

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

FORM 10-Q

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

For the Quarterly Period Ended June 30, 2017

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

For the Transition Period From _____ to _____

Commission File Number: 001-36338

22nd Century Group, Inc.

(Exact name of registrant as specified in its charter)

Nevada

(State or other jurisdiction
of incorporation)

98-0468420

(IRS Employer
Identification No.)

9530 Main Street, Clarence, New York 14031

(Address of principal executive offices)

(716) 270-1523

(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 preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes 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, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer

Non-accelerated filer Smaller reporting company

(Do not check if smaller reporting company) Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

As of August 9, 2017, there were 102,760,340 shares of common stock issued and outstanding.

22nd CENTURY GROUP, INC.

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22nd CENTURY GROUP, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
June 30, 2017 with Comparative Figures at December 31, 2016

	June 30, 2017	December 31, 2016
	(unaudited)	
ASSETS		
Current assets:		
Cash	\$ 12,482,774	\$ 13,468,188
Accounts receivable, net	717,919	40,992
Inventory, net	4,288,017	3,092,686
Prepaid expenses and other assets	550,937	195,569
Total current assets	<u>18,039,647</u>	<u>16,797,435</u>
Machinery and equipment, net	2,271,789	2,434,663
Other assets:		
Intangible assets, net	7,443,777	7,389,946
Investment	1,366,493	1,020,313
Total other assets	<u>8,810,270</u>	<u>8,410,259</u>
Total assets	<u>\$ 29,121,706</u>	<u>\$ 27,642,357</u>
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Current portion of note payable	\$ 320,554	\$ 307,938
Accounts payable	2,268,652	1,340,156
Accrued expenses	1,407,638	1,401,566
Accrued severance	90,101	199,657
Total current liabilities	<u>4,086,945</u>	<u>3,249,317</u>
Warrant liability	<u>141,608</u>	<u>58,681</u>
Total liabilities	4,228,553	3,307,998
Commitments and contingencies (Note 13)	-	-
Shareholders' equity		
Capital stock authorized:		
10,000,000 preferred shares, \$.00001 par value		
300,000,000 common shares, \$.00001 par value		
Capital stock issued and outstanding:		
97,015,911 common shares (90,698,113 at December 31, 2016)	970	907
Capital in excess of par value	109,007,539	102,471,907
Accumulated deficit	(84,115,356)	(78,138,455)
Total shareholders' equity	<u>24,893,153</u>	<u>24,334,359</u>
Total liabilities and shareholders' equity	<u>\$ 29,121,706</u>	<u>\$ 27,642,357</u>

See accompanying notes to consolidated financial statements.

22nd CENTURY GROUP, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
Three Months Ended June 30,
(unaudited)

	<u>2017</u>	<u>2016</u>
Revenue:		
Sale of products, net	\$ 3,897,206	\$ 2,827,658
Cost of goods sold (exclusive of depreciation shown separately below):		
Products	4,062,261	2,968,571
Gross loss	(165,055)	(140,913)
Operating expenses:		
Research and development (including equity based compensation of \$18,250 and \$38,225, respectively)	813,287	509,928
General and administrative (including equity based compensation of \$105,277 and \$176,747, respectively)	1,805,118	1,721,775
Sales and marketing costs (including equity based compensation of \$30,477 and \$5,250, respectively)	267,591	251,106
Depreciation	88,464	81,067
Amortization	143,010	126,041
	<u>3,117,470</u>	<u>2,689,917</u>
Operating loss	(3,282,525)	(2,830,830)
Other income (expense):		
Warrant liability loss - net	(77,583)	(9,468)
Loss on investment	-	(54,839)
Interest income	12,125	2,105
Interest expense	(7,641)	(9,322)
	<u>(73,099)</u>	<u>(71,524)</u>
Loss before income taxes	(3,355,624)	(2,902,354)
Income taxes	-	-
Net loss	\$ (3,355,624)	\$ (2,902,354)
Loss per common share - basic and diluted	\$ (0.04)	\$ (0.04)
Common shares used in basic and diluted earnings per share calculation	<u>91,577,688</u>	<u>76,024,064</u>

See accompanying notes to consolidated financial statements.

22nd CENTURY GROUP, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
Six Months Ended June 30,
(unaudited)

	<u>2017</u>	<u>2016</u>
Revenue:		
Sale of products, net	\$ 6,128,723	\$ 5,846,714
Cost of goods sold (exclusive of depreciation shown separately below):		
Products	6,567,675	5,863,981
Gross loss	(438,952)	(17,267)
Operating expenses:		
Research and development (including equity based compensation of \$32,200 and \$83,281, respectively)	1,364,138	1,107,319
General and administrative (including equity based compensation of \$233,726 and \$402,922, respectively)	3,425,597	3,568,382
Sales and marketing costs (including equity based compensation of \$57,057 and \$16,886, respectively)	563,304	953,720
Depreciation	176,585	161,664
Amortization	283,898	250,882
	<u>5,813,522</u>	<u>6,041,967</u>
Operating loss	(6,252,474)	(6,059,234)
Other income (expense):		
Warrant liability (loss) gain - net	(82,927)	61,597
Gain (loss) on investment	346,180	(142,071)
Interest income	27,880	4,598
Interest expense	(15,560)	(19,696)
	<u>275,573</u>	<u>(95,572)</u>
Loss before income taxes	(5,976,901)	(6,154,806)
Income taxes	-	-
Net loss	\$ (5,976,901)	\$ (6,154,806)
Loss per common share - basic and diluted	<u>\$ (0.07)</u>	<u>\$ (0.08)</u>
Common shares used in basic and diluted earnings per share calculation	<u>91,165,770</u>	<u>75,027,606</u>

See accompanying notes to consolidated financial statements.

22nd CENTURY GROUP, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY
Six Months Ended June 30, 2017
(unaudited)

	Common Shares Outstanding	Par value of Common Shares	Capital in Excess of Par Value	Accumulated Deficit	Shareholders' Equity
Balance at December 31, 2016	90,698,113	\$ 907	\$ 102,471,907	\$ (78,138,455)	\$ 24,334,359
Equity based compensation	-	-	322,983	-	322,983
Stock issued in connection with warrant exercises	6,283,205	63	6,212,649	-	6,212,712
Stock issued in connection with stock option exercises	34,593	-	-	-	-
Net loss	-	-	-	(5,976,901)	(5,976,901)
Balance at June 30, 2017	<u>97,015,911</u>	<u>\$ 970</u>	<u>\$ 109,007,539</u>	<u>\$ (84,115,356)</u>	<u>\$ 24,893,153</u>

See accompanying notes to consolidated financial statements.

22nd CENTURY GROUP, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
Six Months Ended June 30,
(unaudited)

	2017	2016
Cash flows from operating activities:		
Net loss	\$ (5,976,901)	\$ (6,154,806)
Adjustments to reconcile net loss to cash used in operating activities:		
Amortization and depreciation	411,472	363,535
Amortization of license fees	49,011	49,011
(Gain) loss on investment	(346,180)	142,071
Accretion of interest on note payable and accrued severance	15,560	19,696
Warrant liability loss (gain)	82,927	(61,597)
Equity based employee compensation expense	322,983	472,216
Equity based payments for outside services	-	30,873
Decrease in allowance for doubtful accounts	(10,000)	-
Increase in inventory reserve	95,000	-
Increase in assets:		
Accounts receivable	(666,927)	(54,499)
Inventory	(1,290,331)	(440,603)
Prepaid expenses and other assets	(355,368)	(98,146)
Increase (decrease) in liabilities:		
Accounts payable	754,236	112,862
Accrued expenses	(24,339)	(158,219)
Accrued severance	(112,500)	(112,501)
Net cash used in operating activities	(7,051,357)	(5,890,107)
Cash flows from investing activities:		
Acquisition of patents and trademarks	(133,059)	(101,004)
Acquisition of machinery and equipment	(13,710)	(20,596)
Net cash used in investing activities	(146,769)	(121,600)
Cash flows from financing activities:		
Net proceeds from exercise of warrants	6,212,712	196
Net proceeds from February 2016 registered direct offering	-	5,091,791
Net cash provided by financing activities	6,212,712	5,091,987
Net decrease in cash	(985,414)	(919,720)
Cash - beginning of period	13,468,188	3,760,297
Cash - end of period	\$ 12,482,774	\$ 2,840,577
Supplemental disclosures of cash flow information:		
Net cash paid for:		
Cash paid during the period for interest	\$ 2,943	\$ 19,696
Cash paid during the period for income taxes	\$ -	\$ -
Non-cash transactions:		
Patent and trademark additions included in accounts payable	\$ 174,258	\$ 171,215
Patent additions included in accrued expenses	\$ 30,411	\$ -
Reclassification of warrant liability to capital in excess of par due to voiding of exchange rights clause in Crede Tranche 1A warrant	\$ -	\$ 2,810,000

See accompanying notes to consolidated financial statements.

22nd CENTURY GROUP, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
June 30, 2017
(unaudited)

NOTE 1. - NATURE OF BUSINESS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation - The accompanying unaudited consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles (GAAP) for interim financial information and with the instructions to Form 10-Q. Accordingly, they do not include all of the information and footnotes required by GAAP for complete financial statements. In the opinion of management, all adjustments consisting of normal recurring accruals considered necessary for a fair and non-misleading presentation of the financial statements have been included.

Operating results for the six months ended June 30, 2017 are not necessarily indicative of the results that may be expected for the year ending December 31, 2017. The balance sheet as of December 31, 2016 has been derived from the audited consolidated financial statements at that date, but does not include all the information and footnotes required by GAAP for complete financial statements.

These interim consolidated financial statements should be read in conjunction with the December 31, 2016 audited consolidated financial statements and the notes thereto.

Principles of Consolidation - The accompanying consolidated financial statements include the accounts of 22nd Century Group, Inc. ("22nd Century Group"), its three wholly-owned subsidiaries, 22nd Century Limited, LLC ("22nd Century Ltd"), NASCO Products, LLC ("NASCO"), and Botanical Genetics, LLC ("Botanical Genetics"), and two wholly-owned subsidiaries of 22nd Century Ltd, Goodrich Tobacco Company, LLC ("Goodrich Tobacco") and Heracles Pharmaceuticals, LLC ("Heracles Pharma") (collectively, "the Company"). All intercompany accounts and transactions have been eliminated.

Nature of Business - 22nd Century Ltd is a plant biotechnology company specializing in technology that allows (i) for the level of nicotine and other nicotinic alkaloids in tobacco plants to be decreased or increased through genetic engineering and plant breeding and (ii) the levels of cannabinoids in cannabis/hemp plants to be decreased or increased through genetic engineering and plant breeding. Goodrich Tobacco and Heracles Pharma are business units for the Company's (i) premium cigarettes and potential modified risk tobacco products and (ii) smoking cessation product, respectively. The Company acquired the membership interests of NASCO on August 29, 2014. NASCO is a federally licensed tobacco products manufacturer, a participating member of the tobacco Master Settlement Agreement ("MSA") between the tobacco industry and the settling states under the MSA, and operates the Company's cigarette manufacturing business in North Carolina. Botanical Genetics is a wholly-owned subsidiary of 22nd Century Group, and was incorporated to facilitate an equity investment more fully described in Note 9.

Preferred stock authorized - The Company is authorized to issue "blank check" preferred stock, which could be issued with voting, liquidation, dividend and other rights superior to our common stock.

Accounts receivable - The Company periodically reviews aged account balances for collectability. At June 30, 2017 and December 31, 2016, the Company established an allowance for doubtful accounts in the amount of \$0 and \$10,000, respectively.

Inventory - Inventories are valued at the lower of cost or market. Cost is determined using an average cost method for tobacco leaf inventory and raw materials inventory and standard cost is primarily used for finished goods inventory. Inventories are evaluated to determine whether any amounts are not recoverable based on slow moving or obsolete condition and are written off or reserved as appropriate. Inventories at June 30, 2017 and December 31, 2016 consisted of the following:

	June 30, 2017	December 31, 2016
Inventory - tobacco leaf	\$ 1,881,233	\$ 1,936,039
Inventory - finished goods		
Cigarettes and filtered cigars	756,186	340,523
Inventory - raw materials		
Cigarette and filtered cigar components	2,001,221	1,071,747
	<u>4,638,640</u>	<u>3,348,309</u>
Less: inventory reserve	350,623	255,623
	<u>\$ 4,288,017</u>	<u>\$ 3,092,686</u>

Machinery and equipment - Machinery and equipment are recorded at their acquisition cost and depreciated on a straight-line basis over their estimated useful lives ranging from 3 to 10 years. Depreciation commences when the asset is placed in service.

Intangible Assets - Intangible assets are recorded at cost and consist primarily of (1) expenditures incurred with third parties related to the processing of patent claims and trademarks with government authorities, as well as costs to acquire patent rights from third parties, (2) license fees paid for third-party intellectual property, (3) costs to become a signatory under the tobacco MSA, and (4) license fees paid to acquire a predicate cigarette brand. The amounts capitalized relate to intellectual property that the Company owns or to which it has exclusive rights. The Company's intellectual property capitalized costs are amortized using the straight-line method over the remaining statutory life of the primary patent in each of the Company's two primary groupings of patent families, which expire in 2018 and 2028 (the assets' estimated lives, respectively). Periodic maintenance or renewal fees are expensed as incurred. Annual minimum license fees are charged to expense. License fees paid for third-party intellectual property are amortized on a straight-line basis over the last to expire patents, which patent expiration dates range from 2028 through 2035. The Company believes costs associated with becoming a signatory to the MSA and acquiring a predicate cigarette brand have an indefinite life and as such, no amortization is taken. Total intangible assets at June 30, 2017 and December 31, 2016 consisted of the following:

	June 30, 2017	December 31, 2016
Intangible assets, net		
Patent and trademark costs	\$ 6,026,169	\$ 5,688,440
Less: accumulated amortization	2,256,813	2,021,926
Patent and trademark costs, net	<u>3,769,356</u>	<u>3,666,514</u>
License fees, net (see Note 13)	1,450,000	1,450,000
Less: accumulated amortization	277,580	228,568
License fees, net	<u>1,172,420</u>	<u>1,221,432</u>
MSA signatory costs	2,202,000	2,202,000
License fee for predicate cigarette brand	<u>300,000</u>	<u>300,000</u>
	<u>\$ 7,443,777</u>	<u>\$ 7,389,946</u>

Amortization expense relating to the above intangible assets for the three and six months ended June 30, 2017 amounted to \$143,010 and \$283,898, respectively (\$126,041 and \$250,882 for the three and six months ended June 30, 2016, respectively).

The estimated annual average amortization expense for the next five years is approximately \$387,000 for patent costs and \$98,000 for license fees.

Impairment of Long-Lived Assets - The Company reviews the carrying value of its amortizing long-lived assets whenever events or changes in circumstances indicate that the historical cost-carrying value of an asset may no longer be recoverable. The Company assesses recoverability of the asset by estimating the future undiscounted net cash flows expected to result from the asset, including eventual disposition. If the estimated future undiscounted net cash flows are less than the carrying value of the asset, an impairment loss is recorded equal to the difference between the asset's carrying value and its fair value. There was no impairment loss recorded during the six months ended June 30, 2017 or 2016.

Income Taxes - The Company recognizes deferred tax assets and liabilities for any basis differences in its assets and liabilities between tax and GAAP reporting, and for operating loss and credit carry-forwards.

Considering the Company's history of cumulative net operating losses and the uncertainty of their future utilization, the Company has established a valuation allowance to fully offset its net deferred tax assets as of June 30, 2017 and December 31, 2016.

The Company's federal and state tax returns for the years ended December 31, 2013 through December 31, 2015 are currently open to audit under the statutes of limitations. There were no pending audits as of June 30, 2017.

Stock Based Compensation - The Company uses a fair-value based method to determine compensation for all arrangements under which Company employees and others receive shares or options to purchase common shares of the Company. Stock based compensation expense is recorded over the requisite service period based on estimates of probability and time of achieving milestones and vesting. For accounting purposes, the shares will be considered issued and outstanding upon vesting.

Revenue Recognition - The Company recognizes revenue from product sales at the point the product is shipped to a customer and title has transferred. Revenue from the sale of the Company's products is recognized net of cash discounts, sales returns and allowances. Cigarette and filtered cigar federal excise taxes and other regulatory fees in the approximate amount of \$1,985,000 and \$3,544,000 are included in net sales for the three and six months ended June 30, 2017, respectively (approximately \$1,842,000 and \$3,577,000 for the three and six months ended June 30, 2016, respectively), except on sales of *SPECTRUM* research cigarettes, exported cigarettes and exported filtered cigars and in-bond sales of filtered cigars to other federally licensed tobacco products manufacturers, to which such taxes do not apply.

The Company was chosen to be a subcontractor for a 5-year government contract between RTI International ("RTI") and the National Institute on Drug Abuse ("NIDA") to supply NIDA with research cigarettes. The contract was renewed in 2015 for an additional 5 years. These government research cigarettes are distributed under the Company's mark *SPECTRUM*. There were no *SPECTRUM* research cigarettes delivered during the six months ended June 30, 2017. Revenue generated from the sale of *SPECTRUM* research cigarettes amounted to \$0 and \$329,321 for the six months ended June 30, 2017 and 2016, respectively. In May 2017, the Company received a purchase order from RTI for approximately 2.4 million *SPECTRUM* research cigarettes.

Derivatives - The Company does not use derivative instruments to hedge exposures to cash flow, market or foreign currency risks. The Company evaluates all our financial instruments to determine if such instruments are derivatives or contain features that qualify as embedded derivatives. For derivative financial instruments that are accounted for as liabilities, the derivative instrument is initially recorded at its fair market value and then is revalued at each reporting date, with changes in fair value reported in the Consolidated Statements of Operations. The methodology for valuing our outstanding warrants classified as derivative instruments utilizes a lattice model, which includes probability weighted estimates of future events, including volatility of our common stock. The classification of derivative instruments, including whether such instruments should be recorded as liabilities or equity, is evaluated at the end of each reporting period. Derivative instrument liabilities are classified on the balance sheet as current or non-current based on if the net-cash settlement of the derivative instrument could be required within twelve months of the balance sheet date.

Research and Development - Research and development costs are expensed as incurred.

Advertising - The Company expenses advertising costs as incurred. Advertising expense was approximately \$12,000 and \$43,000 for the three and six months ended June 30, 2017, respectively (\$27,000 and \$235,000 for the three and six months ended June 30, 2016, respectively).

Loss Per Common Share - Basic loss per common share is computed using the weighted-average number of common shares outstanding. Diluted loss per share is computed assuming conversion of all potentially dilutive securities. Potential common shares outstanding are excluded from the computation if their effect is anti-dilutive.

Commitment and Contingency Accounting - The Company evaluates each commitment and/or contingency in accordance with accounting standards, which state that if the item is more likely than not to become a direct liability, then the Company will record the liability in the financial statements. If not, the Company will disclose any material commitments or contingencies that may arise.

Use of Estimates - The preparation of financial statements in conformity with accounting principles generally accepted in the U.S. requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of income and expenses during the reporting period. Actual results could differ from those estimates.

Fair Value of Financial Instruments - Financial instruments include cash, receivables, accounts payable, accrued expenses, accrued severance, note payable and warrant liability. Other than warrant liability, fair value is assumed to approximate carrying values for these financial instruments, since they are short term in nature, they are receivable or payable on demand, or had stated interest rates that approximate the interest rates available to the Company as of the reporting date. The determination of the fair value of the warrant liability includes unobservable inputs and is therefore categorized as a Level 3 measurement, as further discussed in Note 12.

Equity Investments - The Company accounts for investments in equity securities of other entities under the equity method of accounting if the Company's investment in the voting stock is greater than or equal to 20% and less than a majority, and the Company has the ability to have significant influence over the operating and financial policies of the investee. When the Company's investment in equity securities falls below 20% and the Company does not have the ability to have significant influence over the operating and financial policies of the investee, the Company carries the equity investment at its cost basis.

Accounting Pronouncements - In May 2014, the Financial Accounting Standards Board ("FASB") issued ASU 2014-09, "Revenue from Contracts with Customers," which supersedes nearly all existing revenue recognition guidance under GAAP. The core principle of ASU 2014-09 is to recognize revenue when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. ASU 2014-09 defines a five-step process to achieve this core principle and, in doing so, more judgment and estimates may be required within the revenue recognition process than are required under existing GAAP. The revised effective date for the ASU is for annual periods beginning after December 15, 2017, and interim periods therein, using either of the following transition methods: (i) a full retrospective approach reflecting the application of the standard in each prior reporting period with the option to elect certain practical expedients, or (ii) a retrospective approach with the cumulative effect of initially adopting ASU 2014-09 recognized at the date of adoption (which includes additional footnote disclosures). In August 2015, the FASB issued ASU 2015-14, "Revenue from Contracts with Customers (Topic 606) - Deferral of the Effective Date," which deferred the effective date of ASU 2014-09 to annual reporting periods beginning after December 15, 2017, with earlier application permitted as of annual reporting periods beginning after December 15, 2016. In March 2016, the FASB issued ASU No. 2016-08, "Revenue from Contracts with Customers (Topic 606) - Principal versus Agent Considerations," to clarify the implementation guidance on principal versus agent. In April 2016, the FASB issued ASU No. 2016-10, "Revenue from Contracts with Customers (Topic 606) - Identifying Performance Obligations and Licensing," which clarifies the identifying performance obligations and licensing implementation guidance. The Company is evaluating the implementation of the applicable revenue recognition ASU's for annual reporting periods beginning after December 15, 2017. As a result of this potential implementation, the Company may exclude certain federal excise taxes and other regulatory fees from revenue and the cost of goods sold.

In February 2016, the FASB issued ASU 2016-02, "Leases," which supersedes existing lease guidance under GAAP. Under the new guidance, lessees will be required to recognize leases as right of use assets and liabilities for leases with lease terms of more than twelve months. The guidance will apply for both finance and operating leases. The effective date for the ASU is for annual periods beginning after December 15, 2018 and interim periods therein. The Company is currently evaluating the impact of the ASU on its consolidated financial statements.

NOTE 2. – JUNE 2017 WARRANT EXERCISE AGREEMENTS

On June 19, 2017, the Company entered into Warrant Exercise Agreements (the “Agreements”) with all of the holders (the “Holders”) of outstanding warrants to purchase up to 7,043,211 shares of common stock of the Company at \$1.00 per share and warrants to purchase up to 4,250,000 shares of common stock of the Company at \$1.45 per share (collectively, the “Warrants”). These Warrants to purchase shares of the Company’s common stock were acquired by the Holders in registered direct offerings in October of 2016 and in July of 2016, respectively, as more fully described in Notes 3 and 4 below. The Company and the Holders agreed that the Holders would, subject to beneficial ownership limitations on exercise contained in the Warrants, exercise all the Warrants for cash. In June 2017, the Holders exercised 3,229,711 Warrants at \$1.00 per share and 2,354,948 Warrants at \$1.45 per share, resulting in net proceeds to the Company in the amount of \$6,169,212, after deducting expenses associated with the transaction.

In consideration for the Holders exercising their Warrants for cash, the Company issued to each Holder a new warrant (the “New Warrants”) to purchase shares of common stock of the Company equal to the number of shares of common stock received by each Holder upon the cash exercise of the Holder’s Warrants. The terms of the New Warrants are substantially similar to the terms of the Warrants exercised, except the New Warrants (i) have an exercise price equal to \$2.15 per share and (ii) are exercisable six months from the date of issuance of the New Warrants for a period of five (5) years. Accordingly, the Company issued 5,584,659 New Warrants to the Holders on June 20, 2017, upon exercise of the Holder’s Warrants as described above. The New Warrants had a fair value of \$6,913,808 at issuance and have been recorded as an adjustment to capital in excess of par. As described in Note 16, additional Warrants were exercised in July and August of 2017 for cash, for a total of 5,708,552 Warrants exercised, generating net proceeds of \$6,167,646, and the Company issued 5,708,552 New Warrants.

NOTE 3. – OCTOBER 2016 REGISTERED DIRECT OFFERING

On October 19, 2016, the Company closed a registered direct offering with two institutional investors of units consisting of 8,500,000 shares of the Company’s common stock and warrants to purchase 4,250,000 shares of the Company’s common stock at an exercise price of \$1.45 per share. The warrants were exercisable for a period of sixty-six (66) months after issuance, were not exercisable for a period of six months immediately following the issuance and had a fair value of approximately \$3,380,000 at issuance. The holders of the warrants did not have the right to exercise any portion of the warrants if the holders, together with its respective affiliates, would beneficially own in excess of 4.99% of the number of shares of the Company’s common stock (including securities convertible into common stock) outstanding immediately after the exercise; provided, however, that the holder could increase or decrease this limitation at any time, although any increase shall not be effective until the 61st day following the notice of increase and the holder could not increase this limitation in excess of 9.99%. The common stock and warrants were sold for \$1.3425 per unit, resulting in net proceeds to the Company in the amount of \$10,707,823, after deducting expenses associated with the transaction. As of August 7, 2017, no such warrants remained outstanding.

NOTE 4. – JULY 2016 REGISTERED DIRECT OFFERING

On July 27, 2016, the Company closed a registered direct offering of common stock and warrants consisting of 6,172,840 shares of the Company’s common stock and warrants to purchase 7,043,211 shares of the Company’s common stock. The warrants provide for an exercise price of \$1.00 per share and 1,543,210 of the warrants were exercisable immediately and had a fair value of approximately \$858,000 at issuance and 5,500,001 of the warrants were exercisable six months from the date of issuance and had a fair value of approximately \$3,058,000 at issuance. All the warrants had a term of 5.5 years. The common stock and warrants were sold for \$0.81 per unit, resulting in net proceeds to the Company in the amount of \$4,682,764, after deducting expenses associated with the transaction. As of August 7, 2017, no such warrants remained outstanding. In addition, on July 27, 2016, the Company terminated an aggregate of 5.5 million warrants with exercise prices of \$1.21 and \$1.25 per share previously issued in conjunction with registered direct offerings in February of 2016 and June of 2015.

NOTE 5. - FEBRUARY 2016 REGISTERED DIRECT OFFERING

On February 5, 2016, the Company closed a registered direct offering of common stock and warrants consisting of 5,000,000 shares of the Company's common stock and warrants to purchase 2,500,000 shares of the Company's common stock at an exercise price of \$1.21 per share. The warrants were exercisable for a period of sixty-six (66) months after issuance, were not exercisable for a period of six months immediately following the issuance and had a fair value of approximately \$1,940,000 at issuance. The common stock and warrants were sold for \$1.10 per unit, resulting in net proceeds to the Company in the amount of \$5,091,791, after deducting expenses associated with the transaction. The warrants associated with this transaction were terminated on July 27, 2016.

NOTE 6. - JOINT VENTURE, CONSULTING AGREEMENT AND ASSOCIATED WARRANTS

On June 22, 2015, the Company terminated its joint venture arrangement with Crede CG III, Ltd. ("Crede") and a third-party due to non-performance and other breaches of the arrangement by Crede and its principals. The Company also notified Crede that the Company reserved and did not waive any rights that the Company may have to assert any and all claims that it may have against Crede, its employees, agents, representatives or affiliates thereof, which are allowable by law or in equity, including claims for breach of the warrant agreements entered into with Crede.

The six-month Consulting Agreement (the "Consulting Agreement"), entered into with Crede on September 29, 2014, expired on March 29, 2015. The value of the warrants issued in conjunction with the Consulting Agreement in the aggregate amount of \$4,070,000 and initially recorded as prepaid consulting fees have been fully amortized. The final amortization of the prepaid consulting fees amounted to \$1,978,785 for the three months ended March 31, 2015, and were included in General and administrative expenses in the Company's Consolidated Statements of Operations.

Four tranches of warrants were issued to Crede in conjunction with the Consulting Agreement as follows: Tranche 1A warrant to purchase 1,250,000 shares of Company common stock, Tranche 1B warrant to purchase 1,000,000 shares of Company common stock, Tranche 2 warrant to purchase 1,000,000 shares of Company common stock and Tranche 3 warrant to purchase 1,000,000 shares of Company common stock. The Tranche 1A warrant contained an exchange rights clause that required derivative liability treatment under FASB ASC 480 - "Distinguishing Liabilities from Equity." The Company valued the derivative liability associated with the Tranche 1A warrant at inception at \$2,810,000 and the liability was recorded on the Company's Consolidated Balance Sheets in Warrant liability. In March 2016, the Company provided notice to Crede that Crede repeatedly breached the activity restrictions contained in the warrants and because the terms of the Tranche 1A warrant provide that the availability of the exchange feature was subject to compliance with such activity restrictions, the exchange rights clause contained in the Tranche 1A warrant was no longer available and was thereafter void (although the remaining amount of shares underlying the warrant without the exchange feature remained fully exercisable at \$3.36 per share through the warrant expiration date of September 29, 2016). Accordingly, the Company reclassified the warrant liability associated with the Tranche 1A warrant to Capital in excess of par on its Consolidated Balance Sheets during March 2016. The Tranche 1A and Tranche 1B warrants all expired without exercise on September 29, 2016.

The Tranche 2 and Tranche 3 warrants were not exercisable unless and until certain revenue milestones were attained, as defined in the prior joint venture agreement between Crede and the Company. As stated above, the Company terminated the joint venture agreement on June 22, 2015. Accordingly, such revenue milestones will never be satisfied and the Tranche 2 and Tranche 3 warrants will never be exercisable.

NOTE 7. - MANUFACTURING FACILITY

The Company's manufacturing operations at its North Carolina factory were not at full production capacity during the six months ended June 30, 2017. However, in mid-May of 2017, the Company began manufacturing an existing brand of filtered cigars under a new contract manufacturing agreement (the "New Agreement") with a third-party, continued manufacturing a third-party MSA cigarette brand, other filtered cigars on a contract basis and the Company's own proprietary cigarette brand, *RED SUN*. The New Agreement is expected to increase revenue, utilize a significant amount of excess production capacity, require additional personnel and require an increase in working capital resources. Raw material component costs, direct manufacturing costs, and an overhead allocation are included in the Cost of goods sold and Finished goods inventory. General and administrative expenses of the factory amounted to \$215,941 and \$334,691 for the three and six months ended June 30, 2017, respectively (\$146,669 and \$281,936 for the three and six months ended June 30, 2016, respectively).

NOTE 8. - MACHINERY AND EQUIPMENT

Machinery and equipment at June 30, 2017 and December 31, 2016 consisted of the following:

	Useful Life	June 30, 2017	December 31, 2016
Cigarette manufacturing equipment	3 - 10 years	\$ 3,193,580	\$ 3,193,580
Office furniture, fixtures and equipment	5 years	104,538	103,945
Laboratory equipment	5 years	32,194	19,076
		3,330,312	3,316,601
Less: accumulated depreciation		1,058,523	881,938
Machinery and equipment, net		\$ 2,271,789	\$ 2,434,663

Depreciation expense was \$88,464 and \$176,585 for the three and six months ended June 30, 2017, respectively (\$81,067 and \$161,664 for the three and six months ended June 30, 2016, respectively).

NOTE 9. - INVESTMENT IN ANANDIA

The Company (through its wholly-owned subsidiary, Botanical Genetics) used the equity method of accounting to record its 24.4% ownership interest in Anandia Laboratories, Inc., a Canadian plant biotechnology company ("Anandia"). The Company's ownership was 25% prior to a dilutive event on September 8, 2016, that reduced the Company's ownership in Anandia to 24.4%. On February 17, 2017, an additional dilutive event (the "Dilutive Event") reduced the Company's ownership in Anandia to 19.4%, an ownership percentage below the 20% threshold for the use of the equity method of accounting. Accordingly, the Company discontinued applying the equity method of accounting for the investment in Anandia, effective on the date of the Dilutive Event. At June 30, 2017 and December 31, 2016, the Company's investment balance in Anandia was \$1,366,493 and \$1,020,313, respectively, and is classified within Other assets on the accompanying Consolidated Balance Sheets. After the Dilutive Event, the Company accounts for its investment in Anandia under the cost method.

The Company has recorded a gain on investment of \$0 and \$16,872 for the three and six months ended June 30, 2017, respectively, and a loss of \$40,427 and \$113,247 for the three and six months ended June 30, 2016, respectively (the gain for the six months ended June 30, 2017, reflects the Company's proportionate gain through the Dilutive Event). As of September 15, 2014, the carrying value of the Company's investment in Anandia was approximately \$1,199,000 in excess of the Company's share of the book value of the net assets of Anandia, with such difference being attributable to intangible assets. This intangible asset was being amortized over the expected benefit period and this amortization expense amounted to \$0 and 7,526 for the three and six months ended June 30, 2017, respectively (\$14,412 and \$28,824 for the three and six months ended June 30, 2016, respectively). After the Dilutive Event, the Company discontinued amortizing this intangible asset. In addition, and as a result of the Dilutive Event, the Company recorded a gain in accordance with the derecognition provisions of Accounting Standards Codification 323 ("ASC 323"). ASC 323 states that an investor (the Company) shall account for an issuance by an investee (Anandia) as if the investor had sold a proportionate share if its investment in the investee and the investor will record a gain or loss resulting from the investee share issuance. As such, the Company recorded a gain of \$336,834 during the three months ended March 31, 2017, as a result of the Dilutive Event. The Company's gain (loss) on the investment when aggregating the Company's share of Anandia's gain (loss), the intangible asset amortization and the gain recorded under ASC 323 amounted to \$0 and \$346,180 for the three and six months ended June 30, 2017, respectively, and amounted to (\$54,839) and (\$142,071) for the three and six months ended June 30, 2016, respectively.

NOTE 10. - NOTES PAYABLE AND PATENT ACQUISITION

On December 22, 2014, the Company entered into a Purchase Agreement (the "Purchase Agreement") with the National Research Council of Canada ("NRC") to acquire certain patent rights that the Company had previously licensed from NRC under a license agreement between the parties. The Purchase Agreement provided for payment by the Company to NRC for the NRC patent rights a total amount of \$1,213,000, of which \$213,000 was paid in cash at the closing on December 23, 2014, and with the remaining \$1,000,000 balance to be paid in three equal installments of \$333,333 in December of 2015, 2016 and 2017, respectively, with no interest on the installment payments unless the Company defaults on any such installment payments. As such, the Company computed the present value of the note payable using the Company's incremental borrowing rate. The resulting present value of the note payable amounted to \$925,730 at December 31, 2014. After the scheduled installment payment of \$333,333 made by the Company to NRC on December 22, 2016 and 2015, and the accretion of interest, the remaining present value of the note payable amounts to \$320,554 and \$307,938 at June 30, 2017 and December 31, 2016, respectively, and the amounts are reported as Current portion of note payable on the Company's Consolidated Balance Sheets. The cost of the acquired patents in the amount of \$1,138,730 (cash of \$213,000 plus the original discounted notes payable in the amount of \$925,730) are included in Intangible assets, net on the Company's Consolidated Balance Sheets. All previous license agreements between NRC and the Company were terminated as a condition of the Purchase Agreement. NRC has a security interest in these patent rights acquired by the Company from NRC until the note payable has been satisfied.

NOTE 11. - SEVERANCE LIABILITY

The Company recorded an accrual for severance during the fourth quarter of 2014 in the initial amount of \$624,320 in accordance with FASB ASC 712 - "Compensation - Nonretirement Postemployment Benefits." The severance accrual relates to the October 25, 2014 termination of Joseph Pandolfino, the Company's former Chairman of the Board and Chief Executive Officer. The prior Employment Agreement with Mr. Pandolfino provided that in certain circumstances Mr. Pandolfino would receive severance payments in the gross amount of \$18,750 per month, subject to customary withholdings, over a term of 36 months. Amounts owed to Mr. Pandolfino have been discounted using the Company's incremental borrowing rate. As a result of the severance benefit payments made through the second quarter of 2017, the discounted current balance of the severance liability amounted to \$90,101 and \$199,657, at June 30, 2017 and December 31, 2016, respectively.

NOTE 12. - WARRANTS FOR COMMON STOCK

At June 30, 2017, the Company had outstanding warrants to purchase 12,445,247 shares of common stock of the Company, of which warrants to purchase 94,721 shares contain an anti-dilution feature and excluding 2,000,000 Tranche 2 and 3 warrants that will never become exercisable, as discussed in Note 6.

During the second quarter of 2017, warrants to purchase 843,110 shares of common stock were exercised on a cashless basis resulting in the issuance of 525,118 shares of the Company's common stock and 5,657,159 warrants to purchase shares of common stock were exercised on a cash basis (including 5,584,659 warrants to purchase shares of common stock under the Warrant Exercise Agreements discussed in Note 2). On May 15, 2017, warrants to purchase 45,834 shares of common stock expired without being exercised. As discussed in Note 16, subsequent to June 30, 2017, an additional 5,708,552 warrants were exercised.

During June of 2017, the Company issued warrants to purchase 5,584,659 shares of common stock with an exercise price of \$2.15 per share. These warrants have a term of sixty-six (66) months, were not exercisable for six months immediately following the date of issuance, do not contain an anti-dilution feature and had a fair value of \$6,913,808 at issuance. As discussed in Note 16, subsequent to June 30, 2017, the Company issued an additional 5,708,552 warrants as a result of a cash exercise of existing warrants. See Note 2 for additional details.

During March of 2017, warrants to purchase 202,500 shares of common stock were exercised on a cashless basis resulting in the issuance of 100,928 shares of the Company's common stock. On February 8, 2017, warrants to purchase 172,730 shares of common stock expired without being exercised.

On January 25, 2016, warrants to purchase 67,042 shares of common stock were exercised, primarily on a cashless basis, resulting in the issuance of 2,618 shares of the Company's common stock. On January 25, 2016, warrants to purchase 6,831,115 shares of common stock expired without being exercised.

Pursuant to the registered direct offering that closed on October 19, 2016, and discussed in Note 3, the Company issued warrants to purchase 4,250,000 shares of common stock with an exercise price of \$1.45 per share. These warrants had a term of sixty-six (66) months, were not exercisable for six months immediately following the date of issuance, did not contain an anti-dilution feature, and had a fair value of approximately \$3,380,000 at issuance. Pursuant to the Warrant Exercise Agreements, as discussed in Note 2, warrants to purchase 2,354,948 shares of common stock were exercised on a cash basis at an exercise price of \$1.45 per share and, as discussed in Note 16, an aggregate of 1,895,052 warrants were exercised in July and August of 2017.

Pursuant to the registered direct offering that closed on July 27, 2016, and discussed in Note 4, the Company issued warrants to purchase 7,043,211 shares of common stock. The warrants provide for an exercise price of \$1.00 per share and 1,543,210 of the warrants were exercisable immediately and had a fair value of approximately \$858,000 at issuance and 5,500,001 of the warrants were exercisable six months from the date of issuance and had a fair value of approximately \$3,058,000 at issuance. All the warrants had a term of 5.5 years and do not contain an anti-dilution feature. In addition, on July 27, 2016, the Company terminated an aggregate of 5.5 million warrants with exercise prices of \$1.21 and \$1.25 per share previously issued in conjunction with registered direct offerings in February of 2016 and June of 2015. Pursuant to the June 2017 Warrant Exercise Agreements, as discussed in Note 2, warrants to purchase 3,229,711 shares of common stock were exercised on a cash basis at an exercise price of \$1.00 per share and, as discussed in Note 16, an aggregate of 3,813,500 warrants were exercised in July and August of 2017.

Pursuant to the registered direct offering that closed on February 5, 2016, and discussed in Note 5, the Company issued warrants to purchase 2,500,000 shares of common stock with an exercise price of \$1.21 per share. These warrants had a term of sixty-six (66) months, were not exercisable for six months immediately following the date of issuance, did not contain an anti-dilution feature, and had a fair value of approximately \$1,940,000 at issuance. The warrants associated with this transaction were terminated on July 27, 2016 (see Note 4 – July 2016 Registered Direct Offering for additional information).

Pursuant to the registered direct offering that closed on June 2, 2015, the Company issued warrants to purchase 3,000,000 shares of common stock with an exercise price of \$1.25 per share. These warrants had a term of sixty-six (66) months, were not exercisable for six months immediately following the date of issuance, did not contain an anti-dilution feature, and had a fair value of approximately \$2,067,000 at issuance. The warrants associated with this transaction were terminated on July 27, 2016 (see Note 4 – July 2016 Registered Direct Offering for additional information).

Outstanding warrants at June 30, 2017 consisted of the following:

Warrant Description	Number of Warrants	Exercise Price	Expiration
December 2011 convertible NP warrants	802,215	\$ 1.3816	February 6, 2018
November 2012 PPO warrants	255,100	\$ 0.6000	November 9, 2017
August 2012 convertible NP warrants ⁽¹⁾	94,721	\$ 0.9310	August 8, 2018
July 2016 registered direct offering warrants ⁽²⁾	3,813,500	\$ 1.0000	January 27, 2021
October 2016 registered direct offering warrants ⁽²⁾	1,895,052	\$ 1.4500	April 19, 2022
June 2017 warrants pursuant to warrant exercise agreements ⁽³⁾	5,584,659	\$ 2.1500	December 20, 2022
Total warrants outstanding ⁽⁴⁾	<u>12,445,247</u>		

(1) Includes anti-dilution features.

(2) As of August 7, 2017, no such warrants were outstanding. See Note 16.

(3) As of August 7, 2017, after an aggregate of 5,708,552 additional warrants were issued in July and August of 2017, 11,293,211 of such warrants were outstanding. See Note 16.

(4) Excludes 2,000,000 Tranche 2 and 3 warrants that will never become exercisable, as discussed in Note 6.

The Company estimates the value of warrant liability upon issuance of the warrants and at each balance sheet date using the binomial lattice model to allocate total enterprise value to the warrants and other securities in the Company's capital structure. Volatility was estimated based on historical observed equity volatilities and implied (forward) or expected volatilities for a sample group of guideline companies and consideration of recent market trends.

As a result of the previously exercisable exchange rights contained in the Tranche 1A warrants, the financial instrument was previously considered a liability in accordance with FASB Accounting Standards Codification Topic 480 - "Distinguishing Liabilities from Equity" ("ASC 480"). More specifically, ASC 480 requires a financial instrument to be classified as a liability if such financial instrument contains a conditional obligation that the issuer must or may settle by issuing a variable number of its equity securities if, at inception, the monetary value of the obligation is based on a known fixed monetary amount. As a result of the actions by Crede that caused the exchange rights feature to be voided (see Note 6 - Joint Venture, Consulting Agreement and Associated Warrants for additional information), the Company reclassified the Tranche 1A warrant liability to Capital in excess of par.

The following table is a roll-forward summary of the warrant liability:

Fair value at December 31, 2015	\$ 2,898,296
Reclassification of warrant liability to capital in excess of par	(2,810,000)
Gain as a result of change in fair value	<u>(29,615)</u>
Fair value at December 31, 2016	58,681
Loss as a result of change in fair value	<u>82,927</u>
Fair value at June 30, 2017	<u><u>\$ 141,608</u></u>

The aggregate loss as a result of the Company's warrant liability for the three and six months ended June 30, 2017 amounted to (\$77,583) and (\$82,927), respectively (the aggregate net (loss) gain for the three and six months ended June 30, 2016 amounted to (\$9,468) and \$61,597, respectively), which are included in Other income (expense) under Warrant liability (loss) gain - net in the accompanying Consolidated Statements of Operations.

FASB ASC 820 - "Fair Value Measurements and Disclosures" establishes a valuation hierarchy for disclosure of the inputs to valuation used to measure fair value. This hierarchy prioritizes the inputs into three broad levels as follows:

- Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities;
- Level 2 inputs are quoted prices for similar assets and liabilities in active markets or inputs that are observable for the asset or liability, either directly or indirectly through market corroboration, for substantially the full term of the financial instrument; and
- Level 3 inputs are unobservable inputs based on the Company's own assumptions used to measure assets and liabilities at fair value.

A financial asset's or a financial liability's classification within the hierarchy is determined based on the lowest level input that is significant to the fair value measurement. The warrant liability is measured at fair value using certain estimated factors such as volatility and probability which are classified within Level 3 of the valuation hierarchy. Significant unobservable inputs that are used in the fair value measurement of the Company's derivative warrant liabilities include volatility. Significant increases (decreases) in the volatility input would result in a significantly higher (lower) fair value measurement.

The following table summarizes the Company's warrant activity since December 31, 2015:

	Number of Warrants
Warrants outstanding at December 31, 2015	16,634,778
Warrants issued in conjunction with registered direct offering	2,500,000
Unexercisable warrants ⁽¹⁾	(2,000,000)
Warrants exercised during January 2016	(67,042)
Warrants expired during January 2016	(6,831,115)
June 2015 registered direct offering warrants cancelled	(3,000,000)
February 2016 registered direct offering warrants cancelled	(2,500,000)
Warrants issued in conjunction with July 2016 registered direct offering	7,043,211
Additional warrants due to anti-dilution provisions	2,089
Warrants expired during September 2016 ⁽²⁾	(2,250,000)
Warrants issued in conjunction with October 2016 registered direct offering	4,250,000
Warrants outstanding at December 31, 2016	13,781,921
Warrants expired during February 2017	(172,730)
Warrants exercised during March 2017	(202,500)
Warrants exercised during April 2017	(162,000)
Warrants exercised during May 2017	(221,366)
Warrants expired during May 2017	(45,834)
Warrants exercised during June 2017	(6,116,903)
Warrants issued pursuant to June 2017 warrant exercise agreements	5,584,659
Warrants outstanding at June 30, 2017	<u>12,445,247</u>
Composition of outstanding warrants:	
Warrants containing anti-dilution feature	94,721
Warrants without anti-dilution feature	12,350,526
	<u>12,445,247</u>

NOTE 13. - COMMITMENTS AND CONTINGENCIES

License Agreements - Under its exclusive worldwide license agreement with North Carolina State University ("NCSU"), the Company is required to pay minimum annual royalty payments, which are credited against running royalties on sales of licensed products. The minimum annual royalty beginning in 2016 and for subsequent years is \$225,000. The license agreement continues through the life of the last-to-expire patent, which is expected to be 2022. The license agreement also requires a milestone payment of \$150,000 upon FDA approval or clearance of a product that uses the NCSU licensed technology. The Company is also responsible for reimbursing NCSU for actual third-party patent costs incurred. These costs vary from year to year and the Company has certain rights to direct the activities that result in these costs. During the three and six months ended June 30, 2017, the aggregate costs incurred related to capitalized patent costs and patent maintenance expense amounted to \$4,866 and \$31,709, respectively (\$10,016 and \$13,996 during the three and six months ended June 30, 2016, respectively).

On December 8, 2015, the Company entered into an additional license agreement (the "License") with NCSU. Under the terms of the License, the Company paid NCSU a non-refundable, non-creditable lump sum license fee of \$150,000. Additionally, the License calls for the Company to pay NCSU a non-refundable, non-creditable minimum annual royalties beginning on December 31, 2018 in the amount of \$10,000. The minimum annual royalty payment increases to \$15,000 in 2019, \$25,000 in 2020 and 2021, and \$50,000 per year thereafter for the remaining term of the License. The Company is also responsible for reimbursing NCSU for actual third-party patent costs incurred. During the three and six months ended June 30, 2017, the aggregate costs incurred related to capitalized patent costs and patent maintenance expense amounted to \$199 and \$29,866, respectively, (\$0 and \$6,075 for the three and six months ended June 30, 2016, respectively). This License continues through the life of the last-to-expire patent, expected to be in 2035.

On February 10, 2014, the Company entered into a sponsored research and development agreement (the “Agreement”) with NCSU. Under the terms of the Agreement, the Company paid NCSU \$162,408 over the two-year term of the Agreement, which grants certain licensed rights to the Company. The Company had extended the Agreement through January 31, 2017 at an additional cost of \$85,681. The Company is currently negotiating an additional extension to this Agreement.

All payments made under the above referenced license agreements and the sponsored research and development agreement are initially recorded as a Prepaid expense on the Company’s Consolidated Balance Sheets and subsequently expensed on a straight-line basis over the applicable period and included in Research and development costs on the Company’s Consolidated Statements of Operations. The amounts expensed during the three and six months ended June 30, 2017 were \$56,250 and \$119,640, respectively (\$115,170 and \$229,967 for the three and six months ended June 30, 2016, respectively).

On August 22, 2014, the Company entered into a Commercial License Agreement with Precision PlantSciences, Inc. (the “Precision License”). The Precision License grants the Company a non-exclusive, but fully paid up right and license to use technology and materials owned by Precision PlantSciences for a license fee of \$1,250,000. The Precision License continues through the life of the last-to-expire patent, which is expected to be in 2028.

On August 27, 2014, the Company entered into an additional exclusive License Agreement (the “License Agreement”) with NCSU. Under the License Agreement, the Company paid NCSU a non-refundable, non-creditable lump sum license fee of \$125,000, and the Company must pay to NCSU an additional non-refundable, non-creditable lump sum fee of \$75,000 upon issuance of a U.S. utility patent included in the patent rights. A patent was issued during the first quarter of 2017 under this clause, and accordingly, the \$75,000 was due and payable to NCSU. The \$75,000 cost was included in Research and development costs on the Company’s Consolidated Statements of Operations for the three months ended March 31, 2017. Additionally, the License Agreement calls for the Company to pay NCSU three non-refundable, non-creditable license maintenance fees in the amount of \$15,000 per annum in each of December 2015, 2016 and 2017. Beginning in calendar year 2018, the Company is obligated to pay to NCSU an annual minimum royalty fee of \$20,000 in 2018, \$30,000 in 2019, and \$50,000 per year thereafter for the remaining term of the License Agreement. The Company is also responsible for reimbursing NCSU for actual third-party patent costs incurred. During the three and six months ended June 30, 2017, the aggregated costs incurred related to capitalized patent costs and patent maintenance expense amounted to \$5,173 and \$24,242, respectively, (\$5,983 and \$33,939 for the three and six months June 30, 2016, respectively). The License Agreement continues through the life of the last-to-expire patent, which is expected to be in 2034.

On September 15, 2014, the Company entered into a Sublicense Agreement with Anandia Laboratories, Inc. (the “Anandia Sublicense”). Under the terms of the Anandia Sublicense, the Company was granted an exclusive sublicense in the United States and a co-exclusive sublicense in the remainder of the world, excluding Canada, to the licensed intellectual property. The Anandia Sublicense required an up-front fee of \$75,000, an annual license fee of \$10,000, the payment of patent filing and maintenance costs, and a running royalty on future net sales. The Anandia Sublicense continues through the life of the last-to-expire patent, which is expected to be in 2035.

The Precision License, the License Agreement with NCSU and the Anandia Sublicense are included in Intangible assets, net in the Company’s Consolidated Balance Sheets and the applicable license fees will be amortized over the term of the agreements based on their last-to-expire patent date. Amortization amounted to \$24,505 and \$49,011 for the three months and six months ended June 30, 2017, respectively (\$24,505 and \$49,011 for the three and six months ended June 30, 2016, respectively) and was included in Amortization expense on the Company’s Consolidated Statements of Operations.

On September 28, 2015, the Company's wholly-owned subsidiary, Botanical Genetics, entered into a Sponsored Research Agreement (the "Agreement") with Anandia Laboratories Inc. ("Anandia"). Pursuant to the Agreement, Anandia is conducting research on behalf of the Company relating to the cannabis/hemp plant. The Agreement had an initial term of twelve (12) months from the date of the Agreement and can be extended at the sole option of the Company for two (2) additional periods of twelve (12) months each (of which the option on one twelve (12) month period has been extended). The Company paid Anandia \$379,800 over the initial term of the Agreement. On March 13, 2017, the Company entered into Amendment No. 1 to the Agreement (the "Amendment"). The Amendment has a term of twelve (12) months and calls for the Company to pay Anandia a total of \$785,100 in equal monthly installments of \$65,425. During the three and six months ended June 30, 2017, expenses related to the Agreement amounted to \$196,275 and \$261,700, respectively (\$84,200 and \$179,200, for the three and six months ended June 30, 2016, respectively) and are included in Research and development costs on the Company's Consolidated Statements of Operations. Under the terms of the Agreement, the Company will have co-exclusive worldwide rights with Anandia to all the intellectual property resulting from the sponsored research between the Company and Anandia. The party that commercializes such intellectual property in the future will pay royalties in varying amounts to the other party, with the amount of such royalties being dependent upon the type of products that are commercialized in the future. If either party sublicenses such intellectual property to a third-party, then the Company and Anandia will share equally in such sublicensing consideration.

The Company had an R&D agreement with the University of Virginia ("UVA") relating to nicotine biosynthesis in tobacco plants. The extended term of the R&D agreement with UVA expired on October 31, 2016. In December 2016, the Company entered into a new sponsored research agreement with UVA and an exclusive license agreement with the University of Virginia Patent Foundation d/b/a University of Virginia Licensing & Ventures Group ("UVA LVG") pursuant to which the Company will invest approximately \$1,000,000 over a three-year period with UVA to create unique industrial hemp plants with guaranteed levels of THC below the legal limits and optimize other desirable hemp plant characteristics to improve the plant's suitability for growing in Virginia and other legacy tobacco regions. This work with UVA will also involve the development and study of medically important cannabinoids to be extracted by UVA from the Company's hemp plants. UVA and the Company will conduct all activities in this scientific collaboration within the parameters of state and federal licenses and permits held by UVA for such work. The new agreements with UVA and UVA LVG grant the Company exclusive rights to commercialize all results of the collaboration in consideration of royalty payments by the Company to UVA LVG. During the three and six months ended June 30, 2017, expenses related to the agreements amounted to \$70,729 and \$111,574, respectively, (\$48,344 and \$112,973 for the three and six months ended June 30, 2016, respectively) and are included in Research and development costs on the Company's Consolidated Statements of Operations.

Lease Agreements - The Company leases a manufacturing facility and warehouse located in North Carolina on a triple net lease basis. The lease commenced on January 14, 2014, and had an initial term of twelve (12) months. The lease contains four (4) additional extensions; with one lease extension for an additional one (1) year and with the other three (3) lease extensions each being for an additional two (2) years in duration, exercisable at the option of the Company. The Company is currently in the first two-year lease extension term that will expire on October 31, 2017. The lease expense for the three and six months ended June 30, 2017 amounted to \$38,438 and \$76,876, respectively, (\$36,131 and \$72,262, for the three and six months ended June 30, 2016, respectively). The future minimum lease payments if the Company exercises each of the additional extensions are approximately as follows:

Year ended December 31, 2017 -	\$ 79,000
Year ended December 31, 2018 -	\$ 169,000
Year ended December 31, 2019 -	\$ 169,000
Year ended December 31, 2020 -	\$ 169,000
Year ended December 31, 2021 -	\$ 141,000

The Company has a lease for its office space in Clarence, New York and extended the lease for an additional one-year renewal period expiring on August 31, 2017. Future minimum lease payments for the year ended December 31, 2017 are approximately \$8,000.

On November 1, 2015, the Company entered into a one-year lease for 25,000 square feet of warehouse space in North Carolina to store the Company's proprietary tobacco leaf. The lease calls for a monthly lease payment of \$3,750 and contains a three-year renewal option after the initial one-year term. Future minimum lease payments for the years ended December 31, 2017, 2018 and 2019 will be \$22,500, \$45,000 and \$37,500, respectively. In October of 2016, the Company exercised the three-year renewal option after the one-year initial term.

On May 1, 2016, the Company entered into a sublease for laboratory space in Buffalo, New York. The sublease calls for a monthly payment of \$1,471 through April 30, 2018. Additionally, on February 1, 2017, the Company entered into an amendment to the initial sublease calling for the sublease of additional lab space at a cost of \$1,219 per month, bringing the total monthly lease obligation to \$2,690. On April 26, 2017, the Company entered into an amendment to the sublease to extend the term of the sublease for an additional twelve (12) months, commencing on May 1, 2017 at a total cost of \$2,770 per month for the total lease obligation. Future minimum lease payments for the years ended December 31, 2017 and 2018 will be approximately \$16,000 and \$11,000, respectively.

On September 1, 2016, the Company entered into a sublease for warehouse space in North Carolina to store and operate tobacco leaf processing equipment. The sublease calls for a monthly payment of \$1,200, expires on August 31, 2017 and contains twelve-month renewal options as long as the sublessor continues to sublease the warehouse. Future minimum sublease payments for the year ended December 31, 2017 are \$7,200 and \$14,400 per year for each subsequent year the warehouse space is sublet by the Company.

On April 20, 2017, the Company entered into a lease for warehouse space in North Carolina to store cigarette and filtered cigar raw materials. The lease calls for a monthly payment of \$3,500 on a month-to-month basis. Future minimum lease payments for the year ended December 31, 2017 are \$21,000 and \$42,000 in subsequent years as long as the Company continues to lease the warehouse space.

Litigation - In accordance with applicable accounting guidance, the Company establishes an accrued liability for litigation and regulatory matters when those matters present loss contingencies that are both probable and estimable. In such cases, there may be an exposure to loss in excess of any amounts accrued. When a loss contingency is not both probable and estimable, the Company does not establish an accrued liability. As a litigation or regulatory matter develops, the Company, in conjunction with any outside counsel handling the matter, evaluates on an ongoing basis whether such matter presents a loss contingency that is probable and estimable. If, at the time of evaluation, the loss contingency related to a litigation or regulatory matter is not both probable and estimable, the matter will continue to be monitored for further developments that would make such loss contingency both probable and estimable. When a loss contingency related to a litigation or regulatory matter is deemed to be both probable and estimable, the Company will establish an accrued liability with respect to such loss contingency and record a corresponding amount of litigation-related expense. The Company will then continue to monitor the matter for further developments that could affect the amount of any such accrued liability.

On April 26, 2016, Crede CG III, LTD. (“Crede”) filed a complaint against the Company in the United States District Court for the Southern District of New York (the “SDNY Court”) entitled Crede CG III, LTD. v. 22nd Century Group, Inc. On May 19, 2016, Crede filed an Amended Complaint that included seven counts, alleging among other things, that the Company allegedly breached and/or interfered with certain agreements entered into with Crede, including the joint venture agreement relating to efforts to sell the Company’s proprietary tobacco into China, the Tranche 1A warrant and the prior securities purchase agreement with Crede. The Amended Complaint seeks money damages, to rescind the securities purchase agreement, to obtain declaratory and injunctive relief to require the Company to issue to Crede 2,077,555 shares of the Company’s common stock under the exchange provision of the Tranche 1A warrant, and entry of an injunction prohibiting the Company from selling tobacco into China without the joint venture’s involvement. The Amended Complaint also seeks attorney’s fees and such other relief as the Court may deem just and proper. We believe that the claims are frivolous, meritless and that the Company has substantial legal and factual defenses to the claims.

On May 19, 2016, Crede filed a motion for preliminary injunction, asking the SDNY Court to require the Company to issue 2,077,555 shares of its common stock to Crede under the exchange provision of the Tranche 1A warrant. After conducting an evidentiary hearing on this motion on June 14, 2016, the SDNY Court denied Crede’s motion and held, among other things, that Crede did not prove the potential for irreparable harm or a likelihood of success on its claim for such 2,077,555 shares under the Tranche 1A warrant, and that there was a likelihood that Crede had violated the activity restrictions of the Tranche 1A warrant, which would bar Crede’s claim for such shares from the Company.

Following such ruling, on July 11, 2016, the Company filed a motion to sever the Crede lawsuit into two separate cases, requesting all claims relating to the Tranche 1A warrant and the securities purchase agreement to stay in the SDNY Court and all claims relating to the China joint venture agreement to be transferred to the United States District Court for the Western District of New York (the “WDNY Court”), where the Company’s headquarters are located. On January 20, 2017, the SDNY Court granted the Company’s motion.

On February 14, 2017, Crede voluntarily dismissed its lawsuit against the Company in the WDNY Court.

On February 21, 2017, the SDNY Court granted the Company's request to file a motion for summary judgment for the claims remaining in the SDNY Court, with all discovery in the case being deferred until after the SDNY Court issues its decision on the summary judgment motion of the Company.

On March 20, 2017, the Company filed its motion for summary judgment for the claims remaining in the SDNY Court. The response by Crede to the Company's summary judgment motion was filed by Crede on May 1, 2017. On May 15, 2017, the Company filed its response to Crede's filing. The parties are now awaiting the SDNY Court to issue its decision on such summary judgment motion.

We believe that the claims are frivolous, meritless and that the Company has substantial legal and factual defenses to the claims. The Company has defended and intends to continue to defend against these claims vigorously.

NOTE 14. - EARNINGS PER COMMON SHARE

The following table sets forth the computation of basic and diluted earnings per common share for the three-month periods ended June 30, 2017 and 2016:

	June 30, 2017	June 30, 2016
Net loss attributed to common shareholders	<u>\$ (3,355,624)</u>	<u>\$ (2,902,354)</u>
Denominator for basic earnings per share-weighted average shares outstanding	91,577,688	76,024,064
Effect of dilutive securities:		
Warrants, restricted stock and options outstanding	-	-
Denominator for diluted earnings per common share-weighted average shares adjusted for dilutive securities	<u>91,577,688</u>	<u>76,024,064</u>
Loss per common share - basic and diluted	<u>\$ (0.04)</u>	<u>\$ (0.04)</u>

The following table sets forth the computation of basic and diluted earnings per common share for the six-month periods ended June 30, 2017 and 2016:

	June 30, 2017	June 30, 2016
Net loss attributed to common shareholders	<u>\$ (5,976,901)</u>	<u>\$ (6,154,806)</u>
Denominator for basic earnings per share-weighted average shares outstanding	91,165,770	75,027,606
Effect of dilutive securities:		
Warrants, restricted stock and options outstanding	-	-
Denominator for diluted earnings per common share-weighted average shares adjusted for dilutive securities	<u>91,165,770</u>	<u>75,027,606</u>
Loss per common share - basic and diluted	<u>\$ (0.07)</u>	<u>\$ (0.08)</u>

Securities outstanding that were excluded from the computation because they would have been anti-dilutive are as follows:

	June 30, 2017	June 30, 2016
Warrants	12,445,247	10,236,621
Options	6,965,688	4,985,679
	<u>19,410,935</u>	<u>15,222,300</u>

NOTE 15. – EQUITY BASED COMPENSATION

On April 12, 2014, the stockholders of the Company approved the 22nd Century Group, Inc. 2014 Omnibus Incentive Plan (the “OIP”) and on April 29, 2017, the shareholders approved an amendment to the OIP to increase the number of shares available for issuance by 5,000,000 shares. The OIP allows for the granting of equity and cash incentive awards to eligible individuals over the life of the OIP, including the issuance of up to an aggregate of 10,000,000 shares of the Company’s common stock pursuant to awards under the OIP. The OIP has a term of ten years and is administered by the Compensation Committee of the Company’s Board of Directors to determine the various types of incentive awards that may be granted to recipients under this plan and the number of shares of common stock to underlie each such award under the OIP. As of June 30, 2017, we had available 3,949,765 shares remaining for future awards under the OIP.

During the three months ended June 30, 2017, the Company issued stock option awards from the OIP for 1,372,000, to eligible individuals having vesting periods ranging from one to three years from the date of the award. There were no equity awards from the OIP during the three months ended March 31, 2017. During the three and six months ended June 30, 2016, the Company issued stock option awards from the OIP for 90,000 shares and 1,724,037 shares, respectively. All stock option awards were valued using the Black-Scholes option-pricing model on the date of the award.

For the three and six months ended June 30, 2017, the Company recorded compensation expense related to restricted stock and stock option awards granted under the OIP of \$154,004 and \$322,983, respectively, (\$212,222 and \$472,216 for the three and six months ended June 30, 2016, respectively). During the three and six months ended June 30, 2017, there were no issuances of stock to third-party service providers. During the three and six months ended June 30, 2016, the Company issued stock to third-party service providers in the amount of 10,000 shares and 15,811 shares, respectively, and during the three months ended June 30, 2016, the Company issued stock options in the amount of 100,000 shares to a third-party service provider. The Company had no equity based compensation expense related to third-party providers for the three and six months ended June 30, 2017. During the three and six months ended June 30, 2016, the Company recorded equity based compensation expense related to third-party providers in the amount of \$8,000 and \$30,873, respectively.

As of June 30, 2017, unrecognized compensation expense related to non-vested restricted shares and stock options amounted to approximately \$2,390,000, which is expected to be recognized approximately as follows: \$507,000, \$828,000, \$448,000 and \$140,000 during 2017, 2018, 2019 and 2020, respectively. Approximately \$467,000 of the unrecognized compensation expense relates to previously issued stock options, with the vesting of such stock options being based on the achievement of a certain milestone, and the attainment of such milestone cannot be determined at this time.

The fair value of each option grant is estimated on the date of grant using the Black-Scholes option-pricing model. The following assumptions were used for the six months ended June 30, 2017 and 2016:

	2017	2016
Risk-free interest rate (weighted average)	2.12%	1.38%
Expected dividend yield	0%	0%
Expected stock price volatility	90%	90%
Expected life of options (weighted average)	5.13 years	5.03 years

The Company estimated the expected volatility based on data used by a peer group of public companies. The expected term was estimated using the contract life of the option. The risk-free interest rate assumption was determined using yield of the equivalent U.S. Treasury bonds over the expected term. The Company has never paid any cash dividends and does not anticipate paying any cash dividends in the foreseeable future. Therefore, the Company assumed an expected dividend yield of zero.

A summary of all stock option activity since December 31, 2015 is as follows:

	Number of Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding at December 31, 2015	3,161,642	\$ 1.10		
Granted in 2016	2,489,037	\$ 0.97		
Outstanding at December 31, 2016	5,650,679	\$ 1.04		
Granted in 2017	1,372,000	\$ 1.39		
Exercised in 2017	(56,991)	\$ 0.72		
Outstanding at June 30, 2017	<u>6,965,688</u>	\$ 1.12	7.3 years	\$ 4,681,882
Exercisable at June 30, 2017	<u>3,663,334</u>	\$ 1.11	6.2 years	\$ 2,611,378

There were stock options granted during the six months ended June 30, 2017 and 2016, to purchase a total of 1,372,000 shares and 1,824,037 shares, respectively. The weighted average grant date fair value of options issued during the six months ended June 30, 2017 was \$0.97 (\$0.64 for the six months ended June 30, 2016). The total fair value of options that vested during the six months ended June 30, 2017 amounted to \$684,265 (\$1,138,910 for the six months ended June 30, 2016). There were 56,991 options exercised during the six months ended June 30, 2017 and during the six months ended June 30, 2016 no options were exercised.

NOTE 16. - SUBSEQUENT EVENTS

In July and August of 2017, certain of the Holders of the Warrants discussed in Note 2 exercised an aggregate of 3,813,500 Warrants with an exercise price of \$1.00 per share and an aggregate of 1,895,052 Warrants with an exercise price of \$1.45 per share for cash, resulting in net cash proceeds to the Company of \$6,167,646, after deducting expenses associated with the exercise. In consideration for Holders exercising their Warrants for cash, the Company issued to those Holders new warrants (the "New Warrants") to purchase shares of common stock of the Company equal to the number of shares of common stock received by the Holders upon the cash exercise of each such Holder's Warrants. The terms of the New Warrants are substantially similar to the terms of the Warrants exercised, except the New Warrants (i) have an exercise price equal to \$2.15 per share and (ii) are exercisable beginning December 20, 2017 for a period of five (5) years. Accordingly, the Company issued an aggregate of 5,708,552 New Warrants to the Holders in July and August of 2017, upon exercise of such Holder's Warrants as described above. The New Warrants had a fair value of approximately \$9,100,000 at issuance.

Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations

Forward-Looking Statements

This Quarterly Report on Form 10-Q contains “forward-looking statements” that reflect, when made, the Company’s expectations or beliefs concerning future events that involve risks and uncertainties. Forward-looking statements frequently are identified by the words “believe,” “anticipate,” “expect,” “estimate,” “intend,” “project,” “will be,” “will continue,” “will likely result,” or other similar words and phrases. Similarly, statements herein that describe the Company’s objectives, plans or goals also are forward-looking statements. Actual results could differ materially from those projected, implied or anticipated by the Company’s forward-looking statements. Some of the factors that could cause actual results to differ include: our ability to continue to monetize the licensing of our technology and products; our ability to raise capital; our ability to achieve profitability; our ability to manage our growth effectively; our ability to have a Modified Risk Tobacco Product approved by the FDA; our ability to obtain FDA clearance for our Modified Risk Cigarettes; our ability to obtain FDA approval for our X-22 smoking cessation product; our ability to gain market acceptance for our products, our ability to prevail in litigation and our ability to maintain our rights to our intellectual property licenses. For a discussion of these and all other known risks and uncertainties that could cause actual results to differ from those contained in the forward-looking statements, see “Risk Factors” in the Company’s Annual Report on Form 10-K for the year ended December 31, 2016, which is available on the SEC’s website at www.sec.gov. All forward-looking statements are qualified in their entirety by this cautionary statement, and the Company undertakes no obligation to revise or update this Quarterly Report on Form 10-Q to reflect events or circumstances after the date hereof.

For purposes of this Management’s Discussion and Analysis of Financial Condition and Results of Operations, references to the “Company,” “we,” “us” or “our” refer to the operations of 22nd Century Group, Inc. and its direct and indirect subsidiaries for the periods described herein.

Overview

We are a plant biotechnology company focused on (i) potentially reduced risk tobacco cigarettes and smoking cessation products produced from modifying the nicotine content in tobacco plants through genetic engineering and plant breeding, and (ii) research and development of unique cannabis/hemp plants through genetic engineering and plant breeding to alter levels of cannabinoids for new medicines and improved agricultural uses. We have an extensive intellectual property portfolio of issued patents and patent applications relating to the tobacco and cannabis plants. Our management team is focused on monetizing our intellectual property portfolio, obtaining regulatory approval to market both our reduced exposure cigarettes and our smoking cessation product in development, and developing and commercializing high value products derived from our unique cannabis/hemp plants. Additional information about our business and operations is contained in our Annual Report on Form 10-K for the year ended December 31, 2016.

Strategic Objectives

Our strategic objectives include the following:

- Pursuit of reduced exposure authorization from the U.S. Food and Drug Administration (“FDA”) for our *BRAND A* Very Low Nicotine cigarettes in development that have 95% less nicotine than conventional tobacco cigarettes, and therefore drastically reduce smokers’ exposure to nicotine. In response to the FDA’s requests, and in conjunction with additional clarifying guidance, the Company intends to bifurcate its combined Modified Risk Tobacco Product application (“MRTP application”) into a separate Premarket Tobacco Product application (“PMT application”) and a separate MRTP application for *BRAND A* to enjoy the benefit of the FDA’s shorter review timing for PMT applications as compared to MRTP applications;
- Pursuit of authorization from the FDA and regulatory agencies in other countries to introduce our X-22 smoking cessation aid in development into commerce as a prescription-based smoking cessation medical product. As a part of these efforts, we are also working to establish a strategic joint venture to conduct a Phase III smoking cessation clinical trial for X-22;

- Pursuit of FDA reduced exposure authorization for our low tar-to-nicotine *BRAND B* modified risk cigarette in development;
- Research and development of industrial hemp plants with: (i) guaranteed levels of THC below the legal limits and (ii) improved suitability for optimized growing in various regions of North America, which the Company has already commenced in Virginia with the University of Virginia (“UVA”). This alliance with UVA will also involve the development and study of medically important cannabinoids to be extracted by UVA from the Company’s unique hemp plants;
- Establishment of substantial multi-year sales contracts around the world for our proprietary high nicotine tobacco leaf and Very Low Nicotine tobacco leaf;
- Commercialization of our proprietary super-premium cigarette brands; and
- Expansion of our growing base of contract manufacturing business at our manufacturing facility in Mocksville, North Carolina.

For the second quarter of 2017, our accomplishments and notable events include:

On June 15, 2017, we met with the Center for Tobacco Products (“CTP”) of the FDA in a guidance meeting regarding the Company’s “*BRAND A*” MRTP application. Based on this meeting, we will resubmit a more expansive and robust MRTP application that will include additional scientific data and information from already completed clinical studies on our Very Low Nicotine (“VLN”) tobacco cigarettes. In response to the CTP’s clarifying guidance, we intend to divide our combined MRTP application into a separate PMT application and a separate MRTP application for *BRAND A* to enjoy the benefit of the CTP/FDA’s shorter review period for PMT applications as compared to MRTP applications.

On June 20, 2017, we met with the Center for Drug Evaluation and Research (“CDER”) of the FDA in a guidance meeting regarding “*X-22*,” our prescription-based smoking cessation aid in development. Based on this meeting, we will work collaboratively with CDER/FDA on an appropriate path for *X-22* to become a prescription-based cessation aid for smokers in the United States. Pending FDA authorization, and finding a joint venture partner or another source of capital, we intend to conduct a Phase III clinical trial in 2018. We also plan to seek “fast track” designation by the FDA for *X-22*.

With prior FDA authorization, we conducted a clinical trial studying our *BRAND B*, low tar-to-nicotine ratio cigarettes. This trial was designed to confirm that as smokers make the adjustment to a higher nicotine cigarette, they take in less smoke because the nicotine is more readily available. After results of the trial are compiled and evaluated, we intend to conduct additional, larger trials in 2018.

Our wholly-owned subsidiary, Goodrich Tobacco Company, received a new purchase order from U.S. federal government agencies for 2.4 million of our proprietary *SPECTRUM* variable-nicotine research cigarettes. *SPECTRUM* brand research cigarettes are an important tool in clinical research for investigating the impact of reduced nicotine levels for cigarette addictiveness and cessation success. Including the new order, we have now received purchase orders for nearly 25 million *SPECTRUM* government research cigarettes.

Our research collaboration with North Carolina State University yielded several new VLN tobacco varieties that contain no foreign DNA and no trace of genetic modification. These second-generation non-GMO VLN tobacco varieties also show improved ripening and curing qualities making them ideally suited for use in our unique VLN products domestically and in foreign markets.

22nd Century and the University of Virginia (“UVA”) launched a project to use novel varieties of industrial hemp to clean up and reclaim abandoned mine lands and other polluted areas – a plant-based process known as “phytoremediation.” We have proprietary hemp plants that are particularly well-suited for use in phytoremediation.

On June 19, 2017, we entered into Warrant Exercise Agreements (the “Agreements”) with all the holders (the “Holders”) of outstanding warrants to purchase up to 7,043,211 shares of common stock of the Company at \$1.00 per share and warrants to purchase up to 4,250,000 shares of common stock of the Company at \$1.45 per share (collectively, the “Warrants”). These Warrants to purchase shares of our common stock were acquired by the Holders in registered direct offerings in October of 2016 and in July of 2016, respectively. The Holders agreed, subject to beneficial ownership limitations on exercise contained in the Warrants, to exercise all the Warrants for cash. In June 2017, the Holders exercised 3,229,711 Warrants at \$1.00 per share and 2,354,948 Warrants at \$1.45 per share, resulting in net proceeds to us in the amount of \$6,169,212, after deducting expenses associated with the transaction. In consideration for the Holders exercising their Warrants for cash, we issued to each Holder a new warrant (the “New Warrants”) to purchase shares of our common stock equal to the number of shares of common stock received by each Holder upon the cash exercise of the Holder’s Warrants. The terms of the New Warrants are substantially similar to the terms of the Warrants exercised, except the New Warrants (i) have an exercise price equal to \$2.15 per share and (ii) are exercisable beginning December 20, 2017 for a period of five (5) years. Accordingly, we issued 5,584,659 New Warrants to such Holders on June 20, 2017, upon exercise of the Warrants of such Holder.

Subsequent to the close of the second quarter of 2017, we also announced:

On July 28, 2017, the FDA announced a new comprehensive plan for tobacco and nicotine regulation in the United States. The FDA announced that it plans to begin a public dialogue about lowering nicotine levels in combustible cigarettes to non-addictive levels. The FDA stated that it will soon issue an Advance Notice of Proposed Rulemaking to seek input on a nicotine mandate. The FDA announcement stated that “lowering nicotine levels could decrease the likelihood that future generations become addicted to cigarettes and allow more currently addicted smokers to quit smoking.” On July 31, 2017, we announced that the Company is already capable of achieving the FDA’s new product standard; as previously reported, we are the only company in the world capable of growing tobacco with non-addictive levels of nicotine. Our proprietary Very Low Nicotine tobacco is grown on independently-owned farms in the United States – without any artificial extraction or chemical processes. We also announced that, over the last 6 years, agencies of the U.S. federal government have invested more than \$100 million on independent clinical research with our proprietary *SPECTRUM* cigarettes that supports the conclusion that lowering nicotine levels in combustible tobacco cigarettes would drastically improve public health. There are at least 17 completed independent scientific clinical trials using our proprietary Very Low Nicotine tobacco and at least 25 ongoing clinical trials using our proprietary Very Low Nicotine cigarettes. We have announced that the Company stands ready to partner with the FDA and with any Big Tobacco companies that are committed to improving the health of American smokers.

In July and August of 2017, certain of the Holders of the Warrants from the June 19, 2017 warrant exercise transaction exercised an aggregate of 3,813,500 Warrants with an exercise price of \$1.00 per share and an aggregate of 1,895,052 Warrants with an exercise price of \$1.45 per share for cash, resulting in net cash proceeds to us of \$6,167,646, after deducting expenses associated with the exercise. In consideration for Holders exercising their Warrants for cash, we issued those Holders New Warrants to purchase shares of common stock of the Company equal to the number of shares of common stock received by each such Holder upon cash exercise of the Holder’s Warrants. The terms of the New Warrants are substantially similar to the terms of the Warrants exercised, except the New Warrants (i) have an exercise price equal to \$2.15 per share and (ii) are exercisable beginning December 20, 2017 for a period of five (5) years. Accordingly, we issued an aggregate of 5,708,552 New Warrants to such Holders in July and August of 2017 upon exercise of the Warrants of such Holders.

Three Months Ended June 30, 2017 Compared to Three Months Ended June 30, 2016

Revenue - Sale of products

In the three months ended June 30, 2017, we realized net sales revenue from the sale of products in the amount of \$3,897,206 an increase of \$1,069,548, or 37.8%, from net sales revenue of \$2,827,658 for the three months ended June 30, 2016. The increase in net sales revenue for the second quarter of 2017 was primarily the result of additional net sales revenue generated from a new contract to manufacture an existing brand of filtered cigars as compared to net sales revenue for the second quarter of 2016. Production under that new contract began in mid-May of 2017.

Cost of goods sold - Products

During the three months ended June 30, 2017, cost of goods sold were \$4,062,261, or 104.2%, of net sales revenue. Excise taxes and certain regulatory fees in the approximate amount of \$1,985,000 are included in the cost of goods sold for the three months ended June 30, 2017. We were not yet operating our factory at full production capacity during the second quarter of 2017, but we began utilizing a portion of the excess capacity as a result of the new filtered cigar contract manufacturing agreement that commenced in mid-May of 2017. As a result, the cost of goods sold relating to product sales, which included the cost of raw material components, direct manufacturing costs and an overhead allocation, exceeded net sales revenue. We also recorded an increase in our inventory reserve by \$95,000 during the second quarter of 2017 that resulted in an increase in the cost of goods sold by the same amount.

During the three months ended June 30, 2016, cost of goods sold were \$2,968,571, or 105.0% of net sales revenue. Excise taxes and certain regulatory fees in the approximate amount of \$1,842,000 are included in the cost of goods sold for the three months ended June 30, 2016. We were not operating our factory at full production capacity during the second quarter of 2016. As a result, the cost of goods sold relating to product sales, which included the cost of raw material components, direct manufacturing costs and an overhead allocation, was in excess of net sales revenue.

Research and development expense

Research and development (“R&D”) expense was \$813,287 in the three months ended June 30, 2017, an increase of \$303,359, or 59.5%, from \$509,928 in the three months ended June 30, 2016. This increase was primarily a result of an increase in R&D sponsored research costs in the approximate amount of \$159,000, an increase in expenses of approximately \$163,000 relating to costs associated with our modified risk tobacco products and an increase in payroll and related benefit costs of approximately \$20,000, partially offset by a decrease in license and royalty fees of approximately \$38,000.

General and administrative expense

General and administrative expense was \$1,805,118 in the three months ended June 30, 2017, an increase of \$83,343, or 4.8%, from \$1,721,775 in the three months ended June 30, 2016. The increase was mainly due to an increase in investor relations expenses of approximately \$124,000, an increase in payroll and related benefit costs of approximately \$122,000 and an increase in travel related expenses of approximately \$43,000, partially offset by a decrease in equity based compensation of approximately \$71,000, a net decrease in legal and accounting expenses of approximately \$89,000, a decrease in consulting expenses of approximately \$38,000 and a net decrease in other general and administrative expenses of approximately \$8,000.

Sales and marketing expense

During the three months ended June 30, 2017, we incurred sales and marketing expenses of \$267,591, an increase of \$16,485, or 6.6%, from \$251,106 in the three months ended June 30, 2016. The increase in sales and marketing expenses were primarily the result of an increase in payroll and related benefit costs of approximately \$37,000 and an increase in equity based compensation of approximately \$25,000, partially offset by a decrease in advertising and promotional costs of approximately \$39,000 and a decrease in travel related expenses of approximately \$4,000.

Depreciation expense

Depreciation expense for the three months ended June 30, 2017 amounted to \$88,464, an increase of \$7,397, or 9.1%, from \$81,067 for the three months ended June 30, 2016. The increase is due to additions to machinery and equipment over the last year in the approximate amount of \$217,000, primarily consisting of equipment additions in our NASCO operations in North Carolina and our laboratory in Buffalo, New York.

Amortization expense

Amortization expense for the three months ended June 30, 2017 amounted to \$143,010, an increase of \$16,969, or 13.5%, from \$126,041 for the three months ended June 30, 2016. The amortization expense relates to amortization taken on capitalized patent costs and license fees. The increase is primarily due to amortization on additional patent costs incurred during the six months ended June 30, 2017 and the year ended December 31, 2016 in the amounts of \$307,005 and \$541,882, respectively.

Warrant liability loss - net

The warrant liability loss of \$77,583 for the second quarter of 2017 was due to an increase in the estimated fair value of the warrants during the period. The increase in the estimated fair value of the warrants was primarily attributable to an increase in our underlying stock price from \$1.18 per share at March 31, 2017 as compared to \$1.75 per share at June 30, 2017.

The warrant liability loss of \$9,468 for the second quarter of 2016 was due to an increase in the estimated fair value of the warrants during the period. The increase in the estimated fair value of the warrants was primarily attributable to an increase in the Company's underlying stock price from \$0.78 per share at March 31, 2016 as compared to \$0.81 per share at June 30, 2016.

Loss on investment

On February 17, 2017, a dilutive event reduced our ownership in Anandia to 19.4%, an ownership percentage below the 20% ownership threshold for the use of the equity method of accounting. Accordingly, we discontinued applying the equity method of accounting for our equity investment in Anandia, effective on the date of the dilutive event, and as a result, there is no gain or loss recorded on the investment in Anandia during the three months ended June 30, 2017.

The loss on equity investment of \$54,839 for the three months ended June 30, 2016, consists of (i) our then 25% share of Anandia's net loss for the three-month period ending June 30, 2016 in the amount of \$40,427, plus (ii) amortization of the intangible asset represented by the difference between our equity investment in Anandia and our portion of the net assets of Anandia in the amount of \$14,412.

Interest income

Interest income for the three months ended June 30, 2017 was \$12,125, an increase of \$10,020 from interest income of \$2,105 for the three months ended June 30, 2016. The interest income earned in the three months ended June 30, 2017 and 2016 was generated from excess cash invested in a money market account, with the average cash balance being greater during the second quarter of 2017 as compared to the second quarter of 2016.

Interest expense

Interest expense decreased by \$1,681, or 18.0%, in the three months ended June 30, 2017 to \$7,641 from \$9,322 in the three months ended June 30, 2016 and is derived from the interest component of severance payments made on accrued severance that had previously been recorded on a discounted basis using our incremental borrowing rate and the accretion of interest on the NRC note payable.

Net loss

We had a net loss in the three months ended June 30, 2017 of \$3,355,624 as compared to a net loss of \$2,902,354 in the three months ended June 30, 2016. The increase in the net loss of \$453,270, or 15.6%, was primarily the result of an increase in the gross loss of approximately \$24,000, an increase in operating expenses of approximately \$427,000 and an increase in other income (expense) in the approximate amount of \$2,000.

Six Months Ended June 30, 2017 Compared to Six Months Ended June 30, 2016

Revenue - Sale of products

In the six months ended June 30, 2017, we realized net sales revenue from the sale of products in the amount of \$6,128,723, an increase of \$282,009, or 4.8%, over net sales revenue of \$5,846,714 for the six months ended June 30, 2016. The increase in net sales revenue for the six months ended June 30, 2017 was primarily the result of additional net sales revenue generated from a new contract to manufacture an existing brand of filtered cigars that began in mid-May of 2017, partially offset by a decrease in net sales revenue from the sale of *SPECTRUM* research cigarettes in the amount of \$329,321 during the first quarter of 2016, as compared to net sales revenue for the six months ended June 30, 2016.

Cost of goods sold - Products

During the six months ended June 30, 2017, cost of goods sold were \$6,567,675, or 107.2% of net sales revenue. Excise taxes and certain regulatory fees in the approximate amount of \$3,544,000 are included in the cost of goods sold for the six months ended June 30, 2017. We were not yet operating our factory at full production capacity during the six months ended June 30, 2017, but we began utilizing a portion of the excess capacity as a result of the new filtered cigar contract manufacturing agreement that commenced in mid-May of 2017. As a result, the cost of goods sold relating to product sales, which included the cost of raw material components, direct manufacturing costs and an overhead allocation, exceeded net sales revenue. We also recorded an increase in our inventory reserve by \$95,000 during the second quarter of 2017 that resulted in an increase in the cost of goods sold by the same amount.

During the six months ended June 30, 2016, cost of goods sold were \$5,863,981 or 100.3% of net sales revenue. Cost of goods sold relating to the sales *SPECTRUM* research cigarettes were \$55,019, or 16.7%, of related net sales revenue, and the remaining cost of goods sold was \$5,808,962, or 105.3% of related net sales revenue. Excise taxes and certain regulatory fees in the approximate amount of \$3,577,000 are included in the cost of goods sold for the six months ended June 30, 2016. We were not operating the factory at full production capacity during the first half of 2016. As a result, the cost of goods sold relating to product sales (exclusive of *SPECTRUM* research cigarettes), which included the cost of raw material components, direct manufacturing costs and an overhead allocation, was in excess of net sales revenue.

Research and development expense

R&D expense was \$1,364,138 in the six months ended June 30, 2017, an increase of \$256,819, or 23.2%, from \$1,107,319 in the six months ended June 30, 2016. This increase was primarily a result of increases in sponsored research contract costs of approximately \$88,000, an increase of approximately \$40,000 in payroll and related benefit costs, an increase in costs related to our modified risk tobacco product in of approximately \$154,000, an increase in testing fees of approximately \$50,000 and an increase in costs associated with our laboratory in the approximate amount of \$25,000, partially offset by a decrease in travel related expenses of approximately \$48,000 and a decrease in equity based compensation expense of approximately \$51,000.

General and administrative expense

General and administrative expense was \$3,425,597 in the six months ended June 30, 2017, a decrease of \$142,785, or 4.0%, from \$3,568,382 in the six months ended June 30, 2016. The decrease was mainly due to a decrease in equity based compensation in the approximate amount of \$169,000, a decrease in legal and accounting fees of approximately \$113,000, a decrease in consulting fees of approximately \$68,000, a decrease in investor relations expenses of approximately \$32,000, a decrease in costs related to SEC filings in the amount of approximately \$12,000 and a net decrease in other general and administrative expenses of approximately \$13,000, partially offset by an increase of approximately \$195,000 in payroll and related benefit costs, an increase of approximately \$46,000 for cost relating to our annual shareholders meeting and an increase in travel related expenses of approximately \$24,000.

Sales and marketing expense

During the six months ended June 30, 2017, we incurred sales and marketing expenses of \$563,304, a decrease of \$390,416, or 40.9%, from \$953,720 in the six months ended June 30, 2016. The decrease in sales and marketing expenses were mainly the result of a decrease in advertising and promotional costs, primarily relating to our proprietary cigarette brand, *RED SUN*, in the approximate amount of \$456,000 and a decrease in travel related expenses of approximately \$28,000, partially offset by an increase in payroll and related benefit costs of approximately \$53,000 and an increase in equity based compensation of approximately \$40,000.

Depreciation expense

Depreciation expense for the six months ended June 30, 2017 amounted to \$176,585, an increase of 14,921, or 9.2%, from \$161,664 for the six months ended June 30, 2016. The increase is due to additions to machinery and equipment over the last year in the approximate amount of \$217,000, primarily consisting of equipment additions in our NASCO operations in North Carolina and our laboratory in Buffalo, New York.

Amortization expense.

Amortization expense for the six months ended June 30, 2017 amounted to \$283,898, an increase of \$33,016, or 13.2%, from \$250,882 for the six months ended June 30, 2016. The amortization expense relates to amortization taken on capitalized patent costs and license fees. The increase was primarily due to amortization on additional patent costs incurred during the six months ended June 30, 2017 and the year ended December 31, 2016 in the amounts of \$307,005 and \$541,882, respectively.

Warrant liability (loss) gain - net

The warrant liability loss of \$82,927 for the six months ended June 30, 2017 was due to an increase in the estimated fair value of the warrants during the period. The increase in the estimated fair value of the warrants was primarily attributable to an increase in the Company's underlying stock price from \$1.09 per share at December 31, 2016 as compared to \$1.75 per share at June 30, 2017.

The warrant liability gain of \$61,597 for the six months ended June 30, 2016 was due to the decrease in the estimated fair value of the warrants during the period. The decrease in the estimated fair value of the warrants was primarily attributable to a decrease in the Company's underlying stock price from \$1.40 per share at December 31, 2015 as compared to \$0.81 per share at June 30, 2016.

Gain (loss) on investment

On February 17, 2017, a dilutive event reduced our ownership in Anandia to 19.4%, an ownership percentage below the 20% ownership threshold for the use of the equity method of accounting. Accordingly, we discontinued applying the equity method of accounting for our equity investment in Anandia, effective on the date of the dilutive event, and as a result, there is no gain or loss recorded on the investment in Anandia during the three months ended June 30, 2017. We recorded a gain on investment of \$16,872 for three months ended March 31, 2017 (the equity gain for the three months ended March 31, 2017, reflects our proportionate gain through February 16, 2017). In addition, and as a result of the February 17, 2017 dilutive event, we recorded a gain in accordance with the derecognition provisions of Accounting Standards Codification 323 ("ASC 323") in the amount of \$336,834. We recorded a total gain on the equity investment in the amount of \$346,180 for the six months ended June 30, 2017 (pertains to the period up to February 17, 2017) by aggregating the Company's share of Anandia's gain (loss), the gain recorded under ASC 323 and the amortization of the intangible asset represented by the difference between our equity investment in Anandia and our portion of the net assets of Anandia in the amount of \$7,526.

The loss on investment of \$142,071 for the six months ended June 30, 2016 consisted of (i) our then 25% share of Anandia's net loss for the respective six months ending June 30, 2016 in the amount of \$113,247, plus (ii) amortization of the intangible asset represented by the difference between our equity investment in Anandia and our portion of the net assets in Anandia in the amount of \$28,824.

Interest income

Interest income for the six months ended June 30, 2017 was \$27,880, an increase of \$23,282 from interest income of \$4,598 for the six months ended June 30, 2016. The interest income earned in the six months ended June 30, 2017 and 2016 was generated from excess cash invested in a money market account, with the average cash balance being greater during the six months ending June 30, 2017 as compared to the six months ended June 30, 2016.

Interest expense

Interest expense decreased by \$4,136, or 21.0%, in the six months ended June 30, 2017 to \$15,560 from \$19,696 in the six months ended June 30, 2016 and is derived from the interest component of severance payments made on accrued severance that had previously been recorded on a discounted basis using our incremental borrowing rate and the accretion of interest on the NRC note payable.

Net loss

We had a net loss in the six months ended June 30, 2017 of \$5,976,901 as compared to a net loss of \$6,154,806 in the six months ended June 30, 2016. The decrease in the net loss of \$177,905, or 2.9%, was primarily the result of a decrease in operating expenses of approximately 229,000 and an increase in other income (expense) of approximately \$371,000, partially offset by an increase in our gross loss of approximately \$422,000.

Liquidity and Capital Resources

Working Capital

As of June 30, 2017, we had positive working capital of approximately \$14.0 million compared to positive working capital of approximately \$13.5 million at December 31, 2016, an increase of approximately \$0.5 million. The increase in our working capital for the six months ended June 30, 2017 was primarily due to a net increase in non-cash working capital in the approximate amount of \$1.4 million plus cash raised through warrant exercises in the approximate amount of \$6.3 million, partially offset by cash used in operating activities of approximately \$7.1 million.

We must successfully execute our business plan to increase revenue in order to achieve positive cash flows from operations to sustain adequate liquidity without requiring additional funds from capital raises and other external sources to meet minimum operating requirements. On December 30, 2016, we filed a Form S-3, universal shelf registration statement, with the U.S. Securities and Exchange Commission ("SEC") that was declared effective by the SEC on January 17, 2017. The universal shelf registration statement will allow, but not compel, the Company to raise up to \$100 million of capital over a three-year period ending on January 17, 2020 through a wide array of securities at times and in amounts to be determined by the Company. We will likely need to raise additional capital to fund (i) our operations and (ii) FDA approval of our products. There can be no assurance that additional capital will be available on acceptable terms or at all.

Cash demands on operations

Including cash on hand at June 30, 2017 of \$12,482,774, plus \$6,167,646 of net cash proceeds received from the exercise of warrants in July and August of 2017, and revenues from ongoing product sales, but not including potential milestone payments of up to \$7,000,000 from British American Tobacco ("BAT"), we believe resulting cash balances will be adequate to sustain operations and meet all current obligations as they come due through at least March of 2019. During the six months ended June 30, 2017, we experienced an operating loss of approximately \$6,252,000 and used cash in operations of approximately \$7,051,000. Excluding discretionary expenses related to R&D, patent and trademark costs, contract growing of our proprietary tobacco, and certain nonrecurring expenses relating to factory capital expenses, investor relations, and marketing costs, our monthly cash expenditures are approximately \$850,000.

Net Cash used in operating activities

In the six months ended June 30, 2017, \$7,051,357 of cash was used in operating activities as compared to \$5,890,107 of cash used in operating activities in the six months ended June 30, 2016, an increase of \$1,161,250. The increase in use of cash in operations was primarily due to an increase in the cash portion of the net loss in the amount of \$217,127 and an increase in the use of cash used for working capital components related to operations in the amount of \$944,123 for the six months ended June 30, 2017 as compared to the six months ended June 30, 2016.

Net Cash used in investing activities

In the six months ended June 30, 2017, net cash used in investing activities was \$146,769, as compared to \$121,600 of cash used in investing activities during the six months ended June 30, 2016, an increase of \$25,169. The increase was primarily the result of an increase in cash used for the acquisition of patents and trademarks in the amount of \$32,055, partially offset by a decrease in the acquisition of machinery and equipment of \$6,886.

Net Cash provided by financing activities

During the six months ended June 30, 2017, \$6,212,712 of cash was provided by financing activities, as compared to \$5,091,987 of cash provided by financing activities during the six months ended June 30, 2016. The net cash provided by financing activities for the six months ended June 30, 2017 was the result of net cash raised from the exercise of warrants, and the net cash provided by financing activities for the six months ended June 30, 2016, was primarily generated by net proceeds received from a February 2016 registered direct offering.

Critical Accounting Policies and Estimates

There have been no material changes to the information set forth in our Annual Report on Form 10-K for the year ended December 31, 2016.

Inflation

Inflation did not have a material effect on our operating results for the six months ended June 30, 2017 and 2016.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements as defined by Item 303(a)(4) of Regulation S-K.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

There have been no material changes to the information set forth in our Annual Report on Form 10-K for the year ended December 31, 2016.

Item 4. Controls and Procedures

(a) Evaluation of Disclosure Controls and Procedures:

The Company maintains disclosure controls and procedures that are designed to ensure that information required to be disclosed in its Securities Exchange Act of 1934 ("Exchange Act") reports are recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to the Company's management, including the Company's chief executive officer and chief financial officer, as appropriate, to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Our chief executive officer and chief financial officer, after evaluating the effectiveness of the Company's "disclosure controls and procedures" (as defined in the Exchange Act Rules 13a-15(e) or 15d-15(e)) as of the end of the period covered by this quarterly report, have concluded that our disclosure controls and procedures were effective as of the end of the period covered by this Form 10-Q to ensure information required to be disclosed is recorded, processed, summarized and reported within the time period specified by SEC rules, based on their evaluation of these controls and procedures as required by paragraph (b) of Exchange Act Rules 13a-15 or 15d-15.

(b) Changes in Internal Control over Financial Reporting:

There were no changes in the Company's internal controls over financial reporting during the second quarter of 2017 that have materially affected, or are reasonably likely to materially affect, the Company's internal controls over financial reporting.

Part II. OTHER INFORMATION

Item 1. Legal Proceedings

We are subject to various claims and legal proceedings arising in the ordinary course of business. As of the date hereof, we are unable to currently assess whether the final resolution of any of such claims or legal proceedings may have a material adverse effect on us.

On April 26, 2016, Crede CG III, LTD. ("Crede") filed a complaint against the Company in the United States District Court for the Southern District of New York (the "SDNY Court") entitled Crede CG III, LTD. v. 22nd Century Group, Inc. On May 19, 2016, Crede filed an Amended Complaint that included seven counts, alleging among other things, that the Company allegedly breached and/or interfered with certain agreements entered into with Crede, including the joint venture agreement relating to efforts to sell the Company's proprietary tobacco into China, the Tranche 1A warrant and the prior securities purchase agreement with Crede. The Amended Complaint seeks money damages, to rescind the securities purchase agreement, to obtain declaratory and injunctive relief to require the Company to issue to Crede 2,077,555 shares of the Company's common stock under the exchange provision of the Tranche 1A warrant, and entry of an injunction prohibiting the Company from selling tobacco into China without the joint venture's involvement. The Amended Complaint also seeks attorney's fees and such other relief as the Court may deem just and proper. We believe that the claims are frivolous, meritless and that the Company has substantial legal and factual defenses to the claims.

On May 19, 2016, Crede filed a motion for preliminary injunction, asking the SDNY Court to require the Company to issue 2,077,555 shares of its common stock to Crede under the exchange provision of the Tranche 1A warrant. After conducting an evidentiary hearing on this motion on June 14, 2016, the SDNY Court denied Crede's motion and held, among other things, that Crede did not prove the potential for irreparable harm or a likelihood of success on its claim for such 2,077,555 shares under the Tranche 1A warrant, and that there was a likelihood that Crede had violated the activity restrictions of the Tranche 1A warrant, which would bar Crede's claim for such shares from the Company.

Following such ruling, on July 11, 2016, the Company filed a motion to sever the Crede lawsuit into two separate cases, requesting all claims relating to the Tranche 1A warrant and the securities purchase agreement to stay in the SDNY Court and all claims relating to the China joint venture agreement to be transferred to the United States District Court for the Western District of New York (the "WDNY Court"), where the Company's headquarters are located. On January 20, 2017, the SDNY Court granted the Company's motion.

On February 14, 2017, Crede voluntarily dismissed its lawsuit against the Company in the WDNY Court.

On February 21, 2017, the SDNY Court granted the Company's request to file a motion for summary judgment for the claims remaining in the SDNY Court, with all discovery in the case being deferred until after the SDNY Court issues its decision on the summary judgment motion of the Company.

On March 20, 2017, the Company filed its motion for summary judgment for the claims remaining in the SDNY Court. The response by Crede to the Company's summary judgment motion was filed by Crede on May 1, 2017. On May 15, 2017, the Company filed its response to Crede's filing. The parties are now awaiting the SDNY Court to issue its decision on such summary judgment motion.

We believe that the claims are frivolous, meritless and that the Company has substantial legal and factual defenses to the claims. The Company has defended and intends to continue to defend against these claims vigorously.

Item 1A. Risk Factors

Our risk factors have not changed materially from those disclosed in our Annual Report on Form 10-K for the year ended December 31, 2016, as filed with the SEC on March 8, 2017.

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

During the second quarter of 2017, we issued 597,618 shares of common stock to various investors from the exercise of 915,610 warrants to purchase shares of our common stock.

On August 1, 2017, we issued 35,877 shares of common stock to an investor that exercised 52,500 warrants to purchase shares of our common stock.

The shares were offered and sold pursuant to exemptions from the registration requirements under Section 4(2) of the Securities Act of 1933, as amended, and Rule 506 of Regulation D promulgated thereunder.

Item 3. Default Upon Senior Securities.

None

Item 4. Mine Safety Disclosures

None

Item 5. Other Information

None

Item 6. Exhibits

Exhibit 31.1 Section 302 Certification - Chief Executive Officer

Exhibit 31.2 Section 302 Certification - Chief Financial Officer

Exhibit 32.1 Certification of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350 as adopted pursuant to section 906 of the Sarbanes-Oxley Act of 2002.

101 Interactive data files formatted in XBRL (eXtensible Business Reporting Language): (i) the Consolidated Balance Sheets, (ii) the Consolidated Statements of Operations, (iii) the Consolidated Statements of Cash Flows, and (iv) the Notes to the Consolidated Financial Statements.

101.INS XBRL Instance Document

101.SCH XBRL Taxonomy Extension Schema Document

101.CAL XBRL Taxonomy Extension Calculation Linkbase Document

101.DEF XBRL Taxonomy Extension Definition Linkbase Document

101.LAB XBRL Taxonomy Extension Label Linkbase Document

101.PRE XBRL Taxonomy Extension Presentation Linkbase Document

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized:

22nd CENTURY GROUP, INC.

Date: August 9, 2017

/s/ Henry Sicignano III

Henry Sicignano III
President, Chief Executive Officer and
Director
(Principal Executive Officer)

Date: August 9, 2017

/s/ John T. Brodfuehrer

John T. Brodfuehrer
Chief Financial Officer
(Principal Accounting and Financial Officer)

CERTIFICATIONS

I, Henry Sicignano III, Chief Executive Officer of 22nd CENTURY GROUP, INC., certify that:

1. I have reviewed this quarterly report on Form 10-Q of 22nd CENTURY GROUP, INC.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 9, 2017

/s/ Henry Sicignano III

Henry Sicignano III

President, Chief Executive Officer and Director
(Principal Executive Officer)

CERTIFICATIONS

I, John T. Brodfuehrer, Chief Financial Officer of 22nd CENTURY GROUP, INC., certify that:

1. I have reviewed this quarterly report on Form 10-Q of 22nd CENTURY GROUP, INC.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 9, 2017

/s/ John T. Brodfuehrer
John T. Brodfuehrer
Chief Financial Officer
(Principal Financial Officer)

Written Statement of the Chief Executive Officer and Chief Financial Officer Pursuant to 18 U.S.C. §1350

Solely for the purposes of complying with 18 U.S.C. §1350, I, the undersigned Chief Executive Officer of 22nd CENTURY GROUP, INC. (the "Company"), and I, the undersigned Chief Financial Officer of the Company, hereby certify, to the best of my knowledge, that the quarterly report on Form 10-Q of the Company for the quarter ended June 30, 2017 (the "Report") fully complies with the requirements of Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

This certification is being furnished solely to accompany this Report pursuant to 18 U.S.C. 1350, and is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934 and is not to be incorporated by reference into any filing of the registrant, whether made before or after the date hereof, regardless of any general incorporation language in such filing.

Date: August 9, 2017

/s/ Henry Sicignano III

Henry Sicignano III
President and Chief Executive Officer

Date: August 9, 2017

/s/ John T. Brodfuehrer

John T. Brodfuehrer
Chief Financial Officer
