and/or DHS. In view of the confidentiality obligations herein, each person working on this project agrees not to personally conduct any research, act as a consultant, or perform any other services relating to the subject matter provided in the Research Plan related to eIF5A and/or DHS, either directly or indirectly for any entity for a period of two (2) years after termination of this Agreement.

10.2 The parties agree that the period of time and scope of the restrictions specified herein are both reasonable and justifiable to prevent harm to the legitimate business interests of Senesco, including but not limited to preventing transfer of Confidential Information to Senesco's competitors and/or preventing other unauthorized disclosures or use of Senesco's Inventions and Research Information.

### XI. ASSIGNMENT.

11.1 No right or obligation under this Agreement shall be assigned by UHN without the prior written permission of Senesco. Senesco has the right to assign its rights and obligations; however, it must also seek consent of UHN, such consent not to be unreasonably withheld. UHN shall not subcontract any work to be performed without Senesco's prior written consent. Any work by any subcontractor shall be under the direct supervision of Principal Investigator.

### XII. SUPPLIES AND EQUIPMENT.

12.1 UHN shall provide laboratory space, personnel and equipment already owned by UHN for conducting the research contemplated by the Agreement. UHN shall retain title to any equipment purchased with funds provided by Senesco under an approved Budget under this Agreement.

#### XIII. TERMINATION.

- 13.1 Senesco has the right to terminate this Agreement upon thirty (30) days advance written notice to UHN. In the event of such a termination, UHN shall refund all unexpended and unobligated funds to Senesco after withholding amounts necessary to discharge obligations that cannot be canceled. UHN agrees to provide Senesco with copies of all work products which exist at the time of termination.
- 13.2 Senesco's rights under Articles VI, VIII, IX, and X shall survive termination of this Agreement.
- 13.3 In the event Senesco wishes to abandon its interest in the Inventions and Research Information, UHN and Senesco will enter into good faith negotiations for UHN  $\,$

to acquire said Inventions and Research Information.

13.4 If Senesco fails to meet any of its obligations under this Agreement and does not remedy these failures within 30 days after receipt of written notice of such failures from UHN, or at any time Senesco fails to carry on business in the normal course, UHN may terminate this agreement by giving Senesco written notice therof.

#### XIV. INDEMNIFICATION.

- 14.1 UHN shall defend, indemnify and hold Senesco, its officers, employees and agents harmless from and against any and all liability, loss, expense (including reasonable attorneys' fees) or claims for injury or damages arising out of the performance of this Agreement but only in proportion to and to the extent such liability, loss, expense, attorneys' fees or claims for injury or damages are caused by or result from the negligent or intentional acts or omissions of UHN, its officers, agents or employees.
- 14.2 Senesco shall defend, indemnify and hold Principal Investigator and UHN, its officers, employees and agents harmless from and against any and all liability, loss, expense (including reasonable attorneys' fees) or claims for injury or damages arising out of the performance of this Agreement but only in proportion to and to the extent such liability, loss, expense, attorneys' fees or claims for injury or damages are caused by or result from the negligent or intentional acts or omissions of Senesco, its officers, agents or employees.

#### XV. GOVERNING LAW.

15.1 This Agreement shall be construed in accordance with and governed by the laws, statutes, rules, court decisions and customs prevailing in the State of New Jersey and the United States, except to the extent that the laws of the Province of Ontario and the Federal Government of Canada shall govern Workman's Compensation, Employment Standards Act, Ontario Human Rights Code, Environmental Protection Act, Occupational Health and Safety Act or any other similar statutes that would take priority.

### XVI. INTEGRATION.

16.1 This Agreement states the entire contract between the parties in respect to the subject matter of the Agreement and supersedes any previous written or oral representations, statements, negotiations or agreements. This Agreement my be modified only by written amendment executed by the authorized representatives of both parties.

### XVII. AGREEMENT MODIFICATION.

17.1 Any agreement to change the terms of this Agreement in any way shall be valid only if the change is made in writing and approved by mutual agreement of authorized representatives of the parties hereto.

#### XVIII. GOVERNING LANGUAGE.

18.1 In the event that a translation of this Agreement is prepared and signed by the parties, this English language Agreement shall be the official version and shall govern if there is a conflict between the translation and this English language Agreement.

### XIX. NOTICES.

19.1 Notices under this Agreement shall be sent by registered mail, return receipt requested, delivered by hand, or faxed to the following address of either party unless changed by written notice.

SENESCO: Bruce Galton, President and CEO

Bob McArthur Director, Research Business Development Bruce Galton, President and Casteria Senesco, Technologies, Inc.
303 George Street, Suite 420
New Brunswick, NJ 08901
Telephone: (732) 296-8400
Facsimile: (732) 296-9292
Telephone: (416) 946-2287
Facsimile: (416) 946-2287

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized representatives as of the day and year first written above.

Senesco Technologies, Inc. ("Senesco")

University Health Network ("UHN")

/s/ Bruce Galton -----Bruce Galton President and CEO

/s/ Christopher Paige Dr. Christopher Paige

Vice President, of Research

Date: JAN 29, 2004 Date: JAN 27, 2004

I have read and understood this Agreement.

/s/ Fei-Fei Liu

Dr. Fei-Fei Liu

### EVALUATION OF POTENTIAL EFFICACY OF 5A1 IN HUMAN NASOPHARYNGEAL CARCINOMA

PRINCIPAL INVESTIGATOR: DR. FEI-FEI LIU CO-PRINCIPAL INVESTIGATOR: DR. JOHN THOMPSON

DR. HENRY KLAMUT DR. DOLLY HUANG

### INTRODUCTION

Protein synthesis is a critical cellular event. It takes place on the ribosomal particles in the cytoplasm, and comprises of three phases: initiation, elongation, and termination.

The initiation phase appears to be the most highly regulated of these three phases, through the involvement of several initiation factors (IF) (eg. IF-1, IF-2, IF-3). Initiator tRNA binds to and forms ternary complexes with these IF's and GTP, along with binding to 43S preinitiation complex, resulting in changing the intra-molecular secondary structures within the mRNA, thereby allowing GPT hydrolysis to energize the commencement of elongation. Factor 5A appears to be involved in accelerating hydrolysis of GPT. These factors may also function as nucleo-cytoplasmic shuttle proteins, and facilitate translation of specific mRNA's through a translocation process.

There are two isoforms of 5A: 5A1, and 5A2. Over-expression of 5A1 induces apoptosis; 5A2 appears to be more involved in cell cycle arrest or differentiation. Preliminary evidence indicates that transfection of 5A1 induces apoptosis in cancer cells, perhaps by promoting the translation of apoptotic mRNA's. Antisense 5A1 on the other hand, prevented the induction of apoptosis.

5Al appears to be highly toxic, since the generation of an adenoviral (adv) vector mediating 5Al expression driven by the non-selective CMV promoter was not possible, presumably due to cytotoxicity of the packaging 293 cells. Hence, its expression needs to be regulated and restricted. We hereby propose to evaluate whether a transcriptional regulatory strategy will result in the successful generation of an adv-mediated 5Al vector. Specifically, we will utilize our EBV-responsive promoter elements, denoted as oriP, and attempt to generate adv.oriP.5Al. Subsequently, adv.oriP.5Al will be evaluated for efficacy in the EBV-positive nasopharyngeal carcinoma (NPC) xenograft system.

HYPOTHESIS: Introduction of 5A1 through an adv vector under oriP regulation (adv.oriP.5A1) into NPC cancer cells will induce apoptosis, prevent tumour formation, and cause regression of established xenograft tumours.

### SPECIFIC AIMS

- To determine whether a novel adv vector mediating 5A1 (adv.oriP.5A1) can be constructed.
- 2. To determine if infection of adv.oriP.5Al will decrease clonogenic survival of C666-1 cells, with induction of apoptosis, activation of caspase (3, 8, or 9) activity, and cleavage of DNA. The kinetics of 5Al expression will be determined using Western blotting, and its effect on cell proliferation will be examined. The additional efficacy when combined with ionizing radiation (RT) will be examined for either an additive or a synergistic interaction. Potential

Evaluation of potential efficacy of 5A1 In human nasopharyngeal carcinoma 1 of 3  $\,$ 

#### \_\_\_\_\_

- therapeutic gain will be evaluated by simultaneous infection of "normal" nasopharyngeal fibroblast (KS1), and EBV-negative CNE-2Z cells.
- 3. To determine if adv.oriP.5Al will prevent formation of C666-1 tumours. C666-1 cells will be infected ex vivo with adv.oriP.5Al, then 24 hours later implanted into the gastrocnemius muscle of SCID mice, and followed for tumour growth.
- 4. To determine if adv.oriP.5A1 therapy can cause regression of established nasopharyngeal tumours. Established C666-1 tumours will be treated with intra-tumoural (IT) adv.oriP.5A1 +/- local tumour RT, and assessed for tumour growth delay. Histologic sections will be removed at various time points after treatment, for examination of expression of 5A1 (using immunohistochemistry), apoptosis, and necrosis.
- 5. Safety and toxicity evaluation will be conducted by serial blood samplings for liver, renal, bone marrow function after intravenous (IV) injection of adv.oriP.5Al. Normal critical organs (liver, lung, kidney, spleen, brain) will also be removed for histologic examination.

### EXPERIMENTAL PROTOCOLS

- 1. The 5Al cDNA will be cloned downstream of the oriP promoter elements, and placed into the novel oriP.5Al shuttle plasmid. This will then be ligated with the remainder of the AEl adv genome, to generate the novel adv.oriP.5Al. Diagnostic digests will be performed to confirm validity of plasmid sequences. The vector will be directly sequenced to confirm presence of the expected promoter and 5Al sequences. Western blotting will be conducted after infection of the EBV-positive C666-1 cells to confirm presence of the expected protein.
- 2. Clonogenic survival experiments will be conducted using C666-1 cells after infection with adv.oriP.5A1 (0-50 pfu/cell). RT (0-10 Gy) will also be delivered in conjunction with a preselected dose of adv.5A1 which will result in 10% cytotoxicity, to determine whether interactive effects can be observed.
  - Cell lysates will be obtained at set times after infection to obtain a Western for 5Al expression to assess the kinetics of 5Al protein expression, along with determination of a dose-dependent relationship.
  - Cell cycling effect of adv.5A1 will be determined using flow cytometry (dual BrDU-PI labelling of DNA), with subsequent analysis of the proportion of cells in the various phases of the cell cycle, post-treatment.
  - Each experiment will be conducted at least three separate times, to obtain a mean and standard error for each study.
- 3. Tumour formation experiments will be conducted by infecting C666-1 (1 x 106) cells ex vivo using a dose of adv.oriP.5A1 which will cause 99%-cytotoxicity in vitro. One day after infection, the infected cells will be implanted into the gastrocnemius muscle of SC1D mice, and tumour and leg diameter will be monitored on a regular basis. Control arms will comprise of PBS-treated, and same dose of an empty adv vector. For each experiment, each arm will comprise of at least 5 mice, and each study has to be conducted at least three times.

Evaluation of potential efficacy of 5A1 In human nasopharyngeal carcinoma 2 of 3

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4. Therapeutic experiments will be performed by treating established C666-1 tumours in SCID mice. At a set point (eg tumour + leg diameter of 9 mm), these tumours will be treated using a series of IT injections of adv.oriP.5A1 (1 x 108 pfu/injection). One possible regimen could be daily injections x 6 consecutive days. Tumour RT (2 or 4 Gy each) will be delivered twice during this 6-day schedule. There will be 5 arms for each tumour model: PBS only, empty adv.oriP IT (same dose), adv.oriP.5A1 alone, RT alone, and adv.oriP.5A1 + RT.

Each mouse will be monitored for tumour growth, weight, and general appearance. Each arm will comprise of at least 5 mice, and each study needs to be performed at least 3 times.

Additional tumour-bearing and treated mice will also have their tumour and normal organs removed for histologic evaluation of 5A1 expression, (by either Western or IHC), and H & E for apoptosis or necrosis.

5. Safety and toxicity profile can be grossly determined based on appearance and weight of treated (IT injection) mice. Blood analyses will be conducted after IV injection (tail vein or IP) of adv.oriP.5Al, and then mice will be sacrificed for LFT's (alk phos, SGOT, SGPT, bilirubin, amylase), marrow (CBC), kidney (creat, BUN) at 48 hrs, and 14 days post-treatment. Normal organs will also be removed for histologic examination using hematoxylin & eosin.

### CONCLUSION

Upon the completion of this series of studies, we will be able to determine if the novel adv.oriP.5Al can be generated. Subsequently, we will be able to assess if 5Al has any efficacy against C666-l cells in vitro, and effect in vivo, of either prevention of tumour formation, or cause regression of established tumours. We also be able to assess the type of interaction of adv.oriP.5Al with RT (either additive, synergistic, or even sub-additive). Finally, the safety profile of adv.oriP.5Al will also be determined, when administered IT or IV.

Dec 1st. 2002

Evaluation of potential efficacy of 5A1 In human nasopharyngeal carcinoma 3 of 3

# SCHEDULE B1

EVALUATION OF POTENTIAL EFFICACY OF 5A1

# EVALUATION OF POTENTIAL EFFICACY OF 5A: IN HUMAN NASOPHARYNGEAL CARCINOMA

## BUDGET JUSTIFICATION; PI: LIU

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## (I) GENERATION OF NOVEL ADV.ORIP.5A1:

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- 1. Dr. Jian-Hua Li (Level 2 Research Technician) will be devoting 3 months
   (January-March 2003) full-time, in attempting to generate the adv.oriP.5A1
   vector. His current salary is \$52,231, with 21% benefit this would equal
   \$62,300. Three months' salary would hence translate to \$15,800.
- 2. Supply costs will include media, sera, extensive tissue culture expenses. In addition, we will need specialised reagents and restriction enzymes for sub-cloning strategy the novel adenovirus. Primers will be required to confirm the sequencing, along with additional methods (Westerns) to verify the generation of the appropriate protein of interest. Hence, the cost of generating the novel vector will be approximately \$22.8K.

#### PERMANENT EQUIPMENT

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Due to the extensive demands on our incubator space (required for adenoviral propagation in 293 cells), we will require the addition of a new incubator (\$11,939 (quotation attached)). No additional permanent equipment costs would be required.

Therefore, to generate the novel adenoviral vector, the total cost would be \$34,739.

### (II) SUPPLIES AND EXPENSES FOR NASOPHARYNGEAL EXPERIMENTS:

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- a) Media, sera, plastic culture plates are needed to propagate several cell lines: 293, C666-1, CNE-2Z, KS1, HeLa and other cells as needed.
- b) Specialized reagents, kits and disposables will be needed for Western blotting, preparation of large-scale plasmid and recombinant adenoviral stocks, adenoviral plaque assays, cell viability (e.g. MTT) assays. Kodak films and transfer membranes will be needed for Western blotting.
- c) Antibodies and kits for caspase activities, other apoptosis markers e.g. AO-EB; in addition to propidium iodide staining for cell cycle analyses, will be required.
- d) Our flow cytometry facility charges \$30/hr, and we would estimate 30 hrs per year.
- e) SCID mice are provided at a cost of \$45 per animal and will be utilized as host animals for our xenograft experiments. The tumour formation experiments will have 3 arms (PBS, adv.oriP, adv.oriP.5Al); each arm will have 9 mice, total # will be 27, and each experiment needs to be conducted three times, translating into 81 mice. The therapeutic experiments will have 6 arms (PBS, adv.oriP, adv.oriP.5Al, RT, RT + adv.oriP, and RT + adv.oriP.5Al); each arm will have 9 mice; total will be 162 mice (6x9x3). We will have an additional 50 mice for inadvertent death or no tumour formation, plus additional mice for histology and safety/toxicity evaluations. Hence, total # of required mice will be 293 (81 + 162 + 50). The grand total # of mice required will therefore be 293 @\$45/mouse = \$13,185. There is also housing cost of

1

- \$0.60 cents per cage per day charged by the OCI/PMH animal colony (5 animals per cage); we will follow each animal to a minimum of 100 days, hence this will total \$3516. Therefore, the total animal cost will be \$16,701 (\$13,185+\$3516). This will take place over 2 years, translating into \$8,351 per year.
- Toxicity profiling for liver, kidney and bone marrow functions is out sourced (VitaTech), and this would cost approximately \$3K. Immunohistochemical analyses will be required to determine apoptosis in vivo, along with expression of 5A1. Our histology department charges approximately \$10/slide.
- Our Division of Experimental Therapeutics at OCI/PMH has common equipment with the access to centrifuges, balances, spectrophotometers, phosphoimagers, etc.; the use of which is contained within a yearly fee of phospholmagers, etc.; the use of which is contained within a year, too of approximately \$1000. Furthermore, central glass washing and research computing services at OCI/PMH amounts to \$3000 per year. Cell storage in liquid nitrogen costs \$1000 per year. Total of these thereby equals \$5000/yr.
- Our biostatistical dept charges approximately \$100/hr; there may be approximately 10 hrs of statistical analyses/year required.

  We plan to produce 1 paper at the end of the 2nd year; coloured
- photomicrographs are very expensive, so that 1 paper would cost \$2K.

### (II) SALARIES

- Dr. Jian-Hua Li (Level 2 Research Technician) will be working 50% full-time on this project for the in vitro component. His current salary is \$52,231,
- with 21% benefit equals \$62,300, which translates into \$31,600/annum. Dr. Willa Shi is another Level 2 Research Technician, and her current salary is \$43,000, plus 21% benefit, would equal \$52,030. She will devote 50% full-time to the in vivo, safety experiments, along with immunohistochemical analyses of xenograft studies. This would translate into \$26,015/annum. Both individual's salary levels will increase by 10%/annum.

Jan 8th, 2004

# Schedule B2

# PROPOSED 5A1 RESEARCH BUDGET

	Yr1	Yr2
SUPPLIES		
PERMANENT EQUIPMENT Incubator SUB-TOTAL	\$11,939 \$11,939	
(I) ADV GENERATION media, sera, tissue culture expenses specialized reagents + films primers, enzymes, antibodies salary cost (25% of Dr. Li's salary)	\$3,000 \$2,000 \$2,000 \$15,800	
SUB-TOTAL	\$22,800	
(II) REMAINDER OF PROJECT SUPLIES media, sera specialized reagents + films caspase antibodies, apoptosis markers flow cytometry animal costs safety testing, immuno common equipment charges statistical cost publication  SUB-TOTAL	\$7,000 \$5,000 \$4,000 \$1,000 \$8,351 \$6,000 \$5,000 \$1,000	\$7,000 \$5,000 \$4,000 \$1,000 \$8,351 \$6,000 \$5,000 \$1,000 \$2,000
SALARIES Dr. Li 50% FTE post-doc (Dr. Shi) 50% FTE SUB-TOTAL TOTAL	\$31,600 \$26,015 \$57,615 \$129,705	\$34,760 \$28,617 \$63,377 \$102,728
30% OVERHEAD	\$168,617	\$133,546 =======

### ACKNOWLEDGEMENT OF EMPLOYEES AND RESEARCHERS

In consideration of the substantial benefits that I have or will continue to receive as a condition to being able to participate in the project described in the Research Agreement executed between Senesco Technologies, Inc. ("Senesco") and UHN, and Dr. Fei-Fei Liu effective as of January 30, 2004, I hereby agree to be bound to the confidentiality and non-disclosure provisions set forth below:

### CONFIDENTIALITY

- 7.1 All terms of this Agreement, all Inventions, Invention disclosure reports, Research Information and Research Information reports as well as all information exchanged between the parties pursuant to the Research Plan, including all technical information, ideas, data, compounds, molecules, cell lines, techniques, methods, processes, uses, composites, skills, trade secrets, and business and marketing information, shall be considered Confidential Information.
- 7.2 Senesco possesses all right, title and interest to all Confidential Information, whether disclosed by Senesco or developed under this Agreement.
- 7.3 Except as provided herein, UHN and Principal Investigator will not disclose or make available Confidential Information to third parties without Senesco's written consent during the term of this Agreement and for a period of five years thereafter.
- 7.4 UHN's and Principal Investigator's obligations of confidentiality under this Section do not apply to any information which (a) is established by written records to be in the public domain other than as a consequence of an act of UHN or Principal Investigator; (b) was in UHN's or Principal Investigator's possession prior to the disclosure by Senesco and is demonstrated through written records that such information was in UHN's or Principal Investigator's possession prior to disclosure from Senesco, and was not the subject of any earlier confidential relationship with Senesco; or (3) was rightfully acquired by UHN or Principal Investigator from a third party who was lawfully in possession of such information and was under no obligation to Senesco to maintain its confidentiality.
- $7.5\,$  UHN and Principal Investigator each agree to use Confidential Information only for the uses as agreed upon in this Agreement and only in connection with the Research Plan or for other uses mutually agreeable to the parties.
- 7.6 Prior to the commencement of work under this Agreement, each UHN employee to undertake work hereunder shall agree to be bound by the Confidentiality and non-compete provisions of this Agreement by signing a copy of the form Acknowledgement attached as Schedule C.

7.7 Senesco, recognizes that UHN, may be desirous of publishing information as part of UHN's policy and function as a university to disseminate information for the purpose of scholarship. UHN and Principal Investigator recognize that such publication may jeopardize the protection of intellectual property rights contemplated under this Agreement. Senesco agrees that UHN personnel shall be permitted to present at symposia, national or regional professional meetings, and to publish in journals, theses or dissertations, or otherwise of their own choosing, methods and results of the Research Plan, PROVIDED that Senesco shall have been provided copies of any proposed publication or presentation at least sixty (60) days in advance of the submission of such proposed publication or presentation to allow Senesco to file patent application(s) or seek other protection for its proprietary subject matter contained in the proposed presentation or publication. Senesco retains the right to postpone publication for an additional thirty (30) days should meaningful protection not be obtained in a timely manner, but will not unreasonably withhold the right to publish or present. Under no circumstances will UHN or Principal Investigator be allowed to disclose Confidential Information without providing Senesco prior written notice. The Principal Investigator will be allowed to retain a copy of all data for the purposes of presentation and publication only.

### X. NOTIFICATION OF COMPETING PROJECTS

- 10.1 Notwithstanding any provisions of this Agreement to the contrary, the parties agree that UHN independently works on many projects which may be similar in some respects to the subject matter set forth in the Research Plan. The parties agree that UHN shall not be precluded from pursuing such projects through its own personnel; however, each person working on this project agrees to first notify Senesco prior to accepting employment or undertaking services for any entity in the world which is competitive with Senesco relating to the subject matter provided in the Research Plan related to eIF5A and/or DHS.
- I Acknowledge and agree that any inventions or rights which may be protectable under intellectual property law developed, created, or conceived of by me (either in whole or in part) relating to eIF5A and/or DHS, shall be owned solely by Senesco, and I hereby agree to take any actions requested by Senesco in order to more fully vest title in the same in Senesco as required by such Agreement.

/s/ Willa Shi ----Dr. Willa Shi

January 17, 2004

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Date

### ACKNOWLEDGEMENT OF EMPLOYEES AND RESEARCHERS

In consideration of the substantial benefits that I have or will continue to receive as a condition to being able to participate in the project described in the Research Agreement executed between Senesco Technologies, Inc. ("Senesco") and UHN, and Dr. Fei-Fei Liu effective as of January 30, 2004, I hereby agree to be bound to the confidentiality and non-disclosure provisions set forth below:

### CONFIDENTIALITY

- 7.1 All terms of this Agreement, all Inventions, Invention disclosure reports, Research Information and Research Information reports as well as all information exchanged between the parties pursuant to the Research Plan, including all technical information, ideas, data, compounds, molecules, cell lines, techniques, methods, processes, uses, composites, skills, trade secrets, and business and marketing information, shall be considered Confidential Information.
- 7.2 Senesco possesses all right, title and interest to all Confidential Information, whether disclosed by Senesco or developed under this Agreement:
- 7.3 Except as provided herein, UHN and Principal Investigator will not disclose or make available Confidential Information to third parties without Senesco's written consent during the term of this Agreement and for a period of five years thereafter.
- 7.4 UHN's and Principal Investigator's obligations of confidentiality under this Section do not apply to any information which (a) is established by written records to be in the public domain other than as a consequence of an act of UHN or Principal Investigator; (b) was in UHN's or Principal Investigator's possession prior to the disclosure by Senesco and is demonstrated through written records that such information was in UHN's or Principal Investigator's possession prior to disclosure from Senesco, and was not the subject of any earlier confidential relationship with Senesco; or (3) was rightfully acquired by UHN or Principal Investigator from a third party who was lawfully in possession of such information and was under no obligation to Senesco to maintain its confidentiality.
- $7.5\,$  UHN and Principal Investigator each agree to use Confidential Information only for the uses as agreed upon in this Agreement and only in connection with the Research Plan or for other uses mutually agreeable to the parties.
- 7.6 Prior to the commencement of work under this Agreement, each UHN employee to undertake work hereunder shall agree to be bound by the Confidentiality and non-compete provisions of this Agreement by signing a copy of the form Acknowledgement attached as Schedule C.

7.7 Senesco, recognizes that UHN, may be desirous of publishing information as part of UHN's policy and function as a university to disseminate information for the purpose of scholarship. UHN and Principal of intellectual property rights contemplated under this Agreement. Senesco agrees that UHN personnel shall be permitted to present at symposia, national or regional professional meetings, and to publish in journals, theses or dissertations, or otherwise of their own choosing,  $% \left( 1\right) =\left( 1\right) +\left( 1\right$ results of the Research Plan, PROVIDED that Senesco shall have been provided copies of any proposed publication or presentation at least sixty (60) days in advance of the submission of such proposed publication or presentation to allow Senesco to file patent application(s) or seek other protection for its proprietary subject matter contained in the proposed presentation or publication. Senesco retains the right to postpone publication for an additional thirty (30) days should meaningful protection not be obtained in a timely manner, but will not unreasonably withhold the right to publish or present. Under no circumstances will UHN or Principal Investigator be allowed to disclose Confidential Information without providing Senesco prior written notice. The Principal Investigator will be allowed to retain a copy of all data for the purposes of presentation and publication only.

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- I Acknowledge and agree that any inventions or rights which may be protectable under intellectual property law developed, created, or conceived of by me (either in whole or in part) relating to eIF5A and/or DHS, shall be owned solely by Senesco, and I hereby agree to take any actions requested by Senesco in order to more fully vest title in the same in Senesco as required by such Agreement.

/s/ Jian-Hua Li Dr. Jian-Hua Li

January 16, 2004 Date

### ACKNOWLEDGEMENT OF EMPLOYEES AND RESEARCHERS

In consideration of the substantial benefits that I have or will continue to receive as a condition to being able to participate in the project described in the Research Agreement executed between Senesco Technologies, Inc. ("Senesco") and UHN, and Dr. Fei-Fei Liu effective as of January 30, 2004, I hereby agree to be bound to the confidentiality and non-disclosure provisions set forth below:

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- 7.3 Except as provided herein, UHN and Principal Investigator will not disclose or make available Confidential Information to third parties without Senesco's written consent during the term of this Agreement and for a period of five years thereafter.
- 7.4 UHN 's and Principal Investigator's obligations of confidentiality under this Section do not apply to any information which (a) is established by written records to be in the public domain other than as a consequence of an act of UHN or Principal Investigator; (b) was in UHN's or Principal Investigator's possession prior to the disclosure by Senesco and is demonstrated through written records that such information was in UHN 's or Principal Investigator's possession prior to disclosure from Senesco, and was not the subject of any earlier confidential relationship with Senesco; or (3) was rightfully acquired by UHN or Principal Investigator from a third party who was lawfully in possession of such information and was under no obligation to Senesco to maintain its confidentiality.
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- I Acknowledge and agree that any inventions or rights which may be protectable under intellectual property law developed, created, or conceived of by me (either in whole or in part) relating to eIF5A and/or DHS, shall be owned solely by Senesco, and I hereby agree to take any actions requested by Senesco in order to more fully vest title in the same in Senesco as required by such Agreement.

/s/	Henry	Klamut
Dr.	Henry	Klamut

January 15, 2004
----Date

### ACKNOWLEDGEMENT OF EMPLOYEES AND RESEARCHERS

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- 7.4 UHN's and Principal Investigator's obligations of confidentiality under this Section do not apply to any information which (a) is established by written records to be in the public domain other than as a consequence of an act of UHN or Principal Investigator; (b) was in UHN's or Principal Investigator's possession prior to the disclosure by Senesco and is demonstrated through written records that such information was in UHN's or Principal Investigator's possession prior to disclosure from Senesco, and was not the subject of any earlier confidential relationship with Senesco; or (3) was rightfully acquired by UHN or Principal Investigator from a third party who was lawfully in possession of such information and was under no obligation to Senesco to maintain its confidentiality.
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- I Acknowledge and agree that any inventions or rights which may be protectable under intellectual property law developed, created, or conceived of by me (either in whole or in part) relating to eIF5A and/or DHS, shall be owned solely by Senesco, and I hereby agree to take any actions requested by Senesco in order to more fully vest title in the same in Senesco as required by such Agreement.

/s/ Dolly Huang
Dr. Dolly Huang

January 16, 2004

Date

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

- I, Bruce C. Galton, President and Chief Executive Officer of Senesco Technologies, Inc., certify that:
- I have reviewed this Quarterly Report on Form 10-QSB of Senesco Technologies, Inc.
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:
  - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) [Paragraph omitted in accordance with SEC transition instructions contained in SEC Release 34-47986]
  - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 17, 2004

/s/ Bruce C. Galton

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

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

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

- I have reviewed this Quarterly Report on Form 10-QSB of Senesco Technologies, Inc.
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:
  - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) [Paragraph omitted in accordance with SEC transition instructions contained in SEC Release 34-47986]
  - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 17, 2004

/s/ Joel Brooks

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

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

### AS ADOPTED PURSUANT TO

### SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-QSB of Senesco Technologies, Inc. for the period ended September 30, 2003 as filed with the Securities and Exchange Commission on the date hereof, the undersigned, Bruce C. Galton, President and Chief Executive Officer, hereby certifies, pursuant to 18 U.S.C. Section 1350, that:

- (1) The Quarterly Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Quarterly Report fairly presents, in all material respects, the financial condition and results of operations of Senesco Technologies, Inc.

Dated: February 17, 2004 /s/ Bruce C. Galton \*

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

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

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

### AS ADOPTED PURSUANT TO

### SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-QSB of Senesco Technologies, Inc. for the period ended September 30, 2003 as filed with the Securities and Exchange Commission on the date hereof, the undersigned, Joel Brooks, Chief Financial Officer and Treasurer, hereby certifies, pursuant to 18 U.S.C. Section 1350, that:

- (1) The Quarterly Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Quarterly Report fairly presents, in all material respects, the financial condition and results of operations of Senesco Technologies, Inc.

Dated: February 17, 2004 /s/ Joel Brooks \*

-----

Joel Brooks

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

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