SENESCO TECHNOLOGIES INC
Form 10-Q
May 17, 2010

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-Q

(Mark One)

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

For the quarterly period ended March 31, 2010

or

¨ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from to _____

Commission File No. 001-31326

SENESCO TECHNOLOGIES, INC.
(exact name of registrant as specified in its charter)

Delaware	84-1368850
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification No.)

303 George Street, Suite 420
New Brunswick, New Jersey 08901
(Address of principal executive offices)
(732) 296-8400
(Registrant's telephone number, including area code)

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the past 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes:x No: ¨

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes: ¨ No: ¨

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See definitions of "accelerated filer", "large accelerated filer" and "smaller reporting

company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ¨ Accelerated filer ¨

Smaller reporting company x Non-accelerated filer ¨

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes: ¨ No: x

As of May 15, 2010, 33,584,121 shares of the issuer's common stock, par value $0.01 per share, were outstanding.

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY

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PART I. FINANCIAL INFORMATION.

Item 1. Financial Statements.

Certain information and footnote disclosures required under United States 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.

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

	March 31, 2010 (unaudited)	June 30, 2009
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 39,707	$ 380,569
Short-term investments	-	1,050,000
Deferred financing costs	177,279	-
Prepaid expenses and other current assets	1,269,488	1,161,348
Total Current Assets	1,486,474	2,591,917
Property and equipment, net	5,581	5,986
Intangibles, net	4,483,750	3,884,999
Deferred financing costs	-	632,324
Security deposit	7,187	7,187
TOTAL ASSETS	$ 5,982,992	$ 7,122,413
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accounts payable	$ 1,401,135	$ 976,680
Accrued expenses	621,614	355,937
Line of credit	2,198,609	-
Convertible note, net of discount	82,047	-
Total Current Liabilities	4,303,405	1,332,617
Convertible note, net of discount	-	6,217
Warrant liability ($416,667 to related parties)	1,388,333	-
Grant payable	99,728	99,728
Other liability	10,049	16,017
TOTAL LIABILITIES	5,801,515	1,454,579
STOCKHOLDERS' EQUITY:		
Preferred stock, $0.01 par value; authorized 5,000,000 shares, no shares issued	—	—
Common stock, $0.01 par value; authorized 120,000,000 shares, issued and outstanding 33,584,121 and 19,812,043, respectively	335,841	198,120
Capital in excess of par,	38,240,964	36,687,846
Deficit accumulated during the development stage	(38,395,328)	(31,218,132)
TOTAL STOCKHOLDERS' EQUITY	181,477	5,667,834
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 5,982,992	$ 7,122,413

See Notes to Condensed Consolidated Financial Statements.

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY
(A DEVELOPMENT STAGE COMPANY)
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(unaudited)

	For the Three Months Ended March 31, 2010	For the Three Months Ended March 31, 2009	For the Nine Months Ended March 31, 2010	For the Nine Months Ended March 31, 2009	From Inception on July 1, 1998 through March 31, 2010
Revenue	$ —	$ 75,000	$ 140,000	$ 275,000	$ 1,590,000
Operating Expenses:					
General and administrative	554,953	532,245	1,735,317	1,711,166	25,666,510
Research and development	566,307	540,494	1,522,610	1,624,166	13,834,169
Total Operating Expenses	1,121,260	1,072,739	3,257,927	3,335,332	39,500,679
Loss From Operations	(1,121,260)	(997,739)	(3,117,927)	(3,060,332)	(37,910,679)
Sale of state income tax loss, net	—	—	—	—	586,442
Loss on extinguishment of debt	(275,345)	—	(361,877)	—	(361,877)
Fair value – warrant liability	(527,566)	—	1,811,775	—	6,543,542
Other noncash income	—	—	—	—	321,259
Interest income (expense), net	(7,375)	737	(6,349)	41,788	516,964
Amortization of debt discount and financing costs	(3,206,049)	(107,240)	(4,973,909)	(319,637)	(6,120,672)
Interest expense on convertible notes	(146,640)	(227,235)	(528,909)	(799,043)	(1,970,307)
Net Loss	$ (5,284,235)	$ (1,331,477)	$ (7,177,196)	$ (4,137,224)	$ (38,395,328)
Basic and Diluted Net Loss Per Common Share	$ (0.17)	$ (0.07)	$ (0.27)	$ (0.22)	
Basic and Diluted Weighted Average Number of Common Shares Outstanding	31,650,371	19,033,091	26,610,925	18,678,109	

See Notes to Condensed Consolidated Financial Statements.

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY
(A DEVELOPMENT STAGE COMPANY)
CONDENSED CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY
FROM INCEPTION ON JULY 1, 1998 THROUGH MARCH 31, 2010
(unaudited)

	Common Stock Shares	Common Stock Amount	Capital in Excess of Par Value	Deficit Accumulated During the Development Stage	Total
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 $2.63437 per share	759,194	7,592	1,988,390	—	1,995,982
Issuance of common stock for placement fees on May 21, 1999 at $0.01 per share	53,144	531	(531)	—	—
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	85,191	852	249,148	—	250,000
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 share	1,471,700	14,718	2,192,833	—	2,207,551
Commissions, legal and bank fees associated with issuances for the year ended June 30, 2000	—	—	(260,595)	—	(260,595)
Fair market value of options and warrants vested during the year ended June 30, 2000	—	—	1,475,927	—	1,475,927
Fair market value of options and warrants vesting during the year ended June 30, 2001	—	—	308,619	—	308,619

(continued)

See Notes to Condensed Consolidated Financial Statements.

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY
(A DEVELOPMENT STAGE COMPANY)
CONDENSED CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY
FROM INCEPTION ON JULY 1, 1998 THROUGH MARCH 31, 2010
(unaudited)

	Common Stock		Capital in Excess of Par Value	Deficit Accumulated During the Development Stage	Total
	Shares	Amount			
Issuance of common stock and warrants for cash from November 30, 2001 through April 17, 2002 at $1.75 per unit	3,701,430	$ 37,014	$ 6,440,486	—$	6,477,500
Issuance of common stock and warrants associated with bridge loan conversion on December 3, 2001	305,323	3,053	531,263	—	534,316
Commissions, legal and bank fees associated with issuances for the year ended June 30, 2002	—	—	(846,444)	—	(846,444)
Fair market value of options and warrants vested during the year ended June 30, 2002	—	—	1,848,726	—	1,848,726
Fair market value of options and warrants vested during the year ended June 30, 2003	—	—	848,842	—	848,842
Issuance of common stock and warrants for cash from January 15, 2004 through February 12, 2004 at $2.37 per unit	1,536,922	15,369	3,627,131	—	3,642,500
Allocation of proceeds to warrants	—	—	(2,099,090)	—	(2,099,090)
Reclassification of warrants	—		1,913,463	—	1,913,463
Commissions, legal and bank fees associated with issuances for the year ended June 30, 2004	—		(378,624)	—	(378,624)
Fair market value of options and warrants vested during the year ended June 30, 2004	-	—	1,826,514	—	1,826,514
Options and warrants exercised during the year ended June 30, 2004 at exercise prices ranging from $1.00 - $3.25	370,283	$ 3,704	692,945	—	696,649

Issuance of common stock and warrants for cash on May 9, 2005 at $2.11 per unit	1,595,651	15,957	3,350,872	—	3,366,829

(continued)

See Notes to Condensed Consolidated Financial Statements.

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY
(A DEVELOPMENT STAGE COMPANY)
CONDENSED CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY
FROM INCEPTION ON JULY 1, 1998 THROUGH MARCH 31, 2010
(unaudited)

	Common Stock Shares	Common Stock Amount	Capital in Excess of Par Value	Deficit Accumulated During the Development Stage	Total
Issuance of common stock and warrants for cash on May 9, 2005 at $2.11 per unit	1,595,651	$ 15,957	$ 3,350,872	—$	3,366,829
Allocation of proceeds to warrants	—	—	(1,715,347)	—	(1,715,347)
Reclassification of warrants	—	—	1,579,715	—	1,579,715
Commissions, legal and bank fees associated with issuance on May 9, 2005	—	—	(428,863)	—	(428,863)
Options and warrants exercised during the year ended June 30, 2005 at exercise prices ranging from $1.50 to $3.25	84,487	844	60,281	—	61,125
Fair market value of options and warrants vested during the year ended June 30, 2005	—	—	974,235	—	974,235
Fair market value of options and Warrants granted and vested During the year ended June 30,2006	—	—	677,000	—	677,000
Warrants exercised during the year ended June 30, 2006 at an exercise price of $0.01	10,000	100	—	—	100
Issuance of common stock and warrants for cash on October 11, 2006 at $1.135 per unit	1,986,306	19,863	2,229,628	—	2,249,491
Commissions, legal and bank fees associated with issuance on October 11, 2006	—	—	(230,483)	—	(230,483)
Fair market value of options and warrants vested during the year ended June 30, 2007	—	—	970,162	—	970,162
Warrants exercised during the year ended June 30, 2007 at an exercise price of $0.01	10,000	100	—	—	100

(continued)

See Notes to Condensed Consolidated Financial Statements

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY
(A DEVELOPMENT STAGE COMPANY)
CONDENSED CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY
FROM INCEPTION ON JULY 1, 1998 THROUGH MARCH 31, 2010
(unaudited)

	Common Stock Shares	Common Stock Amount	Capital in Excess of Par Value	Deficit Accumulated During the Development Stage	Total
Fair market value of options and warrants vested during the year ended June 30, 2008	—	—	$ 1,536,968	—	$ 1,536,968
Allocation of proceeds from issuance of convertible notes and warrants from September 21, 2007 through June 30, 2008	—	—	9,340,000	—	9,340,000
Issuance of common stock in lieu of cash payment for interest during the year ended June 30, 2008	345,867	$ 3,458	430,696	—	434,154
Convertible notes converted into common stock during the year ended June 30, 2008	555,556	5,556	430,952	—	436,508
Fair market value of options and warrants vested during the year ended June 30, 2009	—	—	506,847	—	506,847
Cashless exercise of warrants during the year ended June 30, 2009 at an exercise price of $0.74	2,395	24	(24)	—	—
Issuance of common stock in lieu of cash payment for interest during the year ended June 30,2009	1,271,831	12,718	994,526	—	1,007,244
Convertible notes converted into common stock during the year ended June 30, 2009	50,000	500	44,433	—	44,933
Issuance of common stock in connection with the Company's short term incentive plan during the year ended June 30, 2009	112,700	1,127	(1,127)	—	—
Cumulative net loss from inception through June 30, 2009	—	—		$ (35,949,899)	(35,949,899)
Cumulative effect of change in accounting principle –implementation of FASB ASC	—	—	(7,931,875)	4,731,767	(3,200,108)

815.40

(continued)

See Notes to Condensed Consolidated Financial Statements

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY
(A DEVELOPMENT STAGE COMPANY)
CONDENSED CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY
FROM INCEPTION ON JULY 1, 1998 THROUGH MARCH 31, 2010
(unaudited)

	Common Stock Shares	Common Stock Amount	Capital in Excess of Par Value	Deficit Accumulated During the Development Stage	Total
Issuance of common stock and warrants for cash during the nine months ended March 31, 2010 at $0.90 per unit	1,700,000	$ 17,000	$ 1,513,000	—$	1,530,000
Issuance of common stock and warrants for satisfaction of accounts payable during the nine months ended March 31, 2010	194,444	1,944	259,588	—	261,532
Warrants exercised for cash during the nine months ended March 31, 2010 at an exercise price of $0.01	1,003,000	10,030	—	—	10,030
Legal and regulatory fees associated with issuances during the nine months ended March 31, 2010	—	—	(175,862)	—	(175,862)
Issuance of common stock in lieu of cash payment for interest during the nine months ended March 31, 2010	969,360	9,694	372,575	—	382,269
Convertible notes converted into common stock during the nine months ended March 31, 2010	9,635,090	96,351	2,511,043	—	2,607,394
Issuance of common stock in connection with the Company's short term incentive plan during the nine months ended March 31, 2010	116,000	1,160	(1,160)	—	—
Issuance of common stock for services during the nine months ended March 31, 2010	154,184	1,542	52,258	—	53,800
Fair market value of options and warrants vested during the nine months ended March 31, 2010	—	—	271,784	—	271,784
	—	—	(50,000)	—	(50,000)

Warrants repurchased during the nine months ended March 31, 2010					
Net loss for the nine months ended March 31, 2010	—	—	—	$ (7,177,196)	(7,177,196)
Balance at March 31, 2010	33,584,121	$ 335,841	$ 38,240,964	$ (38,395,328)	$ 181,477

See Notes to Condensed Consolidated Financial Statements.

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY
(A DEVELOPMENT STAGE COMPANY)
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(unaudited)

	For the Nine Months Ended March 31,		From Inception on July 1, 1998 through March 31,
	2010	2009	2010
Cash flows from operating activities:			
Net loss	$ (7,177,196)	$ (4,137,224)	$ (38,395,328)
Adjustments to reconcile net loss to net cash used in operating activities:			
Noncash capital contribution	—	—	85,179
Noncash conversion of accrued expenses into equity	—	—	131,250
Noncash income related to change in fair value of warrant liability	(1,811,775)	—	(6,864,801)
Issuance of common stock and warrants for interest	382,269	799,043	1,832,982
Issuance of common stock for services	53,800	—	53,800
Share-based compensation expense	271,784	358,347	10,474,728
Depreciation and amortization	92,613	81,054	665,053
Amortization of convertible note discount	4,518,864	1,869	5,070,081
Amortization of deferred financing costs	455,045	317,768	1,050,591
Loss on extinguishment of debt	361,877	—	361,877
(Increase) decrease in operating assets:			
Prepaid expense and other current assets	(108,140)	(709,266)	(1,269,488)
Security deposit	—	—	(7,187)
Increase (decrease) in operating liabilities:			
Accounts payable	599,455	102,208	1,576,135
Accrued expenses	265,677	186,505	621,614
Other liability	(5,968)	(5,284)	10,049
Net cash used in operating activities	(2,101,695)	(3,004,980)	(24,603,465)
Cash flows from investing activities:			
Patent costs	(689,843)	(490,251)	(4,976,206)
Redemptions (Purchases) of investments, net	1,050,000	(1,799,388)	—
Purchase of property and equipment	(1,116)	(4,173)	(178,179)
Net cash provided by (used in) investing activities	359,041	(2,293,812)	(5,154,385)
Cash flows from financing activities:			
Proceeds from grant	—	—	99,728
Proceeds from issuance of loan payable	2,198,609	—	2,198,609
Proceeds from issuance of bridge notes	—	—	525,000
Proceeds from issuance of common stock, net and exercise of options and warrants	1,364,169	—	20,446,987
Proceeds from issuance of convertible notes and warrants, net	—	—	9,340,000
Redemption of convertible notes and warrants	(2,160,986)	—	(2,160,986)
Deferred financing costs	—	—	(651,781)
Net cash provided by financing activities	1,401,792	—	29,787,557

Net increase (decrease) in cash and cash equivalents	(340,862)	(5,298,792)	39,707
Cash and cash equivalents at beginning of period	380,569	5,676,985	—
Cash and cash equivalents at end of period	$ 39,707	$ 378,193	$ 39,707
Supplemental disclosure of cash flow information:			
Cash paid during the period for interest	$ 33,859	$ —	$ 56,176
Supplemental schedule of noncash financing activity:			
Conversion of convertible notes into common stock, net	$ 2,619,360	$ —	$ 3,164,360
Conversion of bridge notes into stock	$ —	$ —	$ 534,316
Allocation of convertible debt proceeds to warrants and beneficial conversion feature	$ —	$ —	$ 9,340,000
Warrants issued for financing costs	$ —	$ —	$ 639,645
Issuance of common stock for interest on convertible notes	$ 382,269	$ 799,043	$ 1,832,982
Issuance of common stock in settlement of accounts payable	$ 175,000	$ —	$ 175,000

See Notes to Condensed Consolidated Financial Statements.

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY
(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 Senesco Technologies, Inc. (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 United States 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-K for the fiscal year ended June 30, 2009.

In the opinion of the Company's management, the accompanying unaudited condensed consolidated financial statements contain all adjustments, consisting solely of those which are of a normal recurring nature, necessary to present fairly its financial position as of March 31, 2010, the results of its operations for the three-month and nine-month periods ended March 31, 2010 and 2009, cash flows for the nine-month periods ended March 31, 2010 and 2009, and the results of its operations and cash flows for the period from inception on July 1, 1998 through March 31, 2010.

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

Note 2 – Liquidity:

As shown in the accompanying consolidated financial statements, the Company has a history of losses with a deficit accumulated during the development stage from July 1, 1998 (inception) through March 31, 2010 of $38,395,328. Additionally, the Company has generated minimal revenues by licensing its technology for certain crops to companies willing to share in its development costs. In addition, the Company's technology may not be ready for commercialization for several years. The Company expects to continue to incur losses for the next several years because it anticipates that its expenditures on research and development, and administrative activities will significantly exceed its revenues during that period. The Company cannot predict when, if ever, it will become profitable.

As of March 31, 2010, the Company had cash in the amount of $39,707. On April 1, 2010, the Company received net proceeds of approximately $9,600,000 in connection with a private placement of convertible preferred stock and warrants. The Company estimates that the cash on hand as of March 31, 2010 and the net proceeds from the private placement of convertible preferred stock and warrants will cover its expenses for at least the next twelve months.

The Company will need additional capital in the future and may need to raise such capital through the placement of equity or debt instruments or both. However, the Company may not be able to obtain adequate funds for its operations when needed or on acceptable terms. If the Company is unable to raise additional funds, it will need to do one or more of the following:

- delay, scale-back or eliminate some or all of its research and product development programs;
- license third parties to develop and commercialize products or technologies that it would otherwise seek to develop and commercialize itself;
- seek strategic alliances or business combinations;
- attempt to sell the Company;
- cease operations; or
- declare bankruptcy.

Note 3 – Intangible Assets:

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

The length of time that it takes for an initial patent application to be approved is generally between four to six years. However, due to the unique nature of each patent application, the actual length of time may vary. If a patent application is denied, the associated cost of that application would be written off. However, the Company has not had any patent applications denied as of March 31, 2010. Additionally, should a patent application become impaired during the application process, the Company would write down or write off the associated cost of that patent application.

Issued patents and agricultural patent applications pending are being amortized over a period of 17 years, the expected economic life of the patent.

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

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

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

Note 4 - 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. Shares to be issued upon the exercise of the outstanding options and warrants aggregating 25,196,604 and 23,151,963 as of March 31, 2010 and 2009, respectively, are not included in the computation of net loss per share, as their effect is anti-dilutive. Additionally, based upon the closing share price as of March 31, 2010, 16,417,126 shares that may be issued upon the conversion of convertible notes, subject to a maximum of 22,259,650 shares, are not included in the computation of diluted net loss per share, as their effect is anti-dilutive.

Note 5 – Share-Based Transactions:

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

The fair value of each stock option and warrant granted or vesting has been determined using the Black-Scholes model. The material factors incorporated in the Black-Scholes model in estimating the value of the options and warrants include the following:

	Three Months Ended March 31,		Nine Months Ended March 31,	
	2010	2009	2010	2009
Estimated life in years (1)	5-5.7	3.5-5.5	3.5-5.7	3.5-5.5
Risk-free interest rate (2)	2.5%–3.9%	1.3% – 1.8%	2.2%-3.9%	1.1%-3.9%
Volatility	100%	100%	100%	100%
Dividend paid	None	None	None	None

(1) Expected life was estimated using the “simplified” method, as allowed under the provisions of the Securities and Exchange Commission Staff Bulletin No. 110, since there was no prior history of similar stock option grants.

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

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

A summary of changes in the stock option plan for the nine month period ended March 31, 2010 is as follows:

	Number of Options	Weighted-Average Exercise Price
Outstanding at July 1, 2009	4,550,412	$ 1.70
Granted	1,748,399	0.33
Exercised	—	—
Expired	(233,000)	3.50
Outstanding at March 31, 2010	6,065,811	$ 1.24
Exercisable at March 31, 2010	4,823,310	$ 1.40

A summary of changes to the non-vested stock options for the nine month period ended March 31, 2010 is as follows:

	Number of Options	Weighted-Average Grant-Date Fair Value
Non-vested stock options at July 1, 2009	883,000	$ 0.66
Granted	1,748,399	0.25
Vested	(1,384,898)	(0.31)
Expired	(4,000)	(0.46)
Non-vested stock options at March 31, 2010	1,242,501	$ 0.48

As of March 31, 2010, the aggregate intrinsic value of stock options outstanding was $149,665, with a weighted-average remaining term of 6.6 years. The aggregate intrinsic value of stock options exercisable at that same date was $81,715, with a weighted-average remaining term of 6.0 years. As of March 31, 2010, the Company has 4,139,073 shares available for future stock option grants.

As of March 31, 2010, total compensation expense not yet recognized related to stock option grants and restricted stock units amounted to approximately $215,000, which will be recognized over the next 51 months, and an additional $467,400 which may be recognized as achievement of certain target goals under the Company's Long-Term Incentive Program become probable over the next 9 months.

During the nine month period ended March 31, 2010, the Company issued 80,000 and 74,184 shares of common stock for services provided. The closing price of the common stock on the dates of issuance was $0.36 and $0.34, respectively, resulting in aggregate stock-based compensation of $53,800.

Short-Term Incentive Program

On November 19, 2008, upon recommendation of the Company's Compensation Committee, the Board adopted a Short-Term Equity Incentive Program for each of Bruce C. Galton, John E. Thompson, Ph.D., Joel Brooks, Richard Dondero and Sascha Fedyszyn. The Programs are intended to ensure the achievement of certain goals of the Company, continuity of the Company's executive management, and to align the interests of the executive management with those of the shareholders.

Pursuant to and as defined in the Short-Term Equity Incentive Program, each executive would be awarded shares of the Company's Common Stock, or options to acquire shares of the Company's Common Stock, if the Company achieves certain target goals relating to research, financing, licensing, investor relations and other administrative items during the fiscal year ending June 30, 2009.

The number of eligible shares and options that could have been awarded to the executive was based upon the following weightings:

1. 25% of eligible shares and options for contributions relating to the Company's Human Health Objectives;

2. 15% of eligible shares and options for contributions relating to the Company's Finance Objectives;

3. 20% of eligible shares and options for contributions relating to the Company's Agricultural Licensing Objectives;

4. 25% of eligible shares and options for contributions relating to the Company's Investor Relations, Intellectual Property and Website Administration; and

5. 15% of the eligible shares and options relating to the Company's Organizational Objectives.

If the target goals were achieved by the Company, the executive officers would have been awarded the following number of shares and options for the fiscal year ended June 30, 2009:

	Number of Shares	Number of Options (1)
Bruce C. Galton	66,000	—
John E. Thompson, Ph.D.	—	48,000
Joel Brooks	28,000	—
Richard Dondero	—	80,000
Sascha P. Fedyszyn	42,000	—
Total	136,000	128,000

(1) Such options are exercisable at a strike price of $0.60, which represents the closing price of the common stock on November 18, 2008.

As of September 30, 2009, the Company had determined that the achievement of the target goals was probable. The total amount of compensation expense in connection with the short-term incentive program in the amount of $140,480 had been recorded ratably over the seven and one-half month period from November 19, 2008 through June 30, 2009.

In October 2009, after a review of each of the factors that comprise the short-term award program, the compensation committee determined that the executive officers had partially achieved the previously granted short-term performance milestones, and accordingly, determined to vest the foregoing RSUs/options as follows:

Mr. Galton received shares of common stock underlying his 49,500 RSUs;
Mr. Brooks received shares of common stock underlying his 26,600 RSUs;
Mr. Fedyszyn received shares of common stock underlying his 39,900 RSU's;
Dr. Thompson received 48,000 options; and
Mr. Dondero received 76,000 options.

As a result of the reduction in the amount of RSU's/options that vested, a reduction in the amount of $13,840 was recorded during the nine months ended March 31, 2010.

Long-Term Incentive Program

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

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

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

1. 20% of the eligible shares upon the execution of a research agreement to conduct a phase I/II clinical trial at a research facility;

2. 20% of the eligible shares upon the filing and acceptance by the FDA of an investigational new drug application; and

3. 60% of the eligible shares upon the successful completion of a FDA approved phase I/II clinical trial.

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

	Goal 1	Goal 2	Goal 3
Number of Shares			
Joel Brooks	10,000	10,000	30,000
Number of Options (1)			
John E. Thompson, Ph.D.	50,000	50,000	150,000
Richard Dondero	60,000	60,000	180,000
Total number of options	110,000	110,000	330,000

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

As of March 31, 2010, the Company is not able to determine if the achievement of the target goals under the Long-Term Equity Incentive Program are probable and, therefore, has not yet begun to recognize any of the $467,500, as adjusted for the resignation of certain employees, of compensation expense that was computed on the date of adoption of the Long-Term Equity Incentive Program. The Company will begin recognizing such compensation expense ratably over the remaining term of the Long-Term Equity Incentive Program at such time that the Company is able to determine that the achievement of the target goals are probable.

Note 6 – Revenue Recognition:

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

Note 7 –Loan Payable:

On February 17, 2010, the Company entered into a credit agreement with JMP Securities LLC. The agreement provides the Company with, subject to certain restrictions, including the existence of suitable collateral, up to a $3.0 million line of credit upon which the Company may draw at any time (the "Line of Credit"). Any draws upon the Line of Credit accrue at a monthly interest rate of (i) the broker rate in effect at the time of the draw (which was 2.0% at March 31, 2010), plus (ii) 2.75%. There are no other conditions or fees associated with the Line of Credit. The Line of Credit is not secured by any assets of the Company, but it is secured by certain assets of the one of the Company's Board of Directors, Harlan W. Waksal, M.D., which are currently held by JMP Securities. The balance outstanding as of March 31, 2010 is $2,198,609.

Note 8 –Convertible Notes and Stockholders Equity:

Convertible Notes

During the year ended June 30, 2008, the Company issued $5,000,000 of convertible notes and warrants to YA Global Investments L.P. ("YA Global") and $5,000,000 of convertible notes and warrants to Stanford Venture Capital Holdings, Inc. ("Stanford"), for aggregate gross proceeds in the amount of $10,000,000. The convertible notes were convertible into the Company's Common Stock at a fixed price of $0.90 per share, subject to certain adjustments (the "Fixed Conversion Price"), through August 1, 2009 and December 20, 2009, respectively, at which time the convertible notes may convert into shares of the Company's Common Stock at the lower of the fixed conversion price or 80% of the lowest daily volume-weighted average price (the "VWAP") of the common stock during the five trading days prior to the conversion date. In July and September 2009, the fixed conversion price was adjusted to $0.85 and $0.83, respectively, due to the issuance of common stock and warrants. The maturity date of each of the convertible notes for YA Global and Stanford is December 30, 2010 and December 31, 2010, respectively.

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

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

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

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

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

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

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

The convertible notes and warrants issued to Stanford are subject to a maximum cap of 31,888,888 on the number of shares of common stock that can be issued upon the conversion of the convertible notes, the exercise of the warrants and the issuance of interest shares. In February 2010, certain members of the Company's board of directors purchased all of the convertible notes issued to Stanford and all of the warrants held by Stanford.

During the nine months ended March 31, 2010, YA Global converted $2,619,360 of their convertible notes into 9,635,093 shares of common stock. From the inception of the convertible notes, YA Global converted $3,164,360 of the convertible notes into 10,250,648 shares of common stock. On March 3, 2010, YA Global and Senesco entered into a letter agreement pursuant to which the Company purchased from YA Global all of its remaining outstanding convertible notes, which in the aggregate totaled $1,835,640, for an aggregate purchase price of $ 2,144,844, including accrued interest of $33,859 on the convertible notes.. As a result of this transaction, the Company recorded a loss on the extinguishment of debt in the amount of $275,345. In addition, the Company purchased from YA Global warrants to purchase 2,775,000 shares of the Company's common stock at an exercise price of $1.01 per share, for a purchase price of $50,000.

As of March, 2010, the number of shares of common stock potentially issuable upon conversion of the remaining $5,000,000 of convertible notes outstanding held by certain directors of the Company, approximated 16,417,126 shares, plus an estimated additional 2,100,000 shares (based upon the stock price at March 31, 2010) for the payment of interest in stock under the convertible notes. However, the holders of the notes have agreed, subject to shareholder approval, to convert all of the $5,000,000 of convertible notes into 6,024,096 shares of common stock at a conversion price of $0.83.

As of March 31, 2010, the outstanding balance of the convertible notes was $82,047, which is comprised of notes with an aggregate face amount of $5,000,000 less unamortized debt discount of $4,917,953. Debt discount associated with the convertible notes is amortized to interest expense, using the effective yield method, over the remaining life of the convertible notes. Upon conversion of the convertible notes into Common Stock, any unamortized debt discount relating to the portion converted is charged to interest. Total charges to interest for amortization of debt discount were $3,022,271 and $4,518,864 for the three month and nine month periods ended March 31, 2010.

The costs associated with the issuances in the amount of $1,291,427 have been recorded as deferred financing costs and are being amortized ratably over the term of the convertible notes. The balance of deferred financing costs as of March 31, 2010 amounted to $177,279.

Effective July 1, 2009, the Company adopted the provisions of FASB ASC 815.40, "Determining Whether an Instrument (or Embedded Feature) is Indexed to an Entity's Own Stock". FASB ASC 815.40 applies to any freestanding financial instruments or embedded features that have the characteristics of a derivative, and to any freestanding financial instruments that are potentially settled in an entity's own common stock. As a result of adopting FASB ASC 815.40, as of July 1, 2009, 6,941,666 of the Company's issued and outstanding common stock warrants previously accounted for as equity pursuant to the derivative treatment exemption should no longer be accounted for as equity. As such, effective July 1, 2009, the Company reclassified the fair value of these common stock purchase warrants, which have exercise price reset features, from equity to a liability. On July 1, 2009, using the black sholes valuation model, the Company reclassified, as a cumulative effect adjustment, the difference in fair value of $4,731,767, which represents the difference between the fair value on the dates of issuance of $7,931,875 and the fair value on July 1, 2009 of $3,200,108 from additional paid in capital to deficit accumulated during the development stage. Additionally, the Company recorded a warrant liability in the amount of $3,200,108 to recognize the fair value of such warrants at July 1, 2009. On March 31, 2010, the Company revalued the warrants, using the black scholes valuation model, and the resulting liability amounted to $1,388,333.

The change in value of the liability of $527,566 for the three month period ended March 31, 2010 was recorded as an expense, which increased the basic and diluted net loss per share by $0.02. The change in value of the liability of $1,811,775 for the nine month period ended March 31, 2010 was recorded as income, which reduced the basis and diluted net loss per share by $0.07.

The effect on the net loss for the three month and nine month period ending March 31, 2009 would have been a reduction of $2,415,700 and $8,593,782, respectively, which would have resulted in net income of $1,084,223 and $4,456,558, respectively. The effect on the basic net loss per common share would have been a reduction of $0.13 and $0.32, respectively, which would have resulted in basic net income per common share of $0.06 and $0.05, respectively.

The assumptions used to value the warrants were as follows:

	July 1, 2009	March 31, 2010
Estimated life in years	3	3
Risk-free interest rate (1)	1.57%	1.60%
Volatility	100%	100%
Dividend paid	None	None

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

Common Stock

Transaction with Partlet Holdings

On July 9, 2009, the Company entered into a Securities Purchase Agreement (the "Partlet Securities Purchase Agreement") with Partlet Holdings Ltd., which is an accredited investor, pursuant to which the Company issued an aggregate of 1,111,111 shares (the "Shares") of the Company's common stock at $0.90 per share and each of a Series A warrant (the "Partlet Series A Warrant") and a Series B warrant (the "Partlet Series B Warrant") (collectively the Partlet Series A Warrant and Partlet Series B Warrant shall be referred to herein as the "Partlet Warrants").

The Partlet Series A Warrant entitled the holder to purchase 1,000,000 shares of the Company's common stock at $0.01 per warrant share. The Partlet Series A Warrant has a term of seven years and was exercisable immediately after the date of grant. The Partlet Series B Warrant entitles the holder to purchase 2,055,555 shares of the Company's common stock at $0.60 per warrant share. The Partlet Series B Warrant has a term of seven years and was not exercisable until after the six-month anniversary from the date of grant.

On July 9, 2009, the Company closed on $950,000 of aggregate proceeds of the private placement and, on that date, issued (i) a total of 1,055,555 Shares (ii) a Partlet Series A Warrant to purchase 950,000 shares of the Company's common stock, which was exercised on July 14, 2009, and (iii) a Partlet Series B Warrant to purchase 1,952,778 shares of the Company's common stock. On September 30, 2009, the Company closed on the remaining $50,000 in proceeds upon the Company receiving approval from the Company's stockholders and the NYSE Amex Exchange for certain aspects of the transaction.

Transaction with Each of Robert and Tim Forbes

On July 29, 2009, the Company entered into a Securities Purchase Agreement, (the "Forbes Securities Purchase Agreement") with each of Robert Forbes and Timothy Forbes, each of whom is an accredited investor, pursuant to which the Company issued an aggregate of 444,444 shares of common stock at $0.90 per share and each of a Series A warrant, (the "Forbes Series A Warrants"), and a Series B warrant (the "Forbes Series B Warrants"). Each of Robert Forbes and Timothy Forbes are the brothers of Christopher Forbes who is a director of Senesco. Mr. Christopher Forbes will not be deemed to be the beneficial owner of, nor will he have a pecuniary interest in the Shares or Warrants issued to his brothers.

The Forbes Series A Warrants entitle the holders to purchase, in the aggregate, up to 400,000 shares of the Company's common stock at $0.01 per warrant share. The Forbes Series A Warrants have a term of seven years and were exercisable immediately after the date of grant.

The Forbes Series B Warrants entitle the holders to purchase, in the aggregate, up to 405,556 shares of the Company's common stock at $0.60 per warrant share. The Forbes Series B Warrants have a term of seven years and were not exercisable until after the six-month anniversary from the date of grant.

Transaction with Insiders and Affiliates

On July 29, 2009, the Company entered into a Securities Purchase Agreement, (the "Affiliate's Securities Purchase Agreement") with each of Harlan W. Waksal, M.D., Rudolf Stalder, Christopher Forbes, David Rector, John N. Braca, Jack Van Hulst, Warren Isabelle and the Thomas C. Quick Charitable Foundation (the "Affiliate Investors") each of whom is an accredited investor, pursuant to which the Company issued an aggregate of 144,444 Shares of the Company's common stock at $0.90 per share and each of a Series A warrant, (the "Affiliate's Series A Warrants"), and a Series B warrant (the "Affiliate's Series B Warrants"). Each of Harlan W. Waksal, M.D., Rudolf Stalder, Christopher Forbes, David Rector, John N. Braca, Jack Van Hulst and Warren Isabelle serve on the Company's board. The Thomas C. Quick Charitable Foundation is an affiliate of our board member Thomas C. Quick.

The Affiliate's Series A Warrants entitle the holders to purchase in the aggregate, up to 130,000 shares of the Company's common stock at $0.01 per warrant share. The Affiliates Series A Warrants have a term of seven years and were exercisable immediately after the date of grant.

The Affiliate's Series B Warrants entitle the holders to purchase, in the aggregate, up to 131,807 shares of the Company's common stock at $0.60 per warrant share. The Affiliate's Series B Warrants have a term of seven years and were not exercisable until after the six-month anniversary from the date of grant.

Transaction with Cato Research Ltd.

On July 29, 2009, the Company entered into a Securities Agreement with Cato Holding Company ("Cato"), who is an accredited investor, pursuant to which the Company issued an aggregate of 194,444 Shares of the Company's common stock at $0.90 per share and each of a Series A warrant (the "Cato Series A Warrant") and a Series B warrant (the "Cato Series B Warrant"). The Shares were issued to Cato in exchange for debt that was owed by us to Cato Research Ltd. in the amount of $175,000. Cato Research Ltd. is an affiliate of Cato.

The Cato Series A Warrant entitles the holder to purchase in the aggregate, up to 175,000 shares of the Company's common stock at $0.01 per warrant share. The Cato Series A Warrant has a term of seven years and was exercisable immediately after the date of grant.

The Cato Series B Warrant entitles the holder to purchase, in the aggregate, up to 177,431 shares of the Company's common stock at $0.60 per warrant share. The Cato Series B Warrant has a term of seven years and was not exercisable until after the six-month anniversary from the date of grant.

The foregoing transactions were closed upon the Company receiving approval from the Company's stockholders and the NYSE Amex Exchange for certain aspects of the transactions on September 30, 2009.

As a result of the transaction with Cato, the Company valued the common stock and warrants issued to Cato in the amount of $261,532 and recorded a loss on the extinguishment of debt in the amount of $86,532 during the nine month period ended March 31, 2010.

Note 9 – Income Taxes:

No provision for income taxes has been made for the three month and nine month periods ended March 31, 2010 and 2009 given the Company's losses in 2010 and 2009 and available net operating loss carryforwards. A benefit has not been recorded as the realization of the net operating losses is not assured and the timing in which the Company can utilize its net operating loss carryforwards in any year or in total may be limited by provisions of the Internal Revenue Code regarding changes in ownership of corporations.

Note 10 – Effects of New Accounting Pronouncements Applicable to the Company

In April 2010, the FASB issue ASU 2010-17, Revenue Recognition – Milestone Method ("ASU 2010-17"). ASU 2010-17 provides guidance on the criteria that should be met for determining whether the milestone method of revenue recognition is appropriate. A vendor can recognize consideration that is contingent upon achievement of a milestone in its entirety as revenue in the period in which the milestone is achieved only if the milestone meets all criteria to be considered substantive. The following criteria must be met for a milestone to be considered substantive. The consideration earned by achieving the milestone should 1. Be commensurate with either the level of effort required to achieve the milestone or the enhancement of the value of the item delivered as a result of a specific outcome resulting from the vendor's performance to achieve the milestone. 2, Related solely to past performance. 3. Be reasonable relative to all deliverables and payment terms in the arrangement. No bifurcation of an individual milestone is allowed and there can be more than one milestone in an arrangement. Accordingly, an arrangement may contain both substantive and nonsubstantive milestones. ASU 2010-17 is effective on a prospective basis for milestones achieved in fiscal years, and interim periods within those years, beginning on or after June 15, 2010. Management is currently evaluating the potential impact of ASU 2010-17 on our financial statements.

Note 11 – Subsequent Events:

Private Placement of Convertible Preferred Stock and Warrants

Preferred Stock

On March 26, 2010, the Company entered into two Purchase Agreements (the "Non-Affiliate Purchase Agreements") between the Company and certain non-affiliated investors who are a party thereto (the "Non-Affiliated Investors"). On March 26, 2010, the Company also entered into a third Purchase Agreement (the "Affiliate Purchase Agreement") between the Company and certain affiliated investors who are a party thereto (the "Affiliated Investors"). Collectively the Non-Affiliate Purchase Agreements and Affiliate Purchase Agreement shall be referred to herein as the "Purchase Agreements" and collectively the Non-Affiliated Investors and Affiliated Investors shall be referred to herein as the "Investors". The respective Purchase Agreements contain substantially similar terms. It is anticipated that the offering will bring gross proceeds to the Company in the amount of approximately $11,497,000 and net proceeds to the Company in the amount of approximately $10,800,000. On April 1, 2010, the Company closed on the aggregate gross proceeds of $10,297,000. The remaining $1,200,000 of gross proceeds cannot be closed upon until the Company receives stockholder approval for the transaction.

Pursuant to the Non-Affiliate Purchase Agreements, on April 1, 2010, the Company closed and issued to the Non-Affiliated Purchasers, in a private placement, an aggregate of 10,297 shares of the Company's 10% Series A Convertible Preferred Stock, par value $0.01 per share (the "Series A Preferred Stock"), initially convertible into approximately 32,178,125 shares of the Company's common stock, par value $0.01 per share (the "Common Stock"), and (ii) immediately exercisable warrants to purchase up to approximately 32,178,125 shares of Common Stock for an aggregate gross proceeds of $10,297,000.

Pursuant to the Affiliate Purchase Agreement, the Company agreed to issue to the Affiliate Purchasers, in a private placement, an aggregate of approximately 1,200 shares of the Company's 10% Series B Convertible Preferred Stock, par value $0.01 per share (the "Series B Preferred Stock"), initially convertible into approximately 3,750,000 shares of Common Stock, and (ii) immediately exercisable warrants to purchase up to approximately 3,750,000 shares of Common Stock for an aggregate offering price of approximately $1,200,000. The Series B Preferred Stock will only be issued after the Company receives stockholder approval. Collectively, the Series A Preferred Stock and Series B Preferred Stock shall be referred to herein as the "Preferred Stock".

Each share of Preferred Stock has a stated value of $1,000 (the "Stated Value"). Each holder of shares of Preferred Stock is entitled to receive semi-annually dividends at the rate of 10% per annum of the Stated Value for each share of Preferred Stock held by such holder. Except in limited circumstances, the Company can elect to pay the dividends in cash or shares of Common Stock. If the dividends are paid in shares of Common Stock, such shares will be priced at the lower of 90% of the average VWAP for the 20 days immediately preceding the payment date or $0.224. The dividends are subject to a 30% make whole provision.

The shares of Preferred Stock are convertible into shares of Common Stock at an initial conversion price of $0.32 per share and are convertible at any time, provided that the conversion of shares of Series A Preferred Stock into shares of Common Stock is subject to a 19.99% blocker provision, which provision will expire if the stockholders approve the offering at the Stockholders' Meeting. The conversion price is subject to adjustment if the Company sells or grants any common stock or common stock equivalents, subject to certain exclusions, at an effective price per share that is lower than the conversion price of the Preferred Stock. After 18 months from the date of issuance of the Preferred Stock, if the Company's Common Stock trades above $0.80 for 20 out of 30 consecutive trading days, the Preferred Stock will no longer be subject to adjustment.

The Company may force conversion of the Preferred Stock if the Company's Common Stock trades above $0.80 for 20 out of 30 consecutive trading days and there is an effective registration statement for the underlying Common Stock or such underlying Common Stock is freely tradable under rule 144.

In connection with the offering, the Company has agreed to solicit shareholder approval of (i) the ability of the Investors to convert the Securities into common stock, which in the aggregate exceed 20% of our currently outstanding shares of common stock and (ii) the issuance of the Securities to the Affiliated Investors pursuant to the terms and conditions of the Affiliate Purchase Agreement at a stockholders' meeting to be held on May 25, 2010 (the "Stockholders' Meeting").

The Company anticipates that it will close on the offering with the Affiliate Purchasers as soon as reasonably possible after the receipt of stockholder approval at the Shareholders' Meeting.

Warrants

Pursuant to the Purchase Agreements, the Company delivered a Series A Warrant to the Non-Affiliate Investors and will deliver, upon shareholder approval, a Series B Warrant to the Affiliate Investors (the "Warrants"). Each Warrant has an initial exercise price of $0.35 per share of Common Stock. The Warrants are immediately exercisable and have a five year term. The Series A Warrants are subject to a 19.99% blocker provision to comply with NYSE Amex Rules, which provisions will expire if the stockholders approve the offering at the Stockholders' Meeting. The Series B Warrants do not contain a blocker, as they will be issued only after the Company receives stockholder approval to issue such warrants. The Series A Warrants also contain an provision which limits the holders beneficial ownership to a maximum of 4.99% (which percentage may be increased to 9.99% upon 60 days notice to the Company).

Registration Rights Agreement

The Company also entered into a Registration Rights Agreement by and among the Company and the Non-Affiliate Investors only (the "Registration Rights Agreement"). The Affiliate Investors are not a party to the Registration Rights Agreement. Pursuant to the Registration Rights Agreement, the Company has agreed to file a registration statement (the "Registration Statement") with the Securities and Exchange Commission within, except for certain limited exceptions, 30 days of closing the offering (the "Filing Deadline") to register the shares of Common Stock issuable upon conversion or exercise of the shares of Series A Preferred Stock and the Warrants, as the case may be (collectively, the "Underlying Shares"). In the event the Company did not file the Registration Statement on or before the Filing Deadline, the Company would have been required to pay liquidated damages in an amount equal to 1% of the aggregate amount purchase price paid by the holder for any unregistered securities then held by such Investor up to a maximum of 3%. The Company filed such registration statement on April 23, 2010. The Company must file additional registration statements until all of the securities may be sold pursuant to an effective registration statement or the securities become eligible for sale under Rule 144 of the Securities Act of 1933, as amended.

Placement Agent Warrants

In connection with the Non-Affiliate Purchase Agreement and as partial compensation for its placement agent services related to such Non-Affiliate Purchase Agreement, the Company issued to Ladenburg Thalmann & Co. (which acted as exclusive placement agent for a portion of the offering represented by such Non-Affiliate Purchase Agreement) a warrant initially exercisable to purchase up to approximately 929,688 shares of Common Stock at an exercise price of $0.35 per share of Common Stock (the “Placement Agent Warrant”).

Additional Warrant

The Company will also issued a warrant initially exercisable to purchase up to approximately 150,000 shares of Common Stock at an exercise price of $0.35 per share of Common Stock to Midtown Partners & Co. LLC as part of a tail coverage fee in connection with the offering.

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 this Quarterly Report on Form 10-Q. 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

Our Business

The primary business of Senesco Technologies, Inc., a Delaware corporation incorporated in 1999, and its wholly-owned subsidiary, Senesco, Inc., a New Jersey corporation incorporated in 1998, collectively referred to as "Senesco," "we," "us" or "our," is to utilize our patented and patent-pending genes, primarily eucaryotic translation initiation Factor 5A, or Factor 5A, and deoxyhypusine synthase, or DHS, and related technologies for inhibition in human health applications to develop novel approaches to treat cancer and inflammatory diseases.
In agricultural applications we are developing and licensing Factor 5A, DHS and Lipase to enhance the quality and productivity of fruits, flowers, and vegetables and agronomic crops through the control of cell death, referred to herein as senescence, and growth in plants.

Human Health Applications

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

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

Certain preclinical human health results to date include:

- Performing efficacy, toxicological and dose-finding studies in mice for our potential multiple myeloma drug candidate, SNS-01. SNS-01 is a nano-encapsulated combination therapy of Factor 5A and an siRNA against Factor 5A. Our efficacy study in severe combined immune-deficient ("SCID") mice with subcutaneous human multiple myeloma tumors tested SNS-01 dosages ranging from 0.15 mg/kg to 1.5 mg/kg. In these studies, mice treated with a dose of either 0.75 mg/kg or 1.5 mg/kg both showed a 91% reduction in tumor volume and a decrease in tumor weight of 87% and 95%, respectively. For mice that received smaller doses of either 0.38 mg/kg or 0.15 mg/kg, there was also a reduction in tumor volume (73% and 61%, respectively) and weight (74% and 36%, respectively). All of the treated mice, regardless of dose, survived. This therapeutic dose range study provided the basis for an 8-day maximum tolerated dose study in which normal mice received two intravenous doses of increasing amounts of SNS-01 (from 2.2 mg/kg). Body weight, organ weight and serum levels of liver enzymes were used as clinical indices to assess toxicity. A dose between 2.2 mg/kg and 2.9 mg/kg was well tolerated with respect to these clinical indices, and the survival rate at 2.9 mg/kg was 80%. Those mice receiving above 2.9 mg/kg of SNS-01 showed evidence of morbidity and up to 80% mortality. The 2.9 mg/kg threshold, twice the upper end of the proposed therapeutic dose range, was therefore determined to be the maximum tolerated dose in mice.

- demonstrated significant tumor regression and diminished rate of tumor growth of multiple myeloma tumors in SCID mice treated with Factor 5A technology encapsulated in nanoparticles;

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

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

- induced apoptosis of cancer cells in a human multiple myeloma cell line in the presence of IL-6;

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

- decreased ICAM and activation of NFkB in cancer cells employing siRNA against Factor 5A;

- increased the survival rate in H1N1 mouse influenza survival studies from 14% in untreated mice to 52% in mice treated with our siRNA against Factor 5A. Additionally, the treated mice reversed the weight loss typically seen in infected mice and had other reduced indicators of disease severity as measured by blood glucose and liver enzymes;

- increased the survival, while maintaining functionality, of mouse pancreatic islet cells isolated for transplantation, using intraperitaneal administration of our technology. Initial animal studies have shown that our technology administered prior to harvesting beta islet cells from a mouse, has a significant impact not only on the survival of the beta islet cells, but also on the retention of the cells' functionality when compared to the untreated beta islet cells. Additional studies have shown that the treated beta islet cells survive a pro-inflammatory cytokine challenge, while maintaining their functionality with respect to insulin production. These further studies also revealed Factor-5A's involvement in the modulation of inducible nitric oxide synthase (iNOS), an important indicator of inflammation; and

- increased the survival rate of mice in a lethal challenge sepsis model. Additionally, a broad spectrum of systemic pro-inflammatory cytokines were down-regulated, while not effecting the anti-inflammatory cytokine IL-10.

Accelerating Apoptosis

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

Inhibiting Apoptosis

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

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

Human Health Target Markets

We believe that our gene technology may have broad applicability in the human health field, by either accelerating or inhibiting apoptosis. Accelerating apoptosis may be useful in treating certain forms of cancer because the body's immune system is not able to force cancerous cells to undergo apoptosis. Inhibiting apoptosis may be useful in preventing or treating a wide range of inflammatory and ischemic diseases attributed to premature apoptosis, including diabetes, diabetic retinopathy and lung inflammation, among others.

, We are advancing our research in multiple myeloma with the goal of initiating a Phase I clinical trial, and may select additional human health indications to bring into clinical trials. We believe that the success of our future operations will likely depend on our ability to transform our research and development activities into a commercially feasible technology.

Human Health Research Program

Our human health research program, which has consisted of pre-clinical in-vitro and in-vivo experiments designed to assess the role and method of action of the Factor 5A genes in human diseases, is being performed by approximately five (5) third party researchers, at our direction, at Mayo Clinic and the University of Waterloo. Additionally, we outsource certain projects to other third party research organizations.

Our research and development expenses incurred on human health applications were approximately 73% of our total research and development expenses for the nine months ended March 31, 2010. Our research and development expenses incurred on human health applications were approximately 72% of our total research and development expenses for the nine months ended March 31, 2009. Since inception, the proportion of our research and development expenses on human health applications has increased, as compared to our research and development expenses on agricultural applications. This change is primarily due to the fact that our research focus on human health has increased and some of our research costs for plant applications have shifted to our license partners.

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

- Multiple Myeloma. Our objective is to advance our technology for the potential treatment of multiple myeloma with the goal of initiating a clinical trial. In connection with the potential clinical trial, we have engaged a clinical research organization, or CRO, to assist us through the process. We have also determined the delivery system for our technology, contracted for the supply of pharmaceutical grade materials to be used in toxicology and human studies, performed certain toxicology studies, and have contracted with a third party laboratory to conduct additional toxicology studies. Together with the assistance of our CRO, we will have additional toxicology studies performed with the goal of filing an investigational new drug application, or IND application, with the U.S. Food and Drug Administration, or FDA, for their review and consideration in order to initiate a clinical trial. We estimate that it will take approximately nine (9) months from March 31, 2010 to complete these objectives.

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

In order to pursue the above research initiatives, as well as other research initiatives that may arise, we completed, subject to stockholder approval, a private placement of convertible preferred stock and warrants on April 1, 2010. However, it may be necessary for us to raise a significant amount of additional working capital in the future. If we are unable to raise the necessary funds, we may be required to significantly curtail the future development of some of our research initiatives and we will be unable to pursue other possible research initiatives.

We may further expand our research and development program beyond the initiatives listed above to include other research centers.

Human Health Competition

Our competitors in human health that are presently attempting to distribute their technology have generally utilized one of the following distribution channels:

- Entering into strategic alliances, including licensing technology to major marketing and distribution partners; or
- developing in-house production and marketing capabilities.

In addition, some competitors are established distribution companies, which alleviates the need for strategic alliances, while others are attempting to create their own distribution and marketing channels.

There are many large companies and development stage companies working in the field of apoptosis research including: Amgen Inc., Centocor, Inc., Genzyme Corporation, OSI Pharmaceuticals, Inc., Novartis AG, Introgen Therapeutics, Inc., Genta, Incorporated, and Vertex Pharmaceuticals, Inc., amongst others.

Agricultural Applications

Our agricultural research focuses on the discovery and development of certain gene technologies, which are designed to confer positive traits on fruits, flowers, vegetables, forestry species and agronomic crops. To date, we have isolated and characterized the senescence-induced Lipase gene, DHS, and Factor 5A in certain species of plants. Our goal is to modulate the expression of these genes in order to achieve such traits as extended shelf life, increased biomass, increased yield and increased resistance to environmental stresses and disease, thereby demonstrating proof of concept in each category of crop.

Certain agricultural results to date include:

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

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

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

We have ongoing field trials of certain trees and bananas with our respective partners. The initial field trials conducted with ArborGen over a four year period in certain species of trees have concluded and the trees have been harvested for wood quality assessment. Preliminary data from our joint field trials show significantly enhanced growth rates in some of the trees relative to controls. Selected trees from the field trials were harvested and their wood chemistry and density was assessed. There were no differences in key economic characteristics of wood, such a lignin, cellulose and specific gravity, between the trees with the enhanced growth attributes and untreated control trees, which indicates that the faster growth does not result in lower wood quality. Additional field trials for enhanced growth rates and other traits are currently being performed with ArborGen.

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

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

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

- further develop and implement the DHS and Factor 5A gene technology in banana, canola, cotton, turfgrass, bedding plants, rice, alfalfa, corn, soybean and trees; and

- test the resultant crops for new beneficial traits such as increased yield, increased tolerance to environmental stress, disease resistance and more efficient use of fertilizer.

Agricultural Target Markets

In order to address the complexities associated with marketing and distribution in the worldwide market, we have adopted a multi-faceted commercialization strategy, in which we have entered into and plan to enter into, as the opportunities present themselves, additional licensing agreements or other strategic relationships with a variety of companies or other entities on a crop-by-crop basis. We anticipate revenues from these relationships in the form of licensing fees, royalties, usage fees, or the sharing of gross profits. In addition, we anticipate payments from certain of our partners, our achievement of certain research and development benchmarks. This commercialization strategy allows us to generate revenue at various stages of product development, while ensuring that our technology is incorporated into a wide variety of crops. Our optimal partners combine the technological expertise to incorporate our technology into their product line along with the ability to successfully market the enhanced final product, thereby eliminating the need for us to develop and maintain a sales force.

Because the agricultural market is dominated by privately held companies or subsidiaries of foreign owned companies, market size and market share data for the crops under our license and development agreements is not readily available. Additionally, because we have entered into confidentiality agreements with our license and development partners, we are unable to report the specific financial terms of the agreements as well as any market size and market share data that our partners may have disclosed to us regarding their companies.

Agricultural Development and License Agreements

Through March 31, 2010, we have entered into eight (8) license agreements and one (1) joint collaboration with established agricultural biotechnology companies or, in the case of Poet, an established ethanol company:

Agricultural Research Program

Our agricultural research and development is performed by three (3) researchers, at our direction, at the University of Waterloo, where the technology was developed. Additional agricultural research and development is performed by our license or joint collaboration partners.

The discoverer of our technology, John E. Thompson, Ph.D., is the Associate Vice President, Research and former Dean of Science at the University of Waterloo in Ontario, Canada, and is our Executive Vice President and Chief Scientific Officer. Dr. Thompson is also one of our directors and owns 1.7% of the outstanding shares of our common stock, $0.01 par value, as of March 31, 2010.

On September 1, 1998, we entered into, and have extended through August 31, 2010, a research and development agreement with the University of Waterloo and Dr. Thompson as the principal inventor. The Research and Development Agreement provides that the University of Waterloo will perform research and development under our direction, and we will pay for the cost of this work and make certain payments to the University of Waterloo. In return for payments made under the Research and Development Agreements, we have all rights to the intellectual property derived from the research.

Agricultural Competition

Our competitors in both human health and agriculture that are presently attempting to distribute their technology have generally utilized one of the following distribution channels:

- licensing technology to major marketing and distribution partners;
- entering into strategic alliances; or
- developing in-house production and marketing capabilities.

In addition, some competitors are established distribution companies, which alleviates the need for strategic alliances, while others are attempting to create their own distribution and marketing channels.

Our competitors in the field of delaying plant senescence are companies that develop and produce transformed plants with a variety of enhanced traits. Such companies include: Mendel Biotechnology; Renessen LLC; Exelixis Plant Sciences, Inc.; and Syngenta International AG; among others.

Agricultural Development Program

Generally, projects with our licensees and joint venture partner begin by transforming seed or germplasm to incorporate our technology. Those seeds or germplasm are then grown in our partners' greenhouses. After successful greenhouse trials, our partners will transfer the plants to the field for field trials. After completion of successful field trials, our partners may have to apply for and receive regulatory approval prior to initiation of any commercialization activities.

Generally, the approximate time to complete each sequential development step is as follows:

Seed Transformation	approximately 1 to 2 years
Greenhouse	approximately 1 to 2 years
Field Trials	approximately 2 to 5 years

The actual amount of time spent on each development phase depends on the crop, its growth cycle and the success of the transformation achieving the desired results. As such, the amount of time for each phase of development could vary, or the time frames may change.

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

The status of each of our projects with our partners is as follows:

Project	Partner	Status
Banana	Rahan Meristem	
- Shelf Life		Field trials
- Disease Resistance		Field trials
Trees	Arborgen	
- Growth		Field trials
Alfalfa	Cal/West	Greenhouse
Corn	Monsanto	Proof of concept ongoing
Cotton	Bayer	Seed transformation
Canola	Bayer	Seed transformation
Rice	Bayer	Proof of concept ongoing
Soybean	Monsanto	Proof of concept ongoing
Turfgrass	The Scotts Company	Greenhouse
Ethanol	Poet	Modify inputs

Commercialization by our partners may require a combination of traits in a crop, such as both shelf life and disease resistance, or other traits.

Based upon our commercialization strategy, we anticipate that there may be a significant period of time before plants enhanced using our technology reach consumers. Thus, we have not begun to actively market our technology directly to consumers, but rather, we have sought to establish ourselves within the industry through presentations at industry conferences, our website and direct communication with prospective licensees.

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

Intellectual Property

We have twenty two (22) issued patents from the United States Patent and Trademark Office, or PTO, and thirty-nine (39) issued patents from foreign countries, forty-eight (48) of which are for the use of our technology in agricultural applications and thirteen (13) of which relate to human health applications.

In addition to our sixty one (61) patents, we have a wide variety of patent applications, including divisional applications and continuations-in-part, in process with the PTO and internationally. We intend to continue our strategy of enhancing these new patent applications through the addition of data as it is collected.

Government Regulation

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

In addition, our ongoing preclinical research with cell lines and lab animal models of human disease is not currently subject to the FDA requirements that govern clinical trials. However, use of our technology, if developed for human health applications, will also be subject to FDA regulation. Generally, the FDA must approve any drug or biologic product before it can be marketed in the United States. In addition, prior to being sold outside of the U.S., any products resulting from the application of our human health technology must be approved by the regulatory agencies of foreign governments. Prior to filing a new drug application or biologics license application with the FDA, we would have to perform extensive clinical trials, and prior to beginning any clinical trial, we need to perform extensive preclinical testing which could take several years and may require substantial expenditures.

We believe that our current activities, which to date have been confined to research and development efforts, do not require licensing or approval by any governmental regulatory agency. However, we, or our licensees, may be required to obtain such licensing or approval from governmental regulatory agencies prior to the commercialization of our genetically transformed plants and the application of our human health technology.

Liquidity and Capital Resources

Overview

As of March 31, 2010, our cash balance totaled $39,707, and we had working capital deficit of $2,816,931. On April 1, 2010, we received net proceeds from a private placement of preferred stock and warrants in the aggregate amount of approximately $9,600,000. As of March 31, 2010, we had a federal tax loss carryforward of approximately $30,542,000 and a state tax loss carry-forward of approximately $23,179,000 to offset future taxable income. We cannot assure you that we will be able to take advantage of any or all of such tax loss carryforwards, if at all, in future fiscal years. Additionally, the federal tax loss carryforward in total may be limited by provisions of the Internal Revenue Code regarding changes in ownership of corporations.

Contractual Obligations

The following table lists our cash contractual obligations as of March 31, 2010:

		Payments Due by Period			
Contractual Obligations	Total	Less than 1 year	1 - 3 years	4 - 5 years	More than 5 years
Research and Development Agreements (1)	$ 480,049	$ 480,049	$ —	$ —	$ —
Facility, Rent and Operating Leases (2)	$ 93,480	$ 80,104	$ 13,376	$ —	$ —
Employment, Consulting and Scientific Advisory Board Agreements (3)	$ 221,842	$ 211,842	$ 10,000	$ —	$ —
Total Contractual Cash Obligations	$ 795,371	$ 771,995	$ 23,376	$ —	$ —

(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 consulting agreements provide for automatic renewal, which is not reflected in the table, unless terminated earlier by the parties to the respective agreements.

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

Effective September 1, 2009, we extended our research and development agreement with the University of Waterloo for an additional one-year period through August 31, 2010, in the amount of approximately $650,400. Research and development expenses under this agreement aggregated $164,206 and $479,206 for the three month and nine month periods ended March 31, 2010, respectively, and $139,740 and $489,258 for the three month and nine month periods ended March 31, 2009, respectively, and $5,599,574 for the cumulative period from inception through March 31, 2010.

Capital Resources

Since inception, we have generated revenues of $1,590,000 in connection with the initial fees and milestone payments received under our license and development agreements. We have not been profitable since inception, we will continue to incur additional operating losses in the future, and we will require additional financing to continue the development and subsequent commercialization of our technology. While we do not expect to generate significant revenues from the licensing of our technology for several years, if ever, we may enter into additional licensing or other agreements with marketing and distribution partners that may result in additional license fees, revenues from contract research or other related revenue.

Private Placement of Convertible Preferred Stock and Warrants

On March 26, 2010, we entered into two Purchase Agreements, also referred to herein as the Non-Affiliate Purchase Agreements, between us and certain non-affiliated investors who are a party thereto, also referred to herein as the Non-Affiliated Investors. On March 26, 2010, we also entered into a third Purchase Agreement, also referred to herein as the Affiliate Purchase Agreement, between us and certain affiliated investors. Collectively the Non-Affiliate Purchase Agreements and Affiliate Purchase Agreement shall be referred to herein as the “Purchase Agreements” and collectively the Non-Affiliated Investors and Affiliated Investors shall be referred to herein as the “Investors”. The respective Purchase Agreements contain substantially similar terms. It is anticipated that the offering will bring gross proceeds to us in the amount of approximately $11,497,000 and net proceeds to us in the amount of approximately $10,800,000. On April 1, 2010, we closed on the aggregate gross proceeds of $10,297,000. The remaining $1,200,000 of gross proceeds cannot be closed upon until we receive stockholder approval for the transaction.

We anticipate that, based upon our cash balance as of March 31, 2010 and the net proceeds from the private placement that closed on April 1, 2010, we will be able to fund our operations for at least the next twelve months from March 31, 2010. Over the next twelve months, we plan to fund our research and development and commercialization activities by:

- utilizing our current cash balance and investments;
- the placement of additional equity or debt instruments;
- achieving some of the milestones set forth in our current licensing agreements; and

- the possible execution of additional licensing agreements for our technology.

We cannot assure you that we will be able to raise money through any of the foregoing transactions, or on favorable terms, if at all.

Changes to Critical Accounting Policies and Estimates

We adopted FASB ASC 815.40, "Determining Whether an Instrument (or Embedded Feature) is Indexed to an Entity's Own Stock" for the fiscal year beginning July 1, 2009.

Except for the adoption of FASB ASC 815.40, there have been no changes to our critical accounting policies and estimates as set forth in our Annual Report on Form 10-K for the fiscal year ended June 30, 2009.

Results of Operations

Three Months Ended March 31, 2010 and Three Months Ended March 31, 2009

The net loss for the three month period ended March 31, 2010 was $5,284,235. The net loss for the three month period ended March 31, 2009 was $1,331,477. Such a change represents an increase in net loss of $3,952,758, or 296.9%. This increase in net loss was primarily the result of an increase in non-cash expenses associated with the outstanding and redeemed convertible notes and change in fair value of a warrant liability.

Revenue

There was no revenue for the three month period ended March 31, 2010. Total revenue of $75,000 for the three month period ended March 31, 2009 consisted of a milestone payment in connection with an agricultural license agreement.

We anticipate that we will continue to receive milestone payments in connection with our current agricultural development and license agreements. Additionally, we anticipate that we will receive royalty payments from our license agreements when our partners commercialize their crops containing our technology. However, it is difficult for us to determine our future revenue expectations because we are a development stage biotechnology company with no history of receiving development milestone payments and royalties. As such, the timing and outcome of our experiments, the timing of signing new partners and the timing of our partners moving through the development process into commercialization is difficult to accurately predict.

Operating Expenses

	Three Months Ended March 31,			
	2010	2009	Change	%
	(in thousands, except % values)			
General and administrative	$ 555	$ 532	$ 23	4.3%
Research and development	566	541	25	4.6%
Total operating expenses	$ 1,121	$ 1,073	$ 48	4.5%

We expect operating expenses to increase over the next twelve months as we anticipate that research and development expenses will increase as we continue to expand our research and development activities as they relate to the potential clinical development of SNS01.

General and Administrative Expenses

	Three Months Ended March 31,			
	2010	2009	Change	%
	(in thousands, except % values)			
Share-based compensation	$ 141	$ 120	$ 21	17.5%
Payroll and benefits	142	177	(35)	(19.8)%
Investor relations	34	45	(11)	(24.4)%
Professional fees	122	74	48	64.9%
Depreciation and amortization	32	27	5	18.5%
Director fees	9	14	(5)	(35.7)%
Other general and administrative	75	75	—	—%
Total general and administrative	$ 555	$ 532	$ 23	4.3%

- Share-based compensation for the three months ended March 31, 2010 consisted primarily of the amortized portion of the Black-Scholes value of options granted to directors, employees and consultants and the value of 74,184 shares of common stock issued to consultants. Share based compensation for the three months ended March 31, 2009 consisted primarily of the amortized portion of the Black-Scholes value of options granted to directors, employees and consultants and the amount of our short-term incentive program for the year ended June 30, 2009. During the three month periods ended March 31, 2010 and 2009, there were 1,015,000 and 127,836 options granted, respectively.

- Payroll and benefits decreased primarily due to a reduction in the amount of compensation for our President and CEO, which was partially offset by the costs associated with severance agreement with our former Vice-President of Corporate Development.

- Investor relations decreased primarily due to a reduction in the amount of fees being paid to our previous investor relations firm.

- Professional fees increased primarily due to legal fees in connection with the redemption of the YA Global convertible notes, the purchase of the Stanford convertible notes and warrants by certain of our board members and the execution of the severance agreement with our former Vice-President of Corporate Development.

We expect general and administrative expenses to modestly increase over the next twelve months primarily due to an increase in payroll and benefits and legal and accounting fees as we continue to expand our research and development program for human health applications of our technology.

Research and Development Expenses

	Three Months Ended March 31,			
	2010	2009	Change	%
	(in thousands, except % values)			
Share-based compensation	$ 2	$ 23	$ (21)	(91.3)%
Other research and development	564	518	46	8.8%
Total research and development	$ 566	$ 541	$ 25	4.6%

- Share-based compensation consists primarily of the amortized portion of Black-Scholes value of options and warrants granted to research and development consultants and employees. Additionally, for the three months ended March 31, 2009, it also consisted of the amount of our short-term incentive plan for the year ended June 30, 2009.

- Other research and development costs increased primarily due to an increase in the costs incurred in connection with our development of SNS01 for multiple myeloma due to the timing of certain aspects of the development and the cost of the research performed at the University of Waterloo as a result of a negative exchange rate variance during the three months ended March 31, 2010.

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

	Three Months Ended March 31,			
	2010	%	2009	%
	(in thousands, except % values)			
Agricultural	$ 138	24%	$ 146	27%
Human health	428	76%	395	73%
Total research and development	$ 566	100%	$ 541	100%

- Agricultural research expenses decreased during the three month period ended March 31, 2010 primarily due to a decrease in the amount of share- based compensation.

- Human health research expenses increased during the three month period ended March 31, 2010 primarily as a result of the timing of certain aspects of the development of SNS01 for multiple myeloma.

We expect the percentage of human health research programs to continue to increase as a percentage of the total research and development expenses as we continue our current research projects and begin new human health initiatives, in particular as they relate to the potential clinical development of SNS01.

Other noncash income

On July 1, 2009, we adopted FASB ASC 815.40 and recorded a warrant liability in the amount of $3,200,108 on such date. At each reporting period, we are required to revalue the amount of the warrant liability. On December 31, 2009, the amount of the warrant liability was adjusted to $860,767. On March 31, 2010, the amount of the warrant liability was adjusted to $1,388,333. The difference between December 31, 2009 and March 31, 2010 of $527,566 was recorded as other noncash loss.

Amortization of debt discount, financing costs and interest expense and loss on extinguishment of debt

During the year ended June 30, 2008, we issued $10,000,000 in convertible notes and warrants. The net proceeds of those convertible notes and warrants were recorded as equity. The discount on the convertible notes is being amortized, using the effective yield method, over the term of the convertible notes. The related costs of issuance were recorded as deferred financing costs and are being amortized on a straight line basis over the term of the convertible notes.

The increase in the amortization of the debt discount is primarily due to convertible notes in the amount of $1,161,900 being converted into common stock and convertible notes in the amount of $1,835,640 being redeemed during the three month period ended March 31, 2010. The unamortized portion of such notes was amortized to interest expense.

As a result of the redemption of convertible notes in the amount of $1,835,640, we recorded a loss on extinguishment of debt in the amount of $275,345.

None of the convertible notes were converted into common stock or redeemed during the three month period ended March 31, 2009.

At March 31, 2010 and May 17, 2010, convertible notes in the amount of $5,000,000 were outstanding, which are held by certain members of our board of directors.

Interest (Expense) Income, net

During the three month period ended March 31, 2010, we incurred interest in connection with a loan facility entered into in February 2010. Furthermore, interest income during the three month period ended March 31, 2010 was lower than interest income during the three month period ended March 31, 2009 as a result of a lower cash balance.

Nine Months Ended March 31, 2010 and Nine Months Ended March 31, 2009

The net loss for the nine month period ended March 31, 2010 was $7,177,196. The net loss for the nine month period ended March 31, 2009 was $4,137,224. Such a change represents an increase in net loss of $3,039,972, or 73.5%. This increase in net loss was primarily the result of an increase in non-cash expenses associated with the outstanding and redeemed convertible notes, which was partially offset by a change in fair value of a warrant liability

Revenue

Total revenue of $140,000 and $275,000 for the nine month periods ended March 31, 2010 and 2009, respectively, consisted of milestone payments in connection with certain agricultural license agreements.

We anticipate that we will continue to receive milestone payments in connection with our current agricultural development and license agreements. Additionally, we anticipate that we will receive royalty payments from our license agreements when our partners commercialize their crops containing our technology. However, it is difficult for us to determine our future revenue expectations because we are a development stage biotechnology company with no history of receiving development milestone payments and royalties. As such, the timing and outcome of our experiments, the timing of signing new partners and the timing of our partners moving through the development process into commercialization is difficult to accurately predict.

Operating Expenses

	Nine Months Ended March 31,			
	2010	2009	Change	%
	(in thousands, except % values)			
General and administrative	$ 1,735	$ 1,711	$ 24	1.4%
Research and development	1,523	1,624	(101)	(6.2)%
Total operating expenses	$ 3,258	$ 3,335	$ (77)	(2.3)%

We expect operating expenses to increase over the next twelve months as we anticipate that research and development expenses will increase as we continue to expand our research and development activities as they relate to the potential clinical development of SNS01.

General and Administrative Expenses

	Nine Months Ended March 31,			
	2010	2009	Change	%
	(in thousands, except % values)			
Share-based compensation	$ 324	$ 323	$ 1	0.3%
Payroll and benefits	542	522	20	3.8%
Investor relations	125	200	(75)	(37.5)%
Professional fees	384	349	35	10.0%
Depreciation and amortization	93	81	12	14.8%
Director fees	62	58	4	6.9%
Other general and administrative	205	178	27	15.2%
Total general and administrative	$ 1,735	$ 1,711	$ 24	1.4%

- Share-based compensation for the nine months ended March 31, 2010 consisted primarily of the amortized portion of the Black-Scholes value of options granted to directors, employees and consultants and the value of 154,184 shares of common stock issued to consultants. Share based compensation for the nine months ended March 31, 2009 consisted primarily of the amortized portion of the Black-Scholes value of options granted to directors, employees and consultants and the amount of our short-term incentive program for the year ended June 30, 2009. During the nine month periods ended March 31, 2010 and 2009, there were 1,748,399 and 849,420 options granted, respectively.

- Payroll and benefits increased primarily due to the severance agreement with our former Vice-President of Corporate Development.

- Investor relations decreased primarily because we have not yet incurred the costs of holding our annual meeting for the current year. Our annual meeting was held in December 2008 in the previous year and incurred such costs during the nine month period ended March 31, 2009. Additionally, there was a reduction in the amount of fees being paid to our previous investor relations firm beginning on December 1, 2009.

- Professional fees increased primarily due to legal fees in connection with our redemption of the YA Global convertible notes, the purchase of the Stanford convertible notes and warrants by certain of our board members and the execution of the severance agreements with our former President and CEO and Vice-President of Corporate Development. Such increase was partially offset by a decrease in accounting fees.

We expect general and administrative expenses to modestly increase over the next twelve months primarily due to an increase in payroll and benefits and legal and accounting fees as we continue to expand our research and development program for human health applications of our technology.

Research and Development Expenses

	Nine Months Ended March 31,			
	2010	2009	Change	%
	(in thousands, except % values)			
Share-based compensation	$ 2	$ 35	$ (33)	(94.3)%
Other research and development	1,521	1,589	(68)	(4.3)%
Total research and development	$ 1,523	$ 1,624	$ (101)	(6.2)%

- Share-based compensation consists primarily of the amortized portion of Black-Scholes value of options and warrants granted to research and development consultants and employees. Additionally, for the three months ended March 31, 2009, it also consisted of the amount of our short-term incentive plan for the year ended June 30, 2009.

- Other research and development costs decreased primarily due to a decrease in the costs incurred in connection with our development of SNS01 for multiple myeloma due to the timing of certain aspects of the development and the cost of the research performed at the University of Waterloo as a result of a decrease in the annual budget that began on September 1, 2009.

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

	Nine Months Ended March 31,			
	2010	%	2009	%
	(in thousands, except % values)			
Agricultural	$ 404	27%	$ 457	28%
Human health	1,119	73%	1,167	72%
Total research and development	$ 1,523	100%	$ 1,624	100%

- Agricultural research expenses decreased during the nine month period ended March 31, 2010 primarily due to a decrease in the cost of the research performed at the University of Waterloo as a result of a decrease in the annual budget beginning on September 1, 2009 .

- Human health research expenses decreased during the nine month period ended March 31, 2010 primarily as a result of the timing of certain projects related to the development of SNS01 for multiple myeloma.

We expect the percentage of human health research programs to continue to increase as a percentage of the total research and development expenses as we continue our current research projects and begin new human health initiatives, in particular as they relate to the potential clinical development of SNS01.

Other noncash income

On July 1, 2009, we adopted FASB ASC 815.40 and recorded a warrant liability in the amount of $3,200,108 on such date. At each reporting period, we are required to revalue the amount of the warrant liability. On March 31, 2010, the amount of the warrant liability was adjusted to $1,388,333 and the difference of $1,811,775 was recorded as other noncash income.

Amortization of debt discount, financing costs and interest expense and loss on extinguishment of debt

During the year ended June 30, 2008, we issued $10,000,000 in convertible notes and warrants. The net proceeds of those convertible notes and warrants were recorded as equity. The discount on the convertible notes is being amortized, using the effective yield method, over the term of the convertible notes. The related costs of issuance were recorded as deferred financing costs and are being amortized on a straight line basis over the term of the convertible notes.

The increase in the amortization of the debt discount is primarily due to convertible notes in the amount of $2,619,360 being converted into common stock and convertible notes in the amount of $1,835,640 being redeemed during the nine month period ended March 31, 2010. The unamortized portion of such notes was amortized to interest expense. None of the convertible notes were converted into common stock during the nine month period ended March 31, 2009.

As a result of the redemption of the convertible notes in the amount of $1,835,640, we recorded a loss on extinguishment of debt in the amount of $275,345. Additionally, in July 2009 we issued common stock and warrants, valued at $261,532, to Cato Holding Company in exchange for debt that was owed by us to its affiliate, Cato Research Ltd., in the amount of $175,000. As a result of that transaction, we recorded a loss on extinguishment of debt in the amount of $86,532.

At March 31, 2010, there were $5,000,000 of convertible notes outstanding held by certain members of our board of directors.

Interest (Expense) Income, net

During the nine month period ended March 31, 2010, we incurred interest in connection with a loan facility entered into in February 2010. Furthermore, interest income during the nine month period ended March 31, 2010 was lower than interest income during the nine month period ended March 31, 2009 as a result of a lower interest rates and a lower cash balance.

Period From Inception on July 1, 1998 through March 31, 2010

From inception of operations on July 1, 1998 through March 31, 2010, we have had revenues of $1,590,000, which consisted of the initial license fees and milestone payments in connection with our various development and license agreements. We do not expect to generate significant revenues for several years, if ever, during which time we will continue to engage in significant research and development efforts.

We have incurred losses each year since inception and have an accumulated deficit of$38,395,328 at March 31, 2010. We expect to continue to incur losses as a result of expenditures on research and development and administrative activities.

Item 3. Quantitative and Qualitative Disclosures about Market Risk.

Foreign Currency Risk

Our financial statements are denominated in United States dollars and, except for our agreement with the University of Waterloo, which is denominated in Canadian dollars, all of our contracts are denominated in United States dollars. Therefore, we believe that fluctuations in foreign currency exchange rates will not result in any material adverse effect on our financial condition or results of operations. In the event we derive a greater portion of our revenues from international operations or in the event a greater portion of our expenses are incurred internationally and denominated in a foreign currency, then changes in foreign currency exchange rates could effect our results of operations and financial condition.

Interest Rate Risk

We invest in high-quality financial instruments, primarily money market funds and United States treasury notes, with an effective duration of the portfolio of less than one year which we believe are subject to limited credit risk. We currently do not hedge our interest rate exposure. Due to the short-term nature of our investments, which we plan to hold until maturity, we do not believe that we have any material exposure to interest rate risk arising from our investments.

Item 4T. Controls and Procedures.

(a) Evaluation of disclosure controls and procedures.

The principal executive officer and principal financial officer have evaluated our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of March 31, 2010. Based on this evaluation, they have concluded that our disclosure controls and procedures were effective to ensure that the information required to be disclosed by us in reports that we file or submit under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in the Commission's rules and forms, and to ensure that information required to be disclosed by us in the reports that we file or submit under the Securities Exchange Act of 1934 is accumulated and communicated to our management, including our principal executive and principal financial officers, to allow timely decisions regarding required disclosure.

(b) Changes in internal controls.

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 nine month period ended March 31, 2010 that has materially affected, or is reasonably likely to materially affect, our internal controls over financial reporting.

PART II. OTHER INFORMATION.

Item 1A. Risk Factors.

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.

Risks Related to Our Business

We have a limited operating history and have incurred substantial losses and expect to incur future losses.

We are a development stage biotechnology company with a limited operating history and limited assets and capital. We have incurred losses each year since inception and had an accumulated deficit of $38,395,328 at March 31, 2010. We have generated minimal revenues by licensing our technology for certain crops to companies willing to share in our development costs. In addition, our technology may not be ready for commercialization for several years. We expect to continue to incur losses for the next several years because we anticipate that our expenditures on research and development, and administrative activities will significantly exceed our revenues during that period. We cannot predict when, if ever, we will become profitable.

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

In their audit opinion issued in connection with our consolidated balance sheet as of June 30, 2009 and our related consolidated statements of operations, stockholders' equity, and cash flows for the year then ended, our auditors have expressed substantial doubt about our ability to continue as a going concern given our recurring net losses, negative cash flows from operations, planned spending levels and the limited amount of funds on our balance sheet. We have prepared our financial statements on a going concern basis, which contemplates the realization of assets and the satisfaction of liabilities and commitments in the normal course of business. The consolidated financial statements do not include any adjustments that might be necessary should we be unable to continue in existence.

We may need additional capital to fund our operations until we are able to generate a profit.

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

In addition, the financing with Stanford Venture Capital Holdings, Inc., referred to herein as Stanford, are secured by all of our assets. Certain members of our board of directors have acquired all of the convertible notes issued to Stanford. If we default under the convertible notes, the investors may foreclose on our assets and our business. As a result, we will need to obtain more funding in the future through collaborations or other arrangements with research institutions and corporate partners, or public and private offerings of our securities, including debt or equity financing. We may not be able to obtain adequate funds for our operations from these sources when needed or on acceptable terms. Future collaborations or similar arrangements may require us to license valuable intellectual property to, or to share substantial economic benefits with, our collaborators. If we raise additional capital by issuing additional equity or securities convertible into equity, our stockholders may experience dilution and our share price may decline. Any debt financing may result in restrictions on our spending.

If we are unable to raise additional funds, we will need to do one or more of the following:

- delay, scale-back or eliminate some or all of our research and product development programs;
- license third parties to develop and commercialize products or technologies that we would otherwise seek to develop and commercialize ourselves;
- seek strategic alliances or business combinations;
- attempt to sell our company;
- cease operations; or
- declare bankruptcy.

We believe that at the projected rate of spending and with the proceeds we received from a private placement of convertible preferred stock and warrants on April 1, 2010, we should have sufficient cash to maintain our present operations for at least the next twelve (12) months.

We may be adversely affected by the current economic environment.

Our ability to obtain financing, invest in and grow our business, and meet our financial obligations depends on our operating and financial performance, which in turn is subject to numerous factors. In addition to factors specific to our business, prevailing economic conditions and financial, business and other factors beyond our control can also affect our business and ability to raise capital. We cannot anticipate all of the ways in which the current economic climate and financial market conditions could adversely impact our business.

We depend on a single principal technology and, if our technology is not commercially successful, we will have no alternative source of revenue.

Our primary business is the development and licensing of technology to identify, isolate, characterize and promote or silence genes which control the death of cells in humans and plants. Our future revenue and profitability critically depend upon our ability, or our licensees ability, to successfully develop apoptosis and senescence gene technology and later license or market such technology. We have conducted experiments on certain crops with favorable results and have conducted certain preliminary cell-line and animal experiments, which have provided us with data upon which we have designed additional research programs. However, we cannot give any assurance that our technology will be commercially successful or economically viable for any crops or human health applications.

In addition, no assurance can be given that adverse consequences might not result from the use of our technology such as the development of negative effects on humans or plants or reduced benefits in terms of crop yield or protection. Our failure to obtain market acceptance of our technology or of our current or potential licensees to successfully commercialize such technology would have a material adverse effect on our business.

We outsource all of our research and development activities and, if we are unsuccessful in maintaining our alliances with these third parties, our research and development efforts may be delayed or curtailed.

We rely on third parties to perform all of our research and development activities. Our research and development efforts take place at the University of Waterloo in Ontario, Canada, where our technology was discovered, at the Mayo Clinic and with our commercial partners. At this time, we do not have the internal capabilities to perform our research and development activities. Accordingly, the failure of third-party research partners to perform under agreements entered into with us, or our failure to renew important research agreements with these third parties, may delay or curtail our research and development efforts.

We have significant future capital needs and may be unable to raise capital when needed, which could force us to delay or reduce our research and development efforts.

As of March 31, 2010, we had cash of $39,707 and a working capital deficit of $2,816,931. On April 1, 2010, we received net proceeds of approximately $9,600,000 from the private placement of convertible preferred stock and warrants. Using our available reserves as of March 31, 2010 and the net proceeds from the private placement of convertible preferred stock and warrants, we believe that we can operate according to our current business plan for at least the next twelve(12) months. To date, we have generated minimal revenues and anticipate that our operating costs will exceed any revenues generated over the next several years. Therefore, we will be required to raise additional capital in the future in order to operate in accordance with our current business plan, and this funding may not be available on favorable terms, if at all. If we are unable to raise additional funds, we will need to do one or more of the following:

- delay, scale back or eliminate some or all of our research and development programs;
- provide a license to third parties to develop and commercialize our technology that we would otherwise seek to develop and commercialize ourselves;
- seek strategic alliances or business combinations;
- attempt to sell our company;
- cease operations; or
- declare bankruptcy.

In addition, in connection with any funding, if we need to issue more equity securities than our certificate of incorporation currently authorizes, or more than 20% of the shares of our common stock outstanding, we may need stockholder approval. If stockholder approval is not obtained or if adequate funds are not available, we may be required to curtail operations significantly or to obtain funds through arrangements with collaborative partners or others that may require us to relinquish rights to certain of our technologies, product candidates, products or potential markets. Investors may experience dilution in their investment from future offerings of our common stock. For example, if we raise additional capital by issuing equity securities, such an issuance would reduce the percentage ownership of existing stockholders. In addition, assuming the exercise of all options and warrants outstanding and the conversion of the notes into common stock, as of March 31, 2010, we had 34,587,552 shares of common stock authorized but unissued and unreserved, which may be issued from time to time by our board of directors without stockholder approval. On April 1, 2010, we closed on a private placement of convertible preferred stock and warrants. After giving effect for this private placement, there were no unreserved shares remaining for future issuance. We have asked our shareholders to approve this financing and to increase our authorized shares of common stock from 120,000,000 to 250,000,000. If the shareholders do not approve this increase in authorized shares of common stock, we will not have any shares available for future financings. Furthermore, we may need to issue securities that have rights, preferences and privileges senior to our common stock. Failure to obtain financing on acceptable terms would have a material adverse effect on our liquidity.

Since our inception, we have financed all of our operations through private equity and debt financings. Our future capital requirements depend on numerous factors, including:

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

Our business depends upon our patents and proprietary rights and the enforcement of these rights. Our failure to obtain and maintain patent protection may increase competition and reduce demand for our technology.

As a result of the substantial length of time and expense associated with developing products and bringing them to the marketplace in the biotechnology and agricultural industries, obtaining and maintaining patent and trade secret protection for technologies, products and processes is of vital importance. Our success will depend in part on several factors, including, without limitation:

- our ability to obtain patent protection for our technologies and processes;

- our ability to preserve our trade secrets; and
- our ability to operate without infringing the proprietary rights of other parties both in the United States and in foreign countries.

As of March 31, 2010, we have been issued twenty two (22) patents by the PTO and thirty-nine (39) patents from foreign countries. We have also filed numerous patent applications for our technology in the United States and in several foreign countries, which technology is vital to our primary business, as well as several Continuations in Part on these patent applications. Our success depends in part upon the grant of patents from our pending patent applications.

Although we believe that our technology is unique and that it will not violate or infringe upon the proprietary rights of any third party, we cannot assure you that these claims will not be made or if made, could be successfully defended against. If we do not obtain and maintain patent protection, we may face increased competition in the United States and internationally, which would have a material adverse effect on our business.

Since patent applications in the United States are maintained in secrecy until patents are issued, and since publication of discoveries in the scientific and patent literature tend to lag behind actual discoveries by several months, we cannot be certain that we were the first creator of the inventions covered by our pending patent applications or that we were the first to file patent applications for these inventions.

In addition, among other things, we cannot assure you that:

- our patent applications will result in the issuance of patents;
- any patents issued or licensed to us will be free from challenge and if challenged, would be held to be valid;
- any patents issued or licensed to us will provide commercially significant protection for our technology, products and processes;
- other companies will not independently develop substantially equivalent proprietary information which is not covered by our patent rights;
- other companies will not obtain access to our know-how;
- other companies will not be granted patents that may prevent the commercialization of our technology; or
- we will not incur licensing fees and the payment of significant other fees or royalties to third parties for the use of their intellectual property in order to enable us to conduct our business.

Our competitors may allege that we are infringing upon their intellectual property rights, forcing us to incur substantial costs and expenses in resulting litigation, the outcome of which would be uncertain.

Patent law is still evolving relative to the scope and enforceability of claims in the fields in which we operate. We are like most biotechnology companies in that our patent protection is highly uncertain and involves complex legal and technical questions for which legal principles are not yet firmly established. In addition, if issued, our patents may not contain claims sufficiently broad to protect us against third parties with similar technologies or products, or provide us with any competitive advantage.

The PTO and the courts have not established a consistent policy regarding the breadth of claims allowed in biotechnology patents. The allowance of broader claims may increase the incidence and cost of patent interference proceedings and the risk of infringement litigation. On the other hand, the allowance of narrower claims may limit the scope and value of our proprietary rights.

The laws of some foreign countries do not protect proprietary rights to the same extent as the laws of the United States, and many companies have encountered significant problems and costs in protecting their proprietary rights in these foreign countries.

We could become involved in infringement actions to enforce and/or protect our patents. Regardless of the outcome, patent litigation is expensive and time consuming and would distract our management from other activities. Some of our competitors may be able to sustain the costs of complex patent litigation more effectively than we could because they have substantially greater resources. Uncertainties resulting from the initiation and continuation of any patent litigation could limit our ability to continue our operations.

If our technology infringes the intellectual property of our competitors or other third parties, we may be required to pay license fees or damages.

If any relevant claims of third-party patents that are adverse to us are upheld as valid and enforceable, we could be prevented from commercializing our technology or could be required to obtain licenses from the owners of such patents. We cannot assure you that such licenses would be available or, if available, would be on acceptable terms. Some licenses may be non-exclusive and, therefore, our competitors may have access to the same technology licensed to us. In addition, if any parties successfully claim that the creation or use of our technology infringes upon their intellectual property rights, we may be forced to pay damages, including treble damages.

Our security measures may not adequately protect our unpatented technology and, if we are unable to protect the confidentiality of our proprietary information and know-how, the value of our technology may be adversely affected.

Our success depends upon know-how, unpatentable trade secrets, and the skills, knowledge and experience of our scientific and technical personnel. As a result, all employees agreed to a confidentiality provision in their employment agreement that prohibits the disclosure of confidential information to anyone outside of our company, during the term of employment and for 5 years thereafter. We also require all employees to disclose and assign to us the rights to their ideas, developments, discoveries and inventions. We also attempt to enter into similar agreements with our consultants, advisors and research collaborators. We cannot assure you that adequate protection for our trade secrets, know-how or other proprietary information against unauthorized use or disclosure will be available.

We occasionally provide information to research collaborators in academic institutions and request that the collaborators conduct certain tests. We cannot assure you that the academic institutions will not assert intellectual property rights in the results of the tests conducted by the research collaborators, or that the academic institutions will grant licenses under such intellectual property rights to us on acceptable terms, if at all. If the assertion of intellectual property rights by an academic institution is substantiated, and the academic institution does not grant intellectual property rights to us, these events could limit our ability to commercialize our technology.

As we evolve from a company primarily involved in the research and development of our technology into one that is also involved in the commercialization of our technology, we may have difficulty managing our growth and expanding our operations.

As our business grows, we may need to add employees and enhance our management, systems and procedures. We may need to successfully integrate our internal operations with the operations of our marketing partners, manufacturers, distributors and suppliers to produce and market commercially viable products. We may also need to manage additional relationships with various collaborative partners, suppliers and other organizations. Although we do not presently conduct research and development activities in-house, we may undertake those activities in the future. Expanding our business may place a significant burden on our management and operations. We may not be able to implement improvements to our management information and control systems in an efficient and timely manner and we may discover deficiencies in our existing systems and controls. Our failure to effectively respond to such changes may make it difficult for us to manage our growth and expand our operations.

We have no marketing or sales history and depend on third-party marketing partners. Any failure of these parties to perform would delay or limit our commercialization efforts.

We have no history of marketing, distributing or selling biotechnology products and we are relying on our ability to successfully establish marketing partners or other arrangements with third parties to market, distribute and sell a commercially viable product both here and abroad. Our business plan envisions creating strategic alliances to access needed commercialization and marketing expertise. We may not be able to attract qualified sub-licensees, distributors or marketing partners, and even if qualified, these marketing partners may not be able to successfully market agricultural products or human health applications developed with our technology. If our current or potential future marketing partners fail to provide adequate levels of sales, our commercialization efforts will be delayed or limited and we may not be able to generate revenue.

We will depend on joint ventures and strategic alliances to develop and market our technology and, if these arrangements are not successful, our technology may not be developed and the expenses to commercialize our technology will increase.

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

Competition in the human health and agricultural biotechnology industries is intense and technology is changing rapidly. If our competitors market their technology faster than we do, we may not be able to generate revenues from the commercialization of our technology.

Many human health and agricultural biotechnology companies are engaged in research and development activities relating to apoptosis and senescence. The market for plant protection and yield enhancement products is intensely competitive, rapidly changing and undergoing consolidation. We may be unable to compete successfully against our current and future competitors, which may result in price reductions, reduced margins and the inability to achieve market acceptance for products containing our technology. Our competitors in the field of plant senescence gene technology are companies that develop and produce transgenic plants and include major international agricultural companies, specialized biotechnology companies, research and academic institutions and, potentially, our joint venture and strategic alliance partners. These companies include: Mendel Biotechnology, Inc., Renessen LLC, Exelixis Plant Sciences, Inc., and Syngenta International AG, among others. Some of our competitors that are involved in apoptosis research include: Amgen Inc.; Centocor, Inc.; Genzyme Corporation; OSI Pharmaceuticals, Inc.; Novartis AG; Introgen Therapeutics, Inc.; Genta, Inc.; and Vertex Pharmaceuticals, Inc. Many of these competitors have substantially greater financial, marketing, sales, distribution and technical resources than us and have more experience in research and development, clinical trials, regulatory matters, manufacturing and marketing. We anticipate increased competition in the future as new companies enter the market and new technologies become available. Our technology may be rendered obsolete or uneconomical by technological advances or entirely different approaches developed by one or more of our competitors, which will prevent or limit our ability to generate revenues from the commercialization of our technology.

Our business is subject to various government regulations and, if we or our licensees are unable to obtain regulatory approval, we may not be able to continue our operations.

At present, the U.S. federal government regulation of biotechnology is divided among three agencies:

- the USDA regulates the import, field testing and interstate movement of specific types of genetic engineering that may be used in the creation of transgenic plants;

- the EPA regulates activity related to the invention of plant pesticides and herbicides, which may include certain kinds of transgenic plants; and

- the FDA regulates foods derived from new plant varieties.

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

Use of our technology, if developed for human health applications, will also be subject to FDA regulation. The FDA must approve any drug or biologic product before it can be marketed in the United States. In addition, prior to being sold outside of the U.S., any products resulting from the application of our human health technology must be approved by the regulatory agencies of foreign governments. Prior to filing a new drug application or biologics license application with the FDA, we would have to perform extensive clinical trials, and prior to beginning any clinical trial, we would need to perform extensive preclinical testing which could take several years and may require substantial expenditures.

We believe that our current activities, which to date have been confined to research and development efforts, do not require licensing or approval by any governmental regulatory agency. However, we are planning on performing clinical trials, which would be subject to FDA approval. Additionally, federal, state and foreign regulations relating to crop protection products and human health applications developed through biotechnology are subject to public concerns and political circumstances, and, as a result, regulations have changed and may change substantially in the future. Accordingly, we may become subject to governmental regulations or approvals or become subject to licensing requirements in connection with our research and development efforts. We may also be required to obtain such licensing or approval from the governmental regulatory agencies described above, or from state agencies, prior to the commercialization of our genetically transformed plants and human health technology. In addition, our marketing partners who utilize our technology or sell products grown with our technology may be subject to government regulations. If unfavorable governmental regulations are imposed on our technology or if we fail to obtain licenses or approvals in a timely manner, we may not be able to continue our operations.

Preclinical studies of our human health applications may be unsuccessful, which could delay or prevent regulatory approval.

Preclinical studies may reveal that our human health technology is ineffective or harmful, and/or may be unsuccessful in demonstrating efficacy and safety of our human health technology, which would significantly limit the possibility of obtaining regulatory approval for any drug or biologic product manufactured with our technology. The FDA requires submission of extensive preclinical, clinical and manufacturing data to assess the efficacy and safety of potential products. We are currently in the process of conducting preclinical toxicology studies for our multiple myeloma product candidate. Any delay in this toxicology study, or any potential negative findings in this toxicology study, will delay our ability to file an IND for our multiple myeloma product candidate. 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.

Our success will depend on the success clinical trials that have not yet begun.

It may take several years to complete the clinical trials of a product, and a failure of one or more of our clinical trials can occur at any stage of testing. We believe that the development of our product candidate involves significant risks at each stage of testing. If clinical trial difficulties and failures arise, our product candidate may never be approved for sale or become commercially viable.

There are a number of difficulties and risks associated with clinical trials. These difficulties and risks may result in the failure to receive regulatory approval to sell our product candidate or the inability to commercialize our product candidate. The possibility exists that:

- we may discover that the product candidate does not exhibit the expected therapeutic results in humans, may cause harmful side effects or have other unexpected characteristics that may delay or preclude regulatory approval or limit commercial use if approved;

- the results from early clinical trials may not be statistically significant or predictive of results that will be obtained from expanded, advanced clinical trials;

- institutional review boards or regulators, including the FDA, may hold, suspend or terminate our clinical research or the clinical trials of our product candidate for various reasons, including noncompliance with regulatory requirements or if, in their opinion, the participating subjects are being exposed to unacceptable health risks;

- subjects may drop out of our clinical trials;

- our preclinical studies or clinical trials may produce negative, inconsistent or inconclusive results, and we may decide, or regulators may require us, to conduct additional preclinical studies or clinical trials; and

- the cost of our clinical trials may be greater than we currently anticipate.

If our clinical trials for our product candidates are delayed, we would be unable to commercialize our product candidates on a timely basis, which would materially harm our business.

Planned clinical trials may not begin on time or may need to be restructured after they have begun. Clinical trials can be delayed for a variety of reasons, including delays related to:

- obtaining an effective investigational new drug application, or IND, or regulatory approval to commence a clinical trial;
- negotiating acceptable clinical trial agreement terms with prospective trial sites;
- obtaining institutional review board approval to conduct a clinical trial at a prospective site;
- recruiting qualified subjects to participate in clinical trials;
- competition in recruiting clinical investigators;
- shortage or lack of availability of supplies of drugs for clinical trials;
- the need to repeat clinical trials as a result of inconclusive results or poorly executed testing;
- the placement of a clinical hold on a study;
- the failure of third parties conducting and overseeing the operations of our clinical trials to perform their contractual or regulatory obligations in a timely fashion; and
- exposure of clinical trial subjects to unexpected and unacceptable health risks or noncompliance with regulatory requirements, which may result in suspension of the trial

We believe that our product candidate has significant milestones to reach, including the successful completion of clinical trials, before commercialization. If we have significant delays in or termination of clinical trials, our financial results and the commercial prospects for our product candidates or any other products that we may develop will be adversely impacted. In addition, our product development costs would increase and our ability to generate revenue could be impaired.

Any inability to license from third parties their proprietary technologies or processes which we use in connection with the development of our technology may impair our business.

Other companies, universities and research institutions have or may obtain patents that could limit our ability to use our technology in a product candidate or impair our competitive position. As a result, we would have to obtain licenses from other parties before we could continue using our technology in a product candidate. Any necessary licenses may not be available on commercially acceptable terms, if at all. If we do not obtain required licenses, we may not be able to develop our technology into a product candidate or we may encounter significant delays in development while we redesign methods that are found to infringe on the patents held by others.

Clinical trials for our human health technology will be lengthy and expensive and their outcome is uncertain

Before obtaining regulatory approval for the commercial sales of any product containing our technology, we must demonstrate through clinical testing that our technology and product containing our technology is safe and effective for use in humans. Conducting clinical trials is a time-consuming, expensive and uncertain process and typically requires years to complete. In our industry, the results from preclinical studies and early clinical trials often are not predictive of results obtained in later-stage clinical trials. Some products and technologies that have shown promising results in preclinical studies or early clinical trials subsequently fail to establish sufficient safety and efficacy data necessary to obtain regulatory approval. At any time during clinical trials we or the FDA might delay or halt any clinical trial for various reasons, including:

- occurrence of unacceptable toxicities or side effects;
- ineffectiveness of the product candidate;
- negative or inconclusive results from the clinical trials, or results that necessitate additional studies or clinical trials;
- delays in obtaining or maintaining required approvals from institutions, review boards or other reviewing entities at clinical sites;
- delays in patient enrollment; or
- insufficient funding or a reprioritization of financial or other resources.

Any failure or substantial delay in successfully completing clinical trials and obtaining regulatory approval for our product candidates could severely harm our business.

Even if we receive regulatory approval, consumers may not accept products containing our technology, which will prevent us from being profitable since we have no other source of revenue.

We cannot guarantee that consumers will accept products containing our technology. Recently, there has been consumer concern and consumer advocate activism with respect to genetically-engineered agricultural consumer products. The adverse consequences from heightened consumer concern in this regard could affect the markets for agricultural products developed with our technology and could also result in increased government regulation in response to that concern. If the public or potential customers perceive our technology to be genetic modification or genetic engineering, agricultural products grown with our technology may not gain market acceptance.

We depend on our key personnel and, if we are not able to attract and retain qualified scientific and business personnel, we may not be able to grow our business or develop and commercialize our technology.

We are highly dependent on our scientific advisors, consultants and third-party research partners. Our success will also depend in part on the continued service of our key employees and our ability to identify, hire and retain additional qualified personnel in an intensely competitive market. Although we have a research agreement with Dr. John Thompson, this agreement may be terminated upon short or no notice. Additionally, we do not have employment agreements with our key employees. 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 NYSE Amex 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 our outstanding equity awards or issue equivalent equity awards, our current equity plans require the accelerated vesting of such outstanding equity awards.

Risks Related to Our Common Stock

We currently do not meet the NYSE Amex Exchange continued listing standards. If our common stock is delisted from the NYSE Amex Exchange, we may not be able to list on any other stock exchange, and our common stock may be subject to the "penny stock" regulations which may affect the ability of our stockholders to sell their shares.

The NYSE Amex Exchange requires us to meet minimum financial requirements in order to maintain our listing. Currently, we do not meet the $6,000,000 minimum net worth continued listing requirement of the NYSE Amex Exchange and have received a notice of noncompliance from the NYSE Amex Exchange. We submitted a plan of compliance to the NYSE Amex Exchange discussing how we intend to regain compliance with the continued listing requirements. The NYSE Amex Exchange has accepted our plan of compliance and granted us an extension until April 29, 2011 to regain compliance with the NYSE's continued listing standards. During the extension period, we remain subject to periodic review by NYSE Staff. Failure to make progress consistent with the plan or to regain compliance with the continued listing standards by the end of the extension period could result in our company being delisted from the NYSE. If we are delisted from the NYSE Amex Exchange, our common stock likely will become a "penny stock." In general, regulations of the SEC define a "penny stock" to be an equity security that is not listed on a national securities exchange or the NASDAQ Stock Market and that has a market price of less than $5.00 per share or with an exercise price of less than $5.00 per share, subject to certain exceptions. If our common stock becomes a penny stock, additional sales practice requirements would be imposed on broker-dealers that sell such securities to persons other than certain qualified investors. For transactions involving a penny stock, unless exempt, a broker-dealer must make a special suitability determination for the purchaser and receive the purchaser's written consent to the transaction prior to the sale. In addition, the rules on penny stocks require delivery, prior to and after any penny stock transaction, of disclosures required by the SEC.

If our stock is not accepted for listing on the NYSE Amex Exchange, we will make every possible effort to have it listed on the Over the Counter Bulletin Board, or the OTC Bulletin Board. If our common stock were to be traded on the OTC Bulletin Board, the Securities Exchange Act of 1934, as amended, and related Securities and Exchange Commission (SEC) rules would impose additional sales practice requirements on broker-dealers that sell our securities. These rules may adversely affect the ability of stockholders to sell our common stock and otherwise negatively affect the liquidity, trading market and price of our common stock.

We believe that the listing of our common stock on a recognized national trading market, such as the NYSE Amex Exchange, is an important part of our business and strategy. Such a listing helps our stockholders by providing a readily available trading market with current quotations. Without that, stockholders may have a difficult time getting a quote for the sale or purchase of our stock, the sale or purchase of our stock would likely be made more difficult and the trading volume and liquidity of our stock would likely decline. The absence of such a listing may adversely affect the acceptance of our common stock as currency or the value accorded it by other parties. In that regard, the absence of a listing on a recognized national trading market will also affect our ability to benefit from the use of our operations and expansion plans, including for use in licensing agreements, joint ventures, the development of strategic relationships and acquisitions, which are critical to our business and strategy and none of which is currently the subject of any agreement, arrangement or understanding, with respect to any future financing or strategic relationship it may undertake. A delisting from the NYSE Amex Exchange could result in negative publicity and could negatively impact our ability to raise capital in the future.

Our management and other affiliates have significant control of our common stock and could significantly influence our actions in a manner that conflicts with our interests and the interests of other stockholders.

As of March 31, 2010, our executive officers, directors and affiliated entities together beneficially own approximately 41.6% of the outstanding shares of our common stock, assuming the exercise of options and warrants which are currently exercisable or will become exercisable within 60 days of March 31, 2010, held by these stockholders. As a result, these stockholders, acting together, will be able to exercise significant influence over matters requiring approval by our stockholders, including the election of directors, and may not always act in the best interests of other stockholders. Such a concentration of ownership may have the effect of delaying or preventing a change in control of us, including transactions in which our stockholders might otherwise receive a premium for their shares over then current market prices. Stanford is one such major stockholder of Senesco.

In February 2009, the SEC filed a civil lawsuit accusing certain executives of Stanford of fraud and Stanford's assets were subsequently placed in receivership. It is unclear at this point, what impact, if any, the ongoing investigation of Stanford may have on us.

A significant portion of our total outstanding shares of common stock may be sold in the market in the near future, which could cause the market price of our common stock to drop significantly.

As of March 31, 2010, we had 33,584,121 shares of our common stock issued and outstanding, of which approximately 1,986,306 shares are registered pursuant to a registration statement on Form S-3 and 31,597,815 of which are either eligible to be sold under SEC Rule 144 or are in the public float. In addition, we have registered 2,632,194 shares of our common stock underlying warrants previously issued on the Form S-3 registration statement and we registered 6,137,200 shares of our common stock underlying options granted or to be granted under our stock option plan. Consequently, sales of substantial amounts of our common stock in the public market, or the perception that such sales could occur, may have a material adverse effect on our stock price.

Our common stock has a limited trading market, which could limit your ability to resell your shares of common stock at or above your purchase price.

Our common stock is quoted on the NYSE Amex Exchange and currently has a limited trading market. The NYSE Amex Exchange requires us to meet minimum financial requirements in order to maintain our listing. Currently, we do not meet the continued listing requirements of the NYSE Amex Exchange. As we do not meet the continued listing standards, we could be delisted. We cannot assure you that an active trading market will develop or, if developed, will be maintained. As a result, our stockholders may find it difficult to dispose of shares of our common stock and, as a result, may suffer a loss of all or a substantial portion of their investment.

The market price of our common stock may fluctuate and may drop below the price you paid.

We cannot assure you that you will be able to resell the shares of our common stock at or above your purchase price. The market price of our common stock may fluctuate significantly in response to a number of factors, some of which are beyond our control. These factors include:

- quarterly variations in operating results;
- the progress or perceived progress of our research and development efforts;
- changes in accounting treatments or principles;

- announcements by us or our competitors of new technology, product and service offerings, significant contracts, acquisitions or strategic relationships;
- additions or departures of key personnel;
- future offerings or resales of our common stock or other securities;
- stock market price and volume fluctuations of publicly-traded companies in general and development companies in particular; and
- general political, economic and market conditions.

For example, during the quarter ended March 31, 2010, our common stock traded between $0.25 per share and $0.51 per share.

Because we do not intend to pay, and have not paid, any cash dividends on our shares of common stock, our stockholders will not be able to receive a return on their shares unless the value of our common stock appreciates and they sell their shares.

We have never paid or declared any cash dividends on our common stock and we intend to retain any future earnings to finance the development and expansion of our business. We do not anticipate paying any cash dividends on our common stock in the foreseeable future. Therefore, our stockholders will not be able to receive a return on their investment unless the value of our common stock appreciates and they sell their shares.

Our stockholders may experience substantial dilution as a result of the conversion of outstanding convertible debentures, the conversion of preferred stock, the exercise of options and warrants to purchase our common stock, or due to anti-dilution provisions relating to any on the foregoing.

As of March 31, 2010, we have outstanding warrants to purchase 19,130,793 shares of our common stock. In addition, as of March 31, 2010, we have reserved 10,212,884 shares of our common stock for issuance upon the exercise of options granted or available to be granted pursuant to our stock option plan, all of which may be granted in the future. The exercise of these options and warrants will result in dilution to our existing stockholders and could have a material adverse effect on our stock price. In addition, any shares issued in connection with the Stanford financing and recent private placement of convertible preferred stock, as further discussed elsewhere in this Form 10-Q, can also have a dilutive effect and a possible material adverse effect on our stock price. The conversion price of certain warrants are also subject to certain anti-dilution adjustments. The agreement with Stanford, which is now held by certain members of our board of directors, provides for the potential issuance of up to a total of 31,888,888 shares of our common stock, of which 8,333,333 shares are included in outstanding warrants noted above. We may also need to issue additional shares as a result of anti-dilution provisions related to the convertible preferred stock.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

Private Placement of Convertible Preferred Stock and Warrants

Preferred Stock

On March 26, 2010, we entered into two Purchase Agreements, also referred to herein as the Non-Affiliate Purchase Agreements, between us and certain non-affiliated investors who are a party thereto, also referred to herein as the Non-Affiliated Investors. On March 26, 2010, we also entered into a third Purchase Agreement, also referred to herein as the Affiliate Purchase Agreement, between us and certain affiliated investors. Collectively the Non-Affiliate Purchase Agreements and Affiliate Purchase Agreement shall be referred to herein as the "Purchase Agreements" and collectively the Non-Affiliated Investors and Affiliated Investors shall be referred to herein as the "Investors". The respective Purchase Agreements contain substantially similar terms. It is anticipated that the offering will bring gross proceeds to us in the amount of approximately $11,497,000 and net proceeds to us in the amount of approximately $10,800,000. On April 1, 2010, we closed on the aggregate gross proceeds of $10,297,000. The remaining $1,200,000 of gross proceeds cannot be closed upon until we receive stockholder approval for the transaction.

Pursuant to the Non-Affiliate Purchase Agreements, on April 1, 2010, we closed and issued to the Non-Affiliated Purchasers, in a private placement, an aggregate of 10,297 shares of our 10% Series A Convertible Preferred Stock, par value $0.01 per share, also referred to herein as the Series A Preferred Stock, initially convertible into approximately 32,178,125 shares of our common stock, also referred to herein as the Common Stock, and (ii) immediately exercisable warrants to purchase up to approximately 32,178,125 shares of Common Stock for an aggregate gross proceeds of $10,297,000.

Pursuant to the Affiliate Purchase Agreement, we agreed to issue to the Affiliate Purchasers, in a private placement, an aggregate of approximately 1,200 shares of our 10% Series B Convertible Preferred Stock, par value $0.01 per share, also referred to herein as the Series B Preferred Stock, initially convertible into approximately 3,750,000 shares of our common stock, and (ii) immediately exercisable warrants to purchase up to approximately 3,750,000 shares of Common Stock for an aggregate offering price of approximately $1,200,000. The Series B Preferred Stock will only be issued after we receive stockholder approval. Collectively, the Series A Preferred Stock and Series B Preferred Stock shall be referred to herein as the "Preferred Stock".

Each share of Preferred Stock has a stated value of $1,000, also referred to herein as the Stated Value. Each holder of shares of Preferred Stock is entitled to receive semi-annually dividends at the rate of 10% per annum of the Stated Value for each share of Preferred Stock held by such holder. Except in limited circumstances, we can elect to pay the dividends in cash or shares of Common Stock. If the dividends are paid in shares of Common Stock, such shares will be priced at the lower of 90% of the average VWAP for the 20 days immediately preceding the payment date or $0.224. The dividends are subject to a 30% make whole provision.

The shares of Preferred Stock are convertible into shares of Common Stock at an initial conversion price of $0.32 per share and are convertible at any time, provided that the conversion of shares of Series A Preferred Stock into shares of Common Stock is subject to a 19.99% blocker provision, which provision will expire if the stockholders approve the offering at the Stockholders' Meeting. The conversion price is subject to adjustment if we sell or grant any common stock or common stock equivalents, subject to certain exclusions, at an effective price per share that is lower than the conversion price of the Preferred Stock. After 18 months from the date of issuance of the Preferred Stock, if our Common Stock trades above $0.80 for 20 out of 30 consecutive trading days, the Preferred Stock will no longer be subject to adjustment.

We may force conversion of the Preferred Stock if our Common Stock trades above $0.80 for 20 out of 30 consecutive trading days and there is an effective registration statement for the underlying Common Stock or such underlying Common Stock is freely tradable under rule 144.

In connection with the offering, we have agreed to solicit shareholder approval of (i) the ability of the Investors to convert the Securities into common stock, which in the aggregate exceed 20% of our currently outstanding shares of common stock and (ii) the issuance of the Securities to the Affiliated Investors pursuant to the terms and conditions of the Affiliate Purchase Agreement at a stockholders' meeting to be held on May 25, 2010, also referred to herein as the Stockholders' Meeting.

We anticipate that we will close on the offering with the Affiliate Purchasers as soon as reasonably possible after the receipt of stockholder approval at the Shareholders' Meeting.

Warrants

Pursuant to the Purchase Agreements, we delivered a Series A Warrant to the Non-Affiliate Investors and will deliver, upon shareholder approval, a Series B Warrant to the Affiliate Investors, also referred to herein as the Warrants. Each Warrant has an initial exercise price of $0.35 per share of Common Stock. The Warrants are immediately exercisable and have a five year term. The Series A Warrants are subject to a 19.99% blocker provision to comply with NYSE Amex Rules, which provisions will expire if the stockholders approve the offering at the Stockholders' Meeting. The Series B Warrants do not contain a blocker, as they will be issued only after we receive stockholder approval to issue such warrants. The Series A Warrants also contain an provision which limits the holders beneficial ownership to a maximum of 4.99% (which percentage may be increased to 9.99% upon 60 days notice to us).

Registration Rights Agreement

We also entered into a Registration Rights Agreement by and among us and the Non-Affiliate Investors only, also referred to herein as the Registration Rights Agreement. The Affiliate Investors are not a party to the Registration Rights Agreement. Pursuant to the Registration Rights Agreement, we agreed to file a registration statement, also referred to herein as the Registration Statement, with the Securities and Exchange Commission within, except for certain limited exceptions, 30 days of closing the offering, also referred to herein as the Filing Deadline, to register the shares of Common Stock issuable upon conversion or exercise of the shares of Series A Preferred Stock and the Warrants, as the case may be, also referred to herein collectively, as the Underlying Shares. In the event we did not file the Registration Statement on or before the Filing Deadline, we would have been required to pay liquidated damages in an amount equal to 1% of the aggregate amount purchase price paid by the holder for any unregistered securities then held by such Investor up to a maximum of 3%. We filed such registration statement on April 23, 2010. We must file additional registration statements until all of the securities may be sold pursuant to an effective registration statement or the securities become eligible for sale under Rule 144 of the Securities Act of 1933, as amended.

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Placement Agent Warrants

In connection with the Non-Affiliate Purchase Agreement and as partial compensation for its placement agent services related to such Non-Affiliate Purchase Agreement, we issued to Ladenburg Thalmann & Co. (which acted as exclusive placement agent for a portion of the offering represented by such Non-Affiliate Purchase Agreement) a warrant initially exercisable to purchase up to approximately 929,688 shares of Common Stock at an exercise price of $0.35 per share of Common Stock.

Additional Warrant

We also issued a warrant initially exercisable to purchase up to approximately 150,000 shares of Common Stock at an exercise price of $0.35 per share of Common Stock to Midtown Partners & Co. LLC as part of a tail coverage fee in connection with the offering.

We expect to use the net proceeds from the offering for general corporate purposes.

Item 3. Defaults Upon Senior Securities

None

Item 4. [RESERVED]

Item 5. Other Information

None

Item 6. Exhibits.

Exhibits.

Exhibit No.	Description
3.1	Certificate of Designations to the Company's Certificate of Incorporation (Series A) (Filed as exhibit 3.1 to Form 8-K filed on March 29, 2010)
3.2	Certificate of Designations to the Company's Certificate of Incorporation (Series B) (Filed as exhibit 3.2 to Form 8-K filed on March 29, 2010)
4.1	Form of Series A Common Stock Purchase Warrant (Filed as exhibit 4.1 to Form 8-K filed on March 29, 2010)
4.2	Form of Series B Common Stock Purchase Warrant (Filed as exhibit 4.2 to Form 8-K filed on March 29, 2010)
10.1	Credit Agreement dated as of February 17, 2010 by and between Senesco Technologies, Inc. and JMP Securities (filed herewith)
10.2	Letter Agreement dated as of March 3, 2010 by and between the Company and YA Global Investments L.P. (Filed as exhibit 10.1 to Form 8-K filed on March 4, 2010
10.3	Letter dated as of March 4, 2010 sent to the Company by certain of its insiders relating to the conversion of convertible debentures (Filed as exhibit 10.1 to Form 8-K filed on March 5, 2010)
10.4	Registration Rights Agreement dated March 26, 2010 by and between the Company and certain investors (Filed as exhibit 10.1 to Form 8-K filed on March 29, 2010)
10.5	Securities Purchase Agreement dated March 26, 2010 by and between the Company and certain investors (Non-Affiliates) (Filed as exhibit 10.2 to Form 8-K filed on March 29, 2010)
10.6	Securities Purchase Agreement dated March 26, 2010 by and between the Company and certain investors (Non-Affiliates) (Filed as exhibit 10.3 to Form 8-K filed on March 29, 2010)
10.7	Securities Purchase Agreement dated March 26, 2010 by and between the Company and certain investors thereto (Affiliates) (Filed as exhibit 10.4 to Form 8-K filed on March 29, 2010)

Exhibit No.	Description
31.1	Certification of principal executive officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. (filed herewith)
31.2	Certification of principal financial and accounting officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. (filed herewith)
32.1	Certification of principal executive officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. 1350. (furnished herewith)
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. (furnished 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: May 17, 2010	By:	/s/ Jack Van Hulst Jack Van Hulst, President and Chief Executive Officer (Principal Executive Officer)
DATE: May 17, 2010	By:	/s/ Joel Brooks Joel Brooks, Chief Financial Officer and Treasurer (Principal Financial and Accounting Officer)