SENESCO TECHNOLOGIES INC Form 424B3 February 14, 2014

Prospectus Supplement filed pursuant to Rule 424(b)(3)

Registration Statement Nos. 333-191785 and 333-192787

PROSPECTUS SUPPLEMENT NO. 1 DATED FEBRUARY 14, 2014

(To Prospectus Dated December 11, 2013)

SENESCO TECHNOLOGIES, INC.

This is a supplement ("Prospectus Supplement No. 1") to our prospectus, dated December 11, 2013 (the "Prospectus"), relating to the offer and sale of 180,000 units, consisting of, in the aggregate, 1,800,000 shares of our common stock, par value \$0.01 per share, Series A Warrants to purchase 1,800,000 shares of our common stock, Series B Warrants to purchase 1,800,000 shares of our common stock, Series C Warrants to purchase 1,800,000 shares of our common stock and up to 5,400,000 shares of common stock underlying the Series A Warrants, Series B Warrants and Series C Warrants, to purchasers in this offering.

This Prospectus Supplement No. 1 is not complete without, and may not be delivered or utilized except in connection with, the Prospectus, including any amendments or supplements thereto.

Quarterly Report on Form 10-Q for Fiscal Quarter Ended December 31, 2013

On February 14, 2014, we filed with the Securities and Exchange Commission a quarterly report on Form 10-Q for the fiscal quarter ended December 31, 2013. The quarterly report, as filed (but without the exhibits filed with the Form 10-Q), is set forth below.

The information contained in this Prospectus Supplement No. 1 supplements and supersedes, in relevant part, the information contained in the Prospectus, as amended and supplemented. This Prospectus Supplement No. 1 is incorporated by reference into, and should be read in conjunction with, the Prospectus, as amended and supplemented, and is not complete without, and may not be delivered or utilized except in connection with, the Prospectus, as amended and supplemented.

The Prospectus, together with Prospectus Supplement No. 1, constitutes the prospectus required to be delivered by Section 5(b) of the Securities Act of 1933, as amended, with respect to offers and sales of the securities as set forth in the Prospectus, as amended and supplemented. All references in the Prospectus to "this prospectus" are amended to read "this prospectus (as supplemented and amended)."

INVESTING IN OUR SECURITIES INVOLVES A HIGH DEGREE OF RISK. YOU SHOULD CONSIDER CAREFULLY THE <u>RISK FACTORS</u> BEGINNING ON PAGE 5 OF THE PROSPECTUS BEFORE PURCHASING ANY OF THE SECURITIES OFFERED.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR PASSED UPON THE ADEQUACY OR ACCURACY OF THIS PROSPECTUS SUPPLEMENT NO. 1. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this Prospectus Supplement No. 1 is dated February 14, 2014

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

FORM 10-Q

(Mark One) x QUARTERLY REPORT PURSUANT TO SECTIO EXCHANGE ACT OF 1934	N 13 OR 15(D) OF THE SECURITIES
For the quarterly period ended December 31, 201	3
or	
" TRANSITION REPORT PURSUANT TO SECTION EXCHANGE ACT OF 1934	N 13 OR 15(D) OF THE SECURITIES
For the transition period from to	
Commission File N	Jo. 001-31326
SENESCO TECHNO (Exact name of registrant as	
Delaware	84-1368850
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification No.)
721 Route 202/20	
Bridgewater, New (Address of principal e	=
(908) 864-	
(Registrant's telephone numb	ber, including area code)
Indicate by check mark whether the registrant: (1) has filed a the Securities Exchange Act of 1934 during the preceding 12 required to file such reports), and (2) has been subject to such	months (or for such shorter period that the registrant was
Yes: x	No: "
Indicate by check mark whether the registrant has submitted e any, every Interactive Data File required to be submitted and p (§232.405 of this chapter) during the preceding 12 months (or	posted pursuant to Rule 405 of Regulation S-T

to submit and post such files).

Yes: x

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 "

Non-accelerated filer " Smaller reporting company x

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

Yes: " No: x

5,042,275 shares of the issuer's common stock, par value \$0.01 per share, were outstanding as of January 31, 2014.

$\frac{\text{SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY}}{\text{TABLE OF CONTENTS}}$

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PART I. FINANCIAL INFORMATION.

Item 1. Financial Statements (Unaudited).

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

	Decer 2013		June 2013	·
ASSETS				
CURRENT ASSETS: Cash and cash equivalents Prepaid research supplies and expenses	\$	6,121,895 1,488,465	\$	1,602,294 1,919,220
Total Current Assets		7,610,360		3,521,514
Equipment, furniture and fixtures, net Intangible assets, net Security deposit		3,512 3,482,388 5,171		4,555 3,566,497 5,171
TOTAL ASSETS	\$	11,101,431	\$	7,097,737
LIABILITIES AND STOCKHOLDERS' EQUITY				
CURRENT LIABILITIES: Accounts payable Accrued expenses Line of credit	\$	477,628 616,903 2,187,082	\$	637,320 387,540 2,187,082
Total Current Liabilities		3,281,613		3,211,942
Other liabilities		99,728		99,728
TOTAL LIABILITIES		3,381,341		3,311,670
COMMITMENTS				
STOCKHOLDERS' EQUITY:				
Convertible preferred stock, \$0.01 par value, authorized 5,000,000 shares Series A 10,297 shares issued and 580 and 800 shares outstanding, respectively				
(liquidation preference of \$594,500 and \$820,000 at December 31, 2013 and June 30, 2013, respectively)		6		8
Common stock, \$0.01 par value, authorized 500,000,000 shares, issued and		49,573		22,721
outstanding4,957,275 and 2,272,062, respectively Capital in excess of par Deficit accumulated during the development stage		85,542,557 (77,872,046)		78,189,173 (74,425,835)

Total Stockholders' Equity	7,720,090	3,786,067
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	\$ 11,101,431	\$ 7,097,737

See Notes to Condensed Consolidated Financial Statements

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

	nree Months Er	d December 31 012	x Months Ende	December 31,	Aı	nmulative nounts from ception
Licensing Revenue	\$ -	\$ -	\$ 100,000	\$ -	\$	1,890,000
Operating expenses: General and administrative Research and development Write-off of patents abandoned	941,784 647,123	708,968 591,079	1,882,233 1,374,242 185,161	1,441,688 1,104,512		35,996,534 24,696,513 2,158,595
Total operating expenses	1,588,907	1,300,047	3,441,636	2,546,200		62,851,642
Loss from operations	(1,588,907)	(1,300,047)	(3,341,636)	(2,546,200)		(60,961,642)
Other non-operating income (expense)						
Grant income	-	-	-	-		244,479
Change in fair value of warrant liability	-	64,440	-	44,292		8,701,721
Sale of state income tax loss net	-	-	-	-		586,442
Other noncash (expense) income, net	-	-	-	-		205,390
Loss on settlement of warrant liabilities	-	-	-	(785,171)		(1,724,546)
Loss on extinguishment of debt			-	-		(361,877)
Amortization of debt discount and financing costs	-	-	-	-		(11,227,870)
Interest expense convertible notes	-	-	-	-		(2,027,930)

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Interest (expense) income - net	(30,731)	(34,278)	(62,335)	(68,260)	102,566
Net loss	(1,619,638)	(1,269,885)	(3,403,971)	(3,355,339)	(66,463,267)
Preferred dividends	(20,617)	(23,986)	(42,240)	(648,155)	(11,408,779)
Loss applicable to common shares	(1,640,255)	(1,293,871)	(3,446,211)	(4,003,494)	(77,872,046)
Other comprehensive loss	-	-	-	-	-
Comprehensive loss	\$ (1,640,255)	\$ (1,293,871)	\$ (3,446,211)	\$ (4,003,494)	\$ (77,872,046)
Basic and diluted net loss per common share	\$ (0.48)	\$ (1.11)	\$ (1.20)	\$ (3.57)	
Basic and diluted weighted-average number of common shares outstanding	3,443,109	1,169,753	2,875,517	1,122,123	

See Notes to Condensed Consolidated Financial Statements

SENESCO TECHNOLOGIES, INC. AND SUBSIDIARY (A DEVELOPMENT STAGE COMPANY) CONDENSED CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY FOR THE SIX MONTHS ENDED DECEMBER 31, 2013 (unaudited)

	Preferred	Stook	Common Stoc	J.	Capital in Exce	Deficit Accumulated During the esDevelopment Stage	Stockholders'
	Shares	Amount		Amount	of rai value	Stage	Equity
Balance at June 30, 2013	800	\$ 8	2,272,062	\$ 22,721	\$ 78,189,173	\$ (74,425,835)	\$ 3,786,067
Issuance of common stock for cash at \$2.50 per share on October 2, 2013	-	-	690,000	6,900	1,718,100	-	1,725,000
Commissions and other fees related to the issuance of common stock on October 2, 2013	-	-	-	-	(164,230)	-	(164,230)
Issuance of common stock and warrants for cash at \$3.00 per share on December 16, 2013	-	-	1,800,000	18,000	5,382,000	-	5,400,000
Commissions and other fees related to the issuance of common stock and warrants on December 16, 2013	-	-	-	-	(95,520)	-	(95,520)
Issuance of common stock in lieu of cash payment for services	-	-	108,750	1,088	364,400	-	365,488

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Stock-based compensation	-	-	-	-	101,769	-	101,769
Exercise of warrants	-	-	290	3	287	-	290
Preferred stock converted into common stock	(220)	(2)	73,333	733	(731)		-
Issuance of common stock in lieu of cash payment for dividends	-	-	12,940	129	47,611	(27,740)	20,000
Cash paid for fractional shares due to reverse split	-	-	(100)	(1)	(302)	-	(303)
Dividends accrued and upaid at December 31, 2013	-	-	-	-	-	(14,500)	(14,500)
Net loss	-	-	-	-	-	(3,403,971)	(3,403,971)
Balance July 1, 1998 (inception) through December 31, 2013	580	\$ 6	4,957,275	\$ 49,573 \$	8 85,542,557 \$	5 (77,872,046) \$	7,720,090

See Notes to Condensed Consolidated Financial Statements

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

	Six	Months Ended	Decen 201		Am	nulative ounts from eption
Cash flows from operating activities:						•
Net loss	\$	(3,403,971)	\$	(3,355,339)	\$	(66,463,267)
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				(44,292)		(9,022,980)
of warrant liability		-		(44,292)		(9,022,960)
Noncash charge for change in warrant terms		-		-		115,869
Issuance of common stock and warrants for interest		-		-		2,003,386
Issuance of common stock for services		-		-		53,800
Stock-based compensation expense		467,257		350,129		13,297,903
Depreciation and amortization		153,223		130,420		1,547,157
Write-off of intangibles		185,161		-		2,158,595
Amortization of convertible note discount		-		-		10,000,000
Amortization of deferred financing costs		-		-		1,227,869
Loss on settlement of warrant liabilities				785,171		1,724,546
Loss on extinguishment of debt		-		-		361,877
(Increase) decrease in operating assets:						
Prepaid expenses and other current assets		430,755		252,976		(1,488,465)
Security deposit		-		-		(5,171)
Increase (decrease) in operating liabilities:						
Accounts payable		(159,692)		491,115		477,628
Accrued expenses		234,863		187,951		777,404
Net cash used in operating activities		(2,092,404)		(1,201,869)		(43,017,420)
Cash flows from investing activities:						
Patent costs		(253,232)		(252,233)		(7,005,705)
Purchase of equipment, furniture and fixtures		-		(1,281)		(185,947)
Net cash used in investing activities		(253,232)		(253,514)		(7,191,652)
Cash flows from financing activities:						
Proceeds from grant		-		-		99,728
Proceeds (repayments) from line of credit		-		-		2,187,082
Proceeds from issuance of bridge notes		-		-		525,000
Proceeds from issuance of preferred stock and warrants net	5,	-		-		10,754,841
Redemption of convertible notes and warrants		_		_		(2,160,986)
Proceeds from issuance of convertible notes		_		_		9,340,000
Deferred financing costs		_		_		(651,781)
Proceeds from issuance of common stock and		-		_		
warrants, net and exercise of warrants and options		6,865,237		94,183		36,237,083

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Net cash provided by financing activities	6,865,237	94,183	56,330,967
Net (decrease) increase in cash and cash equivalents	4,519,601	(1,361,200)	6,121,895
Cash and cash equivalents at beginning of period Cash and cash equivalents at end of period	\$ 1,602,294 6,121,895	\$ 2,001,325 640,125	\$ - 6,121,895
Supplemental disclosure of non-cash transactions: Conversion of convertible note into common stock	\$ -	\$ -	\$ 10,000,000
Conversion of bridge notes into common stock Conversion of preferred stock into common stock	731	1,378	534,316 4,953
Allocation of preferred stock proceeds to warrants and beneficial conversion feature	-	-	8,526,135
Allocation of convertible debt proceeds to warrants and beneficial conversion feature	-	-	9,340,000
Warrants issued for financing costs Issuance of common stock for interest payments on	-	-	690,984
convertible notes	-	-	2,003,386
Issuance of common stock for dividend payments Issuance of common stock in settlement of accounts	47,739	496,862	4,261,003
payable	-	-	175,000
Dividends accrued on preferred stock Supplemental disclosure of cash flow information:	(14,500)	(89,598)	(14,500)
Cash paid for interest	64,351	69,776	558,488

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, 2013, as amended.

The Company's board of directors authorized a 1:100 reverse stock split on September 30, 2013, to take effect on October 21, 2013. All share and related option and warrant information presented in these financial statements and accompanying footnotes have been retroactively adjusted to reflect the reduced number of shares resulting from this action.

In the opinion of the Company's management, the accompanying unaudited condensed consolidated financial statements contain all adjustments, consisting solely of those which are of a normal recurring nature, necessary to present fairly its financial position as of December 31, 2013 and the results of its operations for the three months and six months ended December 31, 2013 and cash flows for the six months ended December 31, 2013.

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

Note 2 Liquidity:

As shown in the accompanying condensed consolidated financial statements, the Company has a history of losses with a deficit accumulated during the development stage from July 1, 1998 (inception) through December 31, 2013 of \$77,872,046. 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 December 31, 2013, the Company had cash and cash equivalents in the amount of \$6,121,895, which consisted of checking accounts and money market funds. The Company estimates that its cash and cash equivalents as of December 31, 2013 will cover its expenses through at least December 31, 2014.

The Company will need additional capital to expand its research program and plans to raise additional capital through the exercise of outstanding warrants, placement of debt instruments, equity instruments or any combination thereof. 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 Company incurred \$110,289 and \$106,516 of such costs for the three months ended December 31, 2013 and 2012, respectively. The Company incurred \$253,232 and \$252,233 of such costs for the six months ended December 31, 2013 and 2012, respectively.

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 December 31, 2013. 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 from inception, the expected economic life of the patent. During the three months ended December 31, 2013 and 2012, the Company recorded amortization expense in the amount of \$77,910 and \$66,203, respectively. During the six months ended December 31, 2013 and 2012, the Company recorded amortization expense in the amount of \$152,180 and \$129,128, respectively.

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 a triggering event occurs and the Company's review determines that the future discounted cash flows related to the groups, including 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. During the six months ended December 31, 2013, in order to reduce its cost of patent prosecution and maintenance, the Company reviewed its patent portfolio and identified several patents and patent applications that it believed it no longer needed to maintain without having a material impact on the patent portfolio. Accordingly, during the six months ended December 31, 2013, the Company wrote off patent costs in the net amount of \$185,161.

Note 4 - Loss Per Share:

Basic loss per share is computed by dividing net loss available to common shareholders by the weighted average number of the Company's Common Stock assumed to be outstanding during the period of computation. Diluted earnings per share is computed similar to basic earnings per share except that the denominator is increased to include the number of additional shares of Common Stock that would have been outstanding if the potential shares of Common Stock had been issued and if the additional shares of Common Stock were dilutive.

For all periods presented, basic and diluted loss per share are the same, as any additional Common Stock equivalents would be anti-dilutive. Potentially dilutive shares of Common Stock have been excluded from the calculation of the weighted average number of dilutive shares of Common Stock as follows:

	December 31, 2013	2012
Common stock to be issued upon		
conversion	232,000	38,269
of convertible preferred stock		
Outstanding warrants	5,682,661	318,973
Outstanding options	275,319	211,740
Total potentially dilutive shares of common stock	6,189,980	568,982

Note 5 Stock-Based Compensation:

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 or achievement of specified goals and milestones.

During the six months ended December 31, 2013, the Company issued 46,780 options that are subject to vesting first based upon specified goals and milestones and then based upon time-based conditions. On the issuance date, such options had an aggregate Black-Scholes value of \$201,154. As of December 31, 2013, the Company reviewed the specified goals and milestones on an employee by employee basis. Based upon the review, the Company has estimated that it was probable that, on average, the employees would achieve 62% of the target goals. As a result, the Company is recognizing 62% of the aggregate fair value of the options ratably over the time-based vesting period.

Also, during the six months ended December 31, 2013, the Company issued an additional 27,300 options that are subject to time-based conditions only. On the issuance date, such options had an aggregate Black-Scholes value of \$111,210.

The fair value of each stock option 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 include the following:

	Three Months	S	Six Months					
	Ended December 31, 2013							
Risk-free interest rate (1)	1.75-2.66	%	1.65-2.66	%				
Expected volatility	99	%	99	%				
Dividend yield	None		None					
Expected life (2)	6.25-10.0		5.5-10.0					

- (1) Represents the interest rate on a U.S. Treasury security with a maturity date corresponding to that of the option term.
- (2) Expected life for time based stock options was estimated using the "simplified" method, as allowed under the provisions of the Securities and Exchange Commission Staff Accounting Bulletin No.110. Expected life for performance based stock options was the actual term of the option.

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

Stock option activity under the Company's 2008 Plan and 1998 Plan for the six months ended December 31, 2013 is summarized as follows:

			V	Veigh	ted			
	Aggre	gate	Average		Exe	Exercise Price		
	Numb	er	E	Exerci	se Price	Rai	nge	
Outstanding, July 1, 2013		231,748	\$;	35.00		\$ 4.30	345.00
Granted		74,080			5.39		4.00 - 5.4	40
Exercised		-			-		-	
Forfeited		(27,788)			16.50		16.50	
Expired		(2,721)			255.88		66.00 - 3	15.00
Outstanding, December 31, 2013		275,319	\$	}	26.98		\$ 4.30 - 3	345.00
Options exercisable at December 31, 2013		196,822	\$,	33.97			
Options exercisable and expected to become exercisable at December 31, 2013		262,795						
Weighted average fair value of options granted during the three months ended December 31, 2013	\$	4.22						

As of December 31, 2013, the aggregate intrinsic value of stock options outstanding was \$73,848, with a weighted-average remaining term of 7.7 years. The aggregate intrinsic value of stock options exercisable at that same date was \$35,957, with a weighted-average remaining term of 7.1 years. As of December 31, 2013, the Company has 657 shares available for future stock option grants.

Stock-based compensation expense for the three months ended December 31, 2013 and December 31, 2012 amounted to \$342,791 and \$196,567, respectively.

Stock-based compensation expense for the six months ended December 31, 2013 and December 31, 2013 amounted to \$467,257 and \$350,129, respectively.

As of December 31, 2013, total stock-based compensation expense not yet recognized related to stock option grants amounted to approximately \$691,000, which will be recognized over the next 45 months.

Note 6 Line of Credit:

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"). In April 2011, we were required to enter into a new demand note with the clearing agent for JMP Securities in connection with the Line of Credit.

Any draws upon the Line of Credit accrue at an annual interest rate of (i) the broker rate in effect at the interest date (which was 3.75% at December 31, 2013), plus (ii) 2.0% and are due on demand. 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 a member of the Company's Board of Directors, Harlan W. Waksal, M.D., which assets are currently held by JMP Securities. The principal balance outstanding as of December 31, 2013 and June 30, 2013 was \$2,187,082.

Total interest expense recorded under the Line of Credit for the three months ended December 31, 2013 and 2012 amounted to \$32,153 and \$34,786, respectively.

Total interest expense recorded under the Line of Credit for the six months ended December 31, 2013 and 2012 amounted to \$64,350 and \$69,776, respectively.

Note 7 Income Taxes:

No provision for income taxes has been made for the three months and six months ended December 31, 2013 and 2012 given the Company's losses in 2013 and 2012 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 8 - Fair Value Measurements:

The following tables provide the assets and liabilities carried at fair value measured on a recurring basis as of December 31, 2013 and June 30, 2013:

	Carry	ring	Fair Value Measurement at December 31, 2013							
	Value		Leve	el 1	Level 2		Level 3			
Assets: Cash and cash equivalents	\$	6,121,895	\$	6,121,895	\$	-	\$	-		
	Carrying Value		Fair Value Measureme Level 1		ent at June 30, 2013 Level 2		Level 3			
Assets: Cash and cash equivalents	\$	1,602,294	\$	1,602,294	\$	-	\$	-		

Note 9 Convertible Preferred Stock

During the six months ended December 31, 2013, 220 shares of Convertible Preferred Stock were converted into 73,333 shares of Common Stock. During the six months ended December 31, 2013, the Company issued an additional 12,941 shares of Common Stock for the payment of dividends in the amount of \$42,239. Total dividends payable on the outstanding 580 shares of Convertible Preferred Stock at December 31, 2013 amounted to \$14,500.

As a result of the issuance of Common Stock on October 2, 2013, the conversion rate on the Convertible Preferred Stock was adjusted from \$3.00 to \$2.50.

Note 10 Equity Placements

October 2, 2013

On October 2, 2013, the Company completed a Common Stock offering for \$1,725,000 in gross proceeds, before deducting estimated offering expenses, in a registered direct offering of 690,000 shares of the Company's Common Stock. Each Share was sold at a price of \$2.50 per share. The Shares were sold pursuant to the Registration Statement in the form of a unit, at \$5.00 per unit, with each unit consisting of 2 shares of Common Stock.

The net offering proceeds to the Company from the sale of the Common Stock, after deducting the offering expenses payable by the Company of \$164,230, were \$1,560,770. The net proceeds of the offering will be used for working capital, research and development and general corporate purposes.

December 16, 2013

On December 16, 2013, the Company completed a Common Stock and Warrant offering for \$5,400,000 in gross proceeds, before deducting estimated offering expenses, in a registered direct offering of 180,000 units consisting of ten shares of common stock, par value \$0.01 per share, of the Company's Common Stock, six month warrants to purchase ten shares of Common Stock at an exercise price of \$3 per share, six month warrants to purchase ten shares of Common Stock at an exercise price of \$4 per share, and three year warrants to purchase ten shares of Common Stock at an exercise price of \$4 per share.

The net offering proceeds to the Company from the sale of the units, after deducting the estimated offering expenses payable by the Company of approximately \$95,000, are expected to be approximately \$5,305,000. The net proceeds of the offering will be used for working capital, research and development and general corporate purposes.

Note 11 Recent Accounting Pronouncements

We reviewed recently issued accounting pronouncements and plan to adopt those that are applicable to us. We do not expect the adoption of these pronouncements to have a material impact on our financial position, results of operations or cash flows.

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 "Risk Factors" 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 technology related to certain genes, primarily eukaryotic translation initiation Factor 5A, or Factor 5A, and deoxyhypusine synthase, or DHS, and related technologies for human therapeutic applications to develop novel approaches to treat cancer and inflammatory diseases.

For agricultural applications, we have licensed applications of the Factor 5A, DHS and Lipase platforms to enhance the quality, productivity and stress resistance of fruits, flowers, vegetables, agronomic and biofuel feedstock crops through the control of cell death, referred to herein as senescence, and growth in plants.

Human Therapeutic Applications

We believe that our Factor 5A gene regulatory technology could have broad applicability in the human therapeutic field, by either inducing or inhibiting programmed cell death, also known as apoptosis, which is the natural process the human body goes through in order to eliminate redundant or defective cells. Inducing apoptosis is useful in treating cancer where the defective cancer cells have failed to respond to the body's natural apoptotic signals. Conversely, inhibiting apoptosis may be useful in preventing, ameliorating or treating an exaggerated, acute immune response in a wide range of inflammatory and ischemic diseases attributable to or aggravated by premature apoptosis.

SNS01-T for Multiple Myeloma

We have developed a therapeutic candidate, SNS01-T, an improved formulation of SNS01, for the potential treatment of multiple myeloma and non-Hodgkin B-cell lymphomas. SNS01-T utilizes our Factor 5A technology and comprises two active components: a DNA plasmid, or pDNA, expressing human eIF5A containing a lysine to arginine substitution at amino acid position 50, or eIF5AK50R, and a small inhibitory RNA, or siRNA. These two components are combined in a fixed ratio with a polymer, polyethyleneimine, or PEI, which enables self-assembly of the DNA and RNA into nanoparticles with demonstrated enhanced delivery to tissues and protection from degradation in the blood stream. Under the control of a malignant B cell selective promoter, SNS01-T's DNA plasmid up-regulates the apoptotic pathways within B cells by preferentially expressing the stable arginine form of the Factor 5A death message in target cells. The siRNA, by down-regulating the eIF5A gene, reduces accumulation of the hypusine form of Factor 5A that supports cell survival and proliferation. The down-regulation of the eIF5A gene by an eIF5A siRNA also down-regulates anti-apoptotic proteins, such as NF-kB, ICAM and pro-inflammatory cytokines, which protect malignant cells from apoptosis and promote cell growth in multiple myeloma. The PEI, a cationic polymer, promotes auto-assembly of a nanoparticle with the other two components for intravenous delivery and protects the combination from degradation in the bloodstream until it is taken up by the tumor cell, where the siRNA and DNA plasmid are released.

We have performed efficacy, toxicological and dose-finding studies *in vitro* in non-human and human cells and *in vivo* in mice with SNS01. We have also completed our pivotal GLP toxicology studies in mice and dogs, employing SNS01-T, an improved formulation of SNS01, and have an open investigational new drug application, or IND, with the United States Food and Drug Administration, or FDA.

We have also been granted orphan drug status for SNS01-T by the FDA for the potential treatment of multiple myeloma, mantle cell lymphoma (MCL) and diffuse large B-cell lymphoma (DLBCL) and are conducting a Phase 1b/2a clinical study with SNS01-T in patients with those indications. The clinical study is an open-label, multiple-dose, dose-escalation study, which is evaluating the safety and tolerability of SNS01-T when administered by intravenous infusion to relapsed or refractory patients. The study design calls for four cohorts of three to six patients each. Patients in each cohort will receive twice-weekly dosing for six weeks followed by up to a four-week safety data review period before escalating to a higher dose level in the next cohort.

While the primary objective of this study is to evaluate safety and tolerability, the effect of SNS01-T on tumor response and time to relapse or progression will be assessed using multiple well-established metrics including measurement of monoclonal protein in multiple myeloma and CT imaging in MCL and DLBCL .

We have selected Mayo Clinic, University of Arkansas for Medical Sciences, the Randolph Cancer Center at West Virginia University, the Fred Hutchinson Cancer Research Center and the John Theurer Cancer Center at Hackensack University Medical Center as our clinical sites. We are also considering adding additional sites to increase the rate of enrollment.

The study is open and we have completed our first, second and the third cohorts and cohort four is open for enrollment and treating patients.

The results of cohort three showed that four heavily pre-treated, relapsed or refractory patients, two with diffuse large B-cell lymphoma (DLBCL) and two with multiple myeloma, at a dosage of 0.2 mg/Kg, completed treatment. Three of the four patients were evaluable for safety. One patient had a dose reduction to 0.05 mg/kg due to pre-existing thrombocytopenia and was not evaluable for safety. No dose-limiting toxicities have been observed in any of the first three cohorts. In addition to the absence of dose-limiting toxicity, since all patients in cohort 3 completed the full protocol-specified 6-week treatment period, we appear to be seeing longer treatment durations and fewer dropouts compared to cohorts one and two. The most frequent adverse events were manageable infusion reactions, which decrease with repeated treatments and platelet count decreases, which recover over time. One myeloma patient had reductions in disease-related proteins in his blood and a second patient with DLBCL had evidence of tumor shrinkage in some lesions. Like the previous treatment group, all four patients included at this dose level were refractory to, or had relapsed on, a significant number of previous treatments. Upon treatment with SNS01-T, three of the four patients exhibited stable disease at week 3 and two of the four were stable at week 6, the end of treatment.

The results of the first and second cohorts showed that SNS01-T was safe and well tolerated and had met the criteria for Stable Disease in 2 of the 6 evaluable patients.

SNS01-T used in combination with other drugs

We have demonstrated that the combination of lenalidomide and SNS01-T performs better than either treatment alone in mouse xenograft models of human mantle cell lymphoma. When SCID mice, implanted with an aggressive human mantle cell lymphoma cell line (JVM2), were treated with either 15 mg/kg lenalidomide (5 times weekly by intra-peritoneal injection) or 0.375 mg/kg SNS01-T (twice weekly by intravenous injection) there was a growth delay of 4 days and 14 days, respectively. Mice treated with a combination of both drugs using the same dose levels and dosing regimens exhibited a tumor growth delay of 27 days (p value = 0.0008).

The median survival of mice treated with control nanoparticles was 21 days. Mice treated with lenalidomide or SNS01-T had a median survival of 28 days (33 % increase) and 37 days (76 % increase), respectively. Mice treated with the drug combination had a median survival of 52 days, an increase in survival of 148 %. Survival analysis using the Kaplan-Meier method revealed that treatment of mice with the drug combination resulted in statistically significant increases in survival compared to both SNS01-T (p value = 0.002) and lenalidomide (p value = 0.007) alone. We believe that the results of these studies not only support moving forward in multiple myeloma, but also support extending our clinical evaluation of SNS01-T in other B-cell cancers.

We may consider other human diseases in order to determine the role of Factor 5A and SNS01-T. We may further expand our research and development program beyond the initiatives listed above to include other diseases and research centers.

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.

We have licensed this technology to various strategic partners. We may continue to license this technology, as opportunities present themselves, to additional strategic partners and/or enter into joint collaborations or ventures.

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

- further develop and implement the DHS and Factor 5A gene technology in banana, canola, cotton, turfgrass, 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 Development and License Agreements

As of December 31, 2013, we had six (6) active license agreements with established agricultural biotechnology companies.

Intellectual Property

We have thirty (30) issued patents from the United States Patent and Trademark Office, or PTO, and seventy-four (74) issued patents from foreign countries. Of our one hundred and four (104) domestic and foreign issued patents, sixty-four (64) are for the use of our technology in agricultural applications and forty (40) relate to human therapeutics applications.

In addition to our one hundred and four (104) 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.

The first of our agricultural patents are set to expire in 2019 in the United States and 2025 outside the United States. The first of our core human therapeutic technology patents are set to expire in 2021 in the United States and 2025 outside the United States, and our patents related to multiple myeloma are set to expire, both in and outside the United States in 2029.

During the six months ended December 31, 2013 and the 2013, 2012 and 2011 fiscal years, we reviewed our patent portfolio in order to determine if we could reduce our cost of patent prosecution and maintenance. We identified several patents and patents pending that we believe we no longer need to maintain without having a material impact on the portfolio. We determined that we would no longer incur the cost to prosecute or maintain those patents or patents pending.

Liquidity and Capital Resources

Overview

For the six months ended December 31, 2013, net cash of \$2,092,404 was used in operating activities primarily due to a net loss of \$3,403,971 which was reduced by non-cash expenses of \$805,641. Cash used in operating activities was increased by changes in operating assets and liabilities in the amount of \$505,926.

The \$505,926 change in operating assets and liabilities was the result of an increase in prepaid research supplies and expenses in the amount of \$430,755 and an increase in accounts payable and accrued expenses in the amount of \$75,171 due to the timing of expenses and payments.

During the six months ended December 31, 2013, cash used for investing activities amounted to \$253,232, which was related to patent costs incurred.

Cash provided by financing activities during the six months ended December 31, 2013 amounted to \$6,865,237 as a result of the issuance of common stock and warrants.

As of December 31, 2013, our cash balance totaled \$6,121,895, and we had working capital of \$4,328,747.

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.

We anticipate that, based upon our cash balance at December 31, 2013, we will be able to fund our operations through at least December 31, 2014. Over such period, we plan to fund our research and development and commercialization activities by:

- · utilizing our current cash balance and investments;
- · the exercise of outstanding warrants;
- the placement of additional equity or debt instruments; 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 on favorable terms, if at all.

Changes to Critical Accounting Policies and Estimates

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, 2013.

Results of Operations

Three Months Ended December 31, 2013 and Three Months Ended December 31, 2012

The net loss for the three months ended December 31, 2013 was \$1,619,638. The net loss for the three months ended December 31, 2012 was \$1,269,885. Such a change represents an increase in net loss of \$349,753, or 27.5%. This increase in net loss was primarily the result of an increase in general and administrative expenses, which was partially offset by a decrease in the gain from a change in the fair value of a warrant liability.

Revenue

There was no revenue during the three months ended December 31, 2013 and 2012.

We may receive future milestone payments in connection with our current agricultural development and license agreements. Additionally, we may receive future 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 our future milestone payments are primarily contingent on our partners successful implementation of their development plan, we have no history of receiving royalties and the timing and outcome of our experiments, the timing of signing new partner agreements and the timing of our partners moving through the development process into commercialization is difficult to accurately predict.

General and Administrative Expenses

	Three Months Ended December 31,								
	20	13	20	12	Ch	ange	%		
(in thousands, except % values)									
Payroll and benefits	\$	149	\$	147	\$	2		1.3	%
Investor relations		146		16		130		821.5	%
Professional fees		96		237		(141)		(59.4)	%
Cash Director fees		6		14		(8)		(57.1)	%
Depreciation and amortization		78		67					