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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, 2022

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.)

500 Seneca Street, Suite 507, Buffalo, New York 14204  
(Address of principal executive offices)

(716) 270-1523  
*(Registrant's telephone number, including area code)*

Securities registered under Section 12(b) of the Act:

Title of each class	Ticker symbol	Name of Exchange on Which Registered
Common Stock, \$0.00001 par value	XXII	NASDAQ Capital Market

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 every Interactive Data File required to be submitted 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 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	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

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 5, 2022, there were 214,784,741 shares of common stock issued and outstanding.

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22nd CENTURY GROUP, INC.

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**22nd CENTURY GROUP, INC.**  
**CONDENSED CONSOLIDATED BALANCE SHEETS**  
**(Unaudited)**  
**(\$ in thousands, except per-share data)**

	June 30, 2022	December 31, 2021
<b>ASSETS</b>		
<b>Current assets:</b>		
Cash and cash equivalents	\$ 2,668	\$ 1,336
Short-term investment securities	23,574	47,400
Accounts receivable, net	4,655	585
Inventory	10,018	2,881
Prepaid expenses and other current assets	3,765	2,183
<b>Total current assets</b>	<u>44,680</u>	<u>54,385</u>
Property, plant and equipment, net	14,434	5,841
Operating leases right-of-use assets, net	2,348	1,723
Goodwill	44,200	—
Intangible assets, net	7,890	7,919
Investments	1,326	2,345
Other assets	4,583	3,741
<b>Total assets</b>	<u>\$ 119,461</u>	<u>\$ 75,954</u>
<b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>		
<b>Current liabilities:</b>		
Notes and loan payable	\$ 6,328	\$ 596
Operating and finance lease obligations	788	308
Accounts payable	4,523	2,173
Accrued expenses	2,616	1,489
Accrued payroll	930	2,255
Accrued excise taxes and fees	1,656	1,270
Deferred income	1,083	119
Other current liabilities	189	217
<b>Total current liabilities</b>	<u>18,113</u>	<u>8,427</u>
<b>Long-term liabilities:</b>		
Notes payable	253	—
Operating and finance lease obligations	1,652	1,432
Other long-term liabilities	—	21
<b>Total liabilities</b>	<u>20,018</u>	<u>9,880</u>
<b>Commitments and contingencies (Note 9)</b>		
<b>Shareholders' equity</b>		
Preferred stock, \$.00001 par value, 10,000,000 shares authorized		
Common stock, \$.00001 par value, 300,000,000 shares authorized		
Capital stock issued and outstanding:		
197,661,566 common shares (162,872,875 at December 31, 2021)		
Common stock, par value	2	2
Capital in excess of par value	298,393	244,247
Accumulated other comprehensive loss	(523)	(162)
Accumulated deficit	(198,429)	(178,013)
<b>Total shareholders' equity</b>	<u>99,443</u>	<u>66,074</u>
<b>Total liabilities and shareholders' equity</b>	<u>\$ 119,461</u>	<u>\$ 75,954</u>

See accompanying notes to unaudited interim condensed consolidated financial statements.

**22nd CENTURY GROUP, INC.**  
**CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS**  
**(Unaudited)**  
**(\$ in thousands, except per-share data)**

	Three Months Ended		Six Months Ended	
	June 30,		June 30,	
	2022	2021	2022	2021
<b>Revenue, net</b>	\$ 14,477	\$ 8,371	\$ 23,521	\$ 15,177
<b>Cost of goods sold</b>	13,585	7,923	22,321	14,214
Gross profit	892	448	1,200	963
<b>Operating expenses:</b>				
Research and development	1,897	903	3,036	1,759
Sales, general and administrative	9,471	6,185	16,785	11,015
Total operating expenses	11,368	7,088	19,821	12,774
Operating loss	(10,476)	(6,640)	(18,621)	(11,811)
<b>Other income (expense):</b>				
Unrealized gain (loss) on investments	(885)	(176)	(1,702)	(140)
Gain on Panacea investment conversion	—	2,548	—	2,548
Realized gain (loss) on short-term investment securities	(108)	—	(108)	—
Interest income, net	48	108	98	220
Interest expense	(77)	(14)	(82)	(21)
Total other income (expense)	(1,022)	2,466	(1,794)	2,607
Loss before income taxes	(11,498)	(4,174)	(20,415)	(9,204)
Income taxes	—	—	—	—
Net loss	\$ (11,498)	\$ (4,174)	\$ (20,415)	\$ (9,204)
<b>Other comprehensive loss:</b>				
Unrealized loss on short-term investment securities	(69)	(41)	(469)	(73)
Reclassification of (gain) loss to net loss	108	—	108	—
Other comprehensive loss	39	(41)	(361)	(73)
<b>Comprehensive loss</b>	\$ (11,459)	\$ (4,215)	\$ (20,776)	\$ (9,277)
<b>Net loss per common share - basic and diluted</b>	\$ (0.06)	\$ (0.03)	\$ (0.12)	\$ (0.06)
<b>Weighted average common shares outstanding - basic and diluted (in thousands)</b>	182,004	154,811	172,632	149,564

See accompanying notes to unaudited interim condensed consolidated financial statements.

**22nd CENTURY GROUP, INC.**  
**CONDENSED CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY**  
(Unaudited)  
(\$ in thousands)

	Six Months Ended June 30, 2022					
	Common Shares Outstanding	Par Value of Common Shares	Capital in Excess of Par Value	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Shareholders' Equity
<b>Balance at January 1, 2022</b>	162,872,875	\$ 2	\$ 244,247	\$ (162)	\$ (178,013)	\$ 66,074
Stock issued in connection with RSU vesting	1,663,691	—	—	—	—	—
Equity-based compensation	—	—	1,213	—	—	1,213
Unrealized loss on short-term investment securities	—	—	—	(400)	—	(400)
Net loss	—	—	—	—	(8,918)	(8,918)
<b>Balance at March 31, 2022</b>	<b>164,536,566</b>	<b>2</b>	<b>245,460</b>	<b>(562)</b>	<b>(186,931)</b>	<b>57,969</b>
Stock issued in connection with RSU vesting	75,000	—	—	—	—	—
Stock issued in connection with option exercises	150,000	—	174	—	—	174
Stock issued in connection with acquisition	32,900,000	—	51,653	—	—	51,653
Equity-based compensation	—	—	1,106	—	—	1,106
Unrealized loss on short-term investment securities	—	—	—	(69)	—	(69)
Reclassification of losses to net loss	—	—	—	108	—	108
Net loss	—	—	—	—	(11,498)	(11,498)
<b>Balance at June 30, 2022</b>	<b>197,661,566</b>	<b>2</b>	<b>298,393</b>	<b>(523)</b>	<b>(198,429)</b>	<b>99,443</b>

  

	Six Months Ended June 30, 2021					
	Common Shares Outstanding	Par Value of Common Shares	Capital in Excess of Par Value	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Shareholders' Equity
<b>Balance at January 1, 2021</b>	139,061,690	\$ 1	\$ 189,439	\$ 74	\$ (145,404)	\$ 44,110
Stock issued in connection with RSU vesting	1,196,258	—	—	—	—	—
Stock issued in connection with option exercises	846,342	—	1,153	—	—	1,153
Stock issued in connection with warrant exercises	11,293,211	1	11,781	—	—	11,782
Equity-based compensation	—	—	507	—	—	507
Unrealized loss on short-term investment securities	—	—	—	(32)	—	(32)
Net loss	—	—	—	—	(5,030)	(5,030)
<b>Balance at March 31, 2021</b>	<b>152,397,501</b>	<b>2</b>	<b>202,880</b>	<b>42</b>	<b>(150,434)</b>	<b>52,490</b>
Stock issued in connection with RSU vesting, net of shares withheld for taxes	200,103	—	(469)	—	—	(469)
Stock issued in connection with option exercises	87,879	—	106	—	—	106
Stock issued in connection with capital raise	10,000,000	—	38,206	—	—	38,206
Equity-based compensation	—	—	1,245	—	—	1,245
Unrealized loss on short-term investment securities	—	—	—	(41)	—	(41)
Net loss	—	—	—	—	(4,174)	(4,174)
<b>Balance at June 30, 2021</b>	<b>162,685,483</b>	<b>2</b>	<b>241,968</b>	<b>1</b>	<b>(154,608)</b>	<b>87,363</b>

See accompanying notes to unaudited interim condensed consolidated financial statements.

**22nd CENTURY GROUP, INC.**  
**CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS**  
**(Unaudited)**  
**(\$ in thousands)**

	Six Months Ended June 30,	
	2022	2021
<b>Cash flows from operating activities:</b>		
Net loss	\$ (20,415)	\$ (9,204)
Adjustments to reconcile net loss to cash used in operating activities:		
Amortization and depreciation	924	590
Amortization of ROU Asset	240	149
Amortization of inventory step-up	978	—
Unrealized loss on investment	1,702	140
Realized loss on short-term investment securities	108	—
Gain on Panacea investment conversion	—	(2,548)
Accretion of non-cash interest expense (income)	206	(81)
Equity-based employee compensation expense	2,319	1,752
Changes in operating assets and liabilities, net of acquisition:		
Accounts receivable	(1,126)	21
Inventory	(2,822)	(280)
Prepaid expenses and other assets	(1,212)	(2,307)
Accounts payable	693	(140)
Accrued expenses	59	(66)
Accrued payroll	(1,521)	57
Accrued excise taxes and fees	386	160
Other liabilities	(271)	(513)
<b>Net cash used in operating activities</b>	<b>(19,752)</b>	<b>(12,270)</b>
<b>Cash flows from investing activities:</b>		
Acquisition of patents, trademarks, and licenses	(250)	(179)
Acquisition of property, plant and equipment	(1,182)	(388)
Acquisition, net of cash acquired and debt assumed	(1,253)	—
Investment in Change Agronomy Ltd.	(682)	—
Sales and maturities of short-term investment securities	38,880	19,037
Purchase of short-term investment securities	(15,787)	(58,137)
<b>Net cash provided by (used in) investing activities</b>	<b>19,726</b>	<b>(39,667)</b>
<b>Cash flows from financing activities:</b>		
Payment on note payable	(804)	(538)
Proceeds from note payable issuance	1,994	2,653
Other financing activities	(6)	—
Net proceeds from option exercise	174	1,259
Net proceeds from warrant exercise	—	11,782
Net proceeds from issuance of common stock	—	38,258
Taxes paid related to net share settlement of RSUs	—	(469)
<b>Net cash provided by financing activities</b>	<b>1,358</b>	<b>52,945</b>
<b>Net increase in cash and cash equivalents</b>	<b>1,332</b>	<b>1,008</b>
<b>Cash and cash equivalents - beginning of period</b>	<b>1,336</b>	<b>1,029</b>
<b>Cash and cash equivalents - end of period</b>	<b>\$ 2,668</b>	<b>\$ 2,037</b>
<b>Supplemental disclosures of cash flow information:</b>		
Non-cash transactions:		
Patent and trademark additions included in accounts payable	\$ 3	\$ —
Property, plant and equipment additions included in accounts payable	\$ 76	\$ 9
Property, plant and equipment additions included in accrued expenses	\$ —	\$ 7
Right-of-use assets and corresponding operating lease obligations	\$ —	\$ 497
Patent and trademark additions included in accrued expenses	\$ 43	\$ 32
Panacea investment conversion	\$ —	\$ 12,485
Stock issued in connection with acquisition	\$ 51,653	\$ —

See accompanying notes to unaudited interim condensed consolidated financial statements.

**22nd CENTURY GROUP, INC.**  
**NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS**  
**June 30, 2022**  
**(Unaudited)**  
**Amounts in thousands, except for share and per-share data**

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

**Basis of Presentation** - The accompanying unaudited Condensed 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 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, 2022 are not necessarily indicative of the results that may be expected for the year ending December 31, 2022. The balance sheet as of December 31, 2021 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 condensed consolidated financial statements should be read in conjunction with the December 31, 2021 audited consolidated financial statements and the notes thereto contained in our Annual Report on Form 10-K for the year ended December 31, 2021, as filed with the Securities and Exchange Commission on March 1, 2022.

**Principles of Consolidation** - The accompanying Condensed Consolidated Financial Statements include the accounts of (i) 22nd Century Group, Inc. (“22nd Century Group”); (ii) its five wholly-owned subsidiaries, 22nd Century Limited, LLC (“22nd Century Ltd”), NASCO Products, LLC (“NASCO”), Botanical Genetics, LLC (“Botanical Genetics”), 22nd Century Group Canada, Inc. (“22nd Century Group Canada”) and 22nd Century Group Europe B.V. (“22nd Century Group Europe”); (iii) two wholly-owned subsidiaries of 22nd Century Ltd, Goodrich Tobacco Company, LLC (“Goodrich Tobacco”) and Heracles Pharmaceuticals, LLC (“Heracles Pharma”); and (iv) two wholly-owned subsidiaries of Botanical Genetics, 22nd Century Holdings, LLC (“22nd Century Holdings”) and Golden Acquisition Sub, LLC. This group of subsidiaries is referred to as collectively with 22nd Century Group as the “Company”. All intercompany accounts and transactions have been eliminated.

**Nature of Business** – 22nd Century Group is a leading agricultural biotechnology and intellectual property company focused on tobacco harm reduction, reduced nicotine tobacco and improving health and wellness through plant science. 22nd Century Ltd performs research and development related to the level of nicotine and other nicotinic alkaloids in tobacco plants and Botanical Genetics performs research and development related to hemp/cannabis plants. Goodrich Tobacco and Heracles Pharma are business units for the Company’s potential modified exposure tobacco products. NASCO is a federally licensed tobacco products manufacturer, a subsequent participating member under the tobacco Master Settlement Agreement (“MSA”) between the tobacco industry and the settling states under the MSA and operates the Company’s tobacco products manufacturing business in North Carolina. 22nd Century Holdings owns and operates Needle Rock Farms. 22nd Century Group Canada and 22nd Century Group Europe were formed for future international business opportunities. As described in Note 2, on May 13, 2022, the Company acquired substantially all of the assets of GVB Biopharma’s (“GVB”) business dedicated to hemp-based cannabinoid extraction, refinement, contract manufacturing and product development, which allows the Company to leverage its expertise in receptor and plant science to develop its hemp/cannabis franchise and add significant scale in the immediate term.

**Reclassifications** – As a result of the acquisition of GVB (see Note 2), the Company has revised the presentation and classification of depreciation and amortization in the Condensed Consolidated Statement of Operations and Comprehensive Loss to conform with the acquiree, as follows:

	Three Months Ended June 30, 2021			Six Months Ended June 30, 2021		
	As originally reported	Reclass	Revised	As originally reported	Reclass	Revised
<b>Revenue, net</b>	\$ 8,371	\$ —	\$ 8,371	\$ 15,177	\$ —	\$ 15,177
<b>Cost of goods sold</b>	7,785	138	7,923	13,944	270	14,214
Gross profit	586	(138)	448	1,233	(270)	963
<b>Operating expenses:</b>						
Research and development	746	157	903	1,447	312	1,759
Sales, general and administrative	6,177	8	6,185	11,006	9	11,015
Depreciation	150	(150)	—	288	(288)	—
Amortization	153	(153)	—	303	(303)	—
Total operating expenses	7,226	(138)	7,088	13,044	(270)	12,774
<b>Operating loss</b>	<u>\$ (6,640)</u>	<u>\$ —</u>	<u>\$ (6,640)</u>	<u>\$ (11,811)</u>	<u>\$ —</u>	<u>\$ (11,811)</u>

**COVID-19 Pandemic** – The COVID-19 pandemic has had a minimal impact on the Company’s operations in 2021 and thus far in 2022, but there is a risk that state and federal authorities’ responses to the COVID-19 pandemic or another pandemic may disrupt our business in the future. Our executive leadership team and staff are monitoring this evolving situation and its impacts on our business. We will continue to monitor the local, state, and federal guidance regarding our business practices.

**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.

**Acquisitions** - The Company accounts for acquisitions under the acquisition method of accounting for business combinations. Results of operations of acquired companies are included in the Company’s results of operations as of the respective acquisition dates. The purchase price of each acquisition is allocated to the net assets acquired based on estimates of their fair values at the date of the acquisition. Any purchase price in excess of these net assets is recorded as goodwill.

All direct acquisition-related costs are expensed as incurred and are recognized in operating expenses on the Company’s Condensed Consolidated Statements of Operations and Comprehensive Loss. The allocation of purchase price in certain cases may be subject to revision based on the final determination of fair values during the measurement period, which may be up to one year from the acquisition date.

**Goodwill** - Goodwill represents the excess of cost over the fair value of identifiable net assets of a business acquired and is assigned to one or more reporting units. The Company’s reporting unit is the same as its reportable segment, which is the consolidated entity. The Company tests its reporting unit’s goodwill for impairment at least annually as of the measurement date year and between annual tests if an event occurs or circumstances change that would more-likely-than-not reduce the fair value of a reporting unit below its carrying amount.

During the six months ended June 30, 2022, there were no indicators of impairment and accordingly a goodwill impairment test was not performed.

**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 rights to use.



The Company's capitalized intellectual property costs are amortized using the straight-line method over the remaining statutory life of the patent assets in each of the Company's patent families, which have estimated expiration dates ranging from 2026 to 2043. 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 have expected expiration dates from 2028 through 2036. The Company believes that costs associated with becoming a signatory to the MSA, costs related to the acquisition of a predicate cigarette brand and trademarks have indefinite lives. As such, no amortization is taken. At each reporting period, the Company evaluates whether events and circumstances continue to support the indefinite-lived classification.

**Impairment of Long-Lived Assets** – On at least an annual basis, 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. If any such indicators are present, the Company will test for recoverability in accordance with ASC 360-*Property, plant, and equipment* or ASC 350-*Intangibles, Goodwill, and Other*.

Intangible assets subject to amortization are reviewed for strategic importance and commercialization opportunity prior to expiration. If it is determined that the asset no longer supports the Company's strategic objectives and/or will not be commercially viable prior to expiration, the asset is impaired. In addition, the Company will assess the expected future undiscounted cash flows for its intellectual property based on consideration of future market and economic conditions, competition, federal and state regulations, and licensing opportunities. If the carrying value of such assets are not recoverable, the carrying value will be reduced to fair value and record the difference as an impairment.

Indefinite-lived intangible asset carrying values are reviewed at least annually or more frequently if events or changes in circumstances indicate that it is more likely than not that an impairment exists. The Company first performs a qualitative assessment and considers its current strategic objectives, future market and economic conditions, competition, and federal and state regulations to determine if an impairment is more likely than not. If it is determined that an impairment is more likely than not, a quantitative assessment is performed to compare the asset carrying value to fair value and record the difference as an impairment.

**Fair Value of Financial Instruments** - The Company's financial instruments include cash and cash equivalents, short-term investment securities, accounts receivable, investments, a promissory note receivable, accounts payable, accrued expenses, and notes payable. The carrying values of these financial instruments approximate fair value. The Company carries cash equivalents, short-term investment securities, investments, and certain other assets at fair value which is described further in Note 5.

**Investments** – The Company's equity securities are recorded at fair value with changes in fair value included within the statement of operations. Equity securities without a readily determinable market value are carried at cost less impairment, adjusted for observable price changes in orderly transactions for an identical or similar investment of the same issuer. The Company considers certain debt instruments as available-for-sale securities, and accordingly, all unrealized gains and losses incurred on the short-term investment securities (the adjustment to fair value) are recorded in other comprehensive income or loss on the Company's Condensed Consolidated Statements of Operations and Comprehensive Loss.

**Stock Based Compensation** – The Company's Omnibus Incentive Plan allows for various types of equity-based incentive awards. Stock based compensation expense is based on awards that are expected to vest over the requisite service periods and are based on the fair value of the award measured on the grant date. Vesting requirements vary for directors, officers, and employees. In general, time-based awards fully vest after one year for directors and vest in equal annual installments over a three-year period for officers and employees. Performance-based awards vest upon achievement of certain milestones. Forfeitures are accounted for when they occur.

**Income Taxes** - For interim income tax reporting, due to a full valuation allowance on net deferred tax assets, no income tax expense or benefit is recorded unless it is an unusual or infrequently occurring item. The tax effects of unusual or infrequently occurring items, including changes in judgment about valuation allowances and effects of changes in tax laws or rates, are reported in the interim period in which they occur.

**Segments** - As a result of the acquisition of GVB (see Note 2) and ongoing evaluation of our strategy across our plant science and intellectual property platform (tobacco, hemp/cannabis, and hops), the Company is reevaluating its operating and reporting segments, which is expected to be finalized by the end of fiscal 2022 once the corporate and management reporting structure realignment is completed. As of June 30, 2022, the Company operates its business in one single operating and reportable segment. The Company's chief operating decision maker assesses, measures, and reviews the operating and financial results at the consolidated level for the entire platform.

**Recent Accounting Pronouncements** – In June 2016, the FASB issued ASU 2016-13, “*Measurement of Credit Losses on Financial Instruments*.” The standard replaces the incurred loss model with the current expected credit loss (CECL) model to estimate credit losses for financial assets measured at amortized cost and certain off-balance sheet credit exposures. The CECL model requires companies to estimate credit losses expected over the life of the financial assets based on historical experience, current conditions and reasonable and supportable forecasts. The provisions of the ASU have an effective date for the Company beginning after December 15, 2022 and interim periods within those fiscal years. The Company is evaluating the expected impacts of the ASU.

We consider the applicability and impact of all ASUs. If the ASU is not listed above, it was determined that the ASU was either not applicable or would have an immaterial impact on our financial statements and related disclosures.

## **NOTE 2. – BUSINESS ACQUISITIONS**

On May 13, 2022, the Company entered into and closed the transactions contemplated by the Reorganization and Acquisition Agreement (the “Reorganization Agreement”) with GVB Biopharma (“GVB”). Under the terms of the Reorganization Agreement, the Company acquired substantially all of the assets of GVB’s business dedicated to hemp-based cannabinoid extraction, refinement, contract manufacturing and product development (the “Transaction”). The acquisition of GVB allows the Company to leverage its expertise in receptor and plant science to develop its hemp/cannabis franchise and add significant scale in the immediate term. GVB is included in the Company’s consolidated single operating and reportable segment.

The aggregate consideration for the Transaction consisted of (i) the assumption of approximately \$4,637 of debt, (ii) the assumption and direct payment of certain third-party transaction costs incurred by GVB in connection with the Transaction totaling approximately \$1,753 and (iii) the issuance to GVB of 32,900,000 unregistered shares of common stock of the Company (the “Shares”) with a fair value of \$1,653. The fair value of the Company’s common stock issued as part of the consideration was determined based upon the opening stock price of the Company’s shares as of the acquisition date. The Shares are subject to a lock-up and restrictions on transfer for at least six months following closing and thereafter, one-third of the Shares will be released from the lock-up after six months, one-third will be released from the lock-up after nine months and the remainder will be released after one year. Certain Shares held by former preferred holders of GVB stock have limited registration rights associated with approximately 8,959,533 total Shares.

The Transaction was structured as a tax-free re-organization pursuant to Internal Revenue Code Section 368(a)(1)(c). Accordingly, the tax basis of net assets acquired will retain their carry over tax basis and holding period in purchase accounting.

The Company has provisionally estimated fair values for the assets purchased, liabilities assumed and purchase consideration as of the date of the acquisition. The determination of estimated fair value required management to make significant estimates and assumptions based on information that was available at the time the Condensed Consolidated Financial Statements were prepared. The amounts reported are considered provisional as the Company is completing the valuations that are required to allocate the purchase price in areas such as property and equipment, intangible assets, deferred taxes and goodwill. As a result, the allocation of the provisional purchase price may change in the future, which could be material.

The preliminary purchase price allocation was as follows:

Cash	\$	500
Accounts receivable		2,944
Inventory		5,292
Other assets		519
Property, plant & equipment		7,935
Operating leases right-of-use assets, net		864
Deferred income taxes		635
Goodwill and intangibles		44,200
Accounts payable and accrued expenses		(2,952)
Other current liabilities		(1,002)
Lease liabilities		(892)
Auto loans		(387)
Bridge loan		(4,250)
Fair value of net assets acquired	\$	<u>53,406</u>

The preliminary fair values of the assets acquired were determined using one of three valuation approaches: market, income or cost. The selection of a particular method for a given asset depended on the reliability of available data and the nature of the asset, among other considerations.

#### ***Current Assets and Liabilities***

The fair value of current assets and liabilities, excluding inventory, was assumed to approximate their carrying value as of the acquisition date due to the short-term nature of these assets and liabilities.

The fair value of in-process and finished goods inventory acquired was estimated by applying a version of the income approach called the comparable sales method. This approach estimates the fair value of the assets by calculating the potential revenue generated from selling the inventory and subtracting from it the costs related to the completion and sale of that inventory and a reasonable profit allowance for these remaining efforts. Based upon this methodology, the Company recorded the inventory acquired at fair value resulting in an increase in inventory of \$978, which was fully amortized in the three month period ended June 30, 2022 in the Condensed Consolidated Statement of Operations and Comprehensive Loss.

#### ***Property, Plant and Equipment***

The Company has not completed its valuation of the property, plant and equipment purchased. As a result, no adjustment has been recorded to property, plant and equipment to step-up the basis to fair value nor has any amortization of any fair value adjustment been made to these Condensed Consolidated Financial Statements.

#### ***Leases***

The Company recognized operating lease liabilities and operating lease right-of-use assets for office and manufacturing facilities in accordance with ASC 842, *Leases*. The Company concluded there were no off-market lease intangibles on the date of acquisition based on an evaluation of market rents per square foot, geographic location and nature of use of the underlying asset, among other considerations.

#### ***Intangible assets***

The Company has not completed its valuation of identifiable intangible assets. As a result, no allocation has been recorded in the provisional purchase price allocation, nor has any amortization of any fair value adjustment been made to these Condensed Consolidated Financial Statements. The Company initially has determined identifiable intangible assets acquired include customer lists and tradename.

### Goodwill

The excess of the purchase price over the fair value of net tangible and intangible assets acquired and liabilities assumed was allocated to goodwill. A variety of factors contributed to the goodwill recognized, including the value of GVB's assembled work force, the incremental value resulting from GVB's capabilities in hemp/cannabis, operational synergies across the plant science platform, and the expected revenue growth over time that is attributable to increased market share from future products and customers. Goodwill recorded in the transaction will be non-deductible.

### Actual and Pro Forma (unaudited) disclosures

The results of operations and assets from the GVB acquisition have been included in the Company's Condensed Consolidated financial statements since the acquisition date. For the three and six months ended June 30, 2022, net revenues related to GVB were \$4,506 and net loss was \$1,474.

The following unaudited pro forma information presents the consolidated results of operations of the Company and assumes the acquisition occurred on January 1, 2021:

	Three Months Ended		Six Months Ended	
	June 30,		June 30,	
	2022	2021	2022	2021
Revenue, net	\$ 18,122	\$ 16,208	\$ 34,180	\$ 29,666
Net loss	\$ (11,831)	\$ (6,545)	\$ (19,578)	\$ (11,932)
Net loss per common share - basic and diluted	\$ (0.06)	\$ (0.03)	\$ (0.10)	\$ (0.07)
Weighted average common shares outstanding - basic and diluted	\$ 197,550	\$ 187,711	\$ 196,808	\$ 182,464

The unaudited pro forma results are presented for illustrative purposes only and do not reflect the realization of potential cost savings, and any related integration costs. Certain costs savings may result from the acquisition; however, there can be no assurance that these cost savings will be achieved. These unaudited pro forma results do not purport to be indicative of the results that would have been obtained, or to be a projection of results that may be obtained in the future. These unaudited pro forma results include certain adjustments, primarily due to amortization expense due to the fair value adjustment of inventory, acquisition related costs and the impact of income taxes on the pro forma adjustments.

### Acquisition costs

During the six months ended June 30, 2022, direct costs incurred as a result of the acquisition of \$39 were expensed as incurred and included in Sales, General and Administrative in the Condensed Consolidated Statements of Operations and Comprehensive Loss.

### NOTE 3. - INVENTORY

Inventories are valued at the lower of historical cost or net realizable value. Cost is determined using an average cost method for tobacco leaf inventory and raw materials inventory. Standard cost is primarily used for finished goods inventory. Cost of hemp biomass consists of initial third-party acquisition costs plus analytical testing costs. Costs of extracted and hemp oil inventory are comprised of initial acquisition cost of the biomass and all direct and indirect processing costs including labor related costs, consumables, materials, packaging supplies, utilities, facility costs, analytical testing costs, and production related depreciation. 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, 2022 and December 31, 2021 consisted of the following:

	June 30, 2022	December 31, 2021
Raw materials	\$ 7,337	\$ 2,634
Work in process	1,021	—
Finished goods	1,660	247
	<u>\$ 10,018</u>	<u>\$ 2,881</u>

#### NOTE 4. – INVESTMENTS & OTHER ASSETS

The total carrying value of the Company’s investments and other assets at June 30, 2022 and December 31, 2021 consisted of the following:

	June 30, 2022	December 31, 2021
Panacea Life Sciences Holdings, Inc. common stock	\$ 644	\$ 2,340
Aurora stock warrants	—	5
Change Agronomy Ltd. ordinary shares	682	—
Total investments	<u>\$ 1,326</u>	<u>\$ 2,345</u>

#### *Investment in Panacea Life Sciences Holdings, Inc.*

On December 3, 2019, the Company entered into a securities purchase agreement with Panacea Life Sciences, Inc. (“Panacea”) whereby the Company acquired shares of Panacea Series B preferred stock; a convertible note receivable with a \$7,000 face value; and a warrant to purchase additional shares of Series B preferred stock.

On June 30, 2021, the Company entered into a Promissory Note Exchange Agreement with Panacea and a Securities Exchange Agreement with Panacea, Exactus, Inc. (“Exactus”) and certain other Panacea shareholders. Pursuant to the Securities Exchange Agreement, Exactus fully acquired Panacea. These transactions effected the (i) conversion of all of the Company’s Series B Preferred Stock in Panacea into 91,016,026 shares of common stock in Exactus valued at \$9,102 as of June 30, 2021 and (ii) the conversion of the Company’s existing debt in Panacea by converting the outstanding \$7,000 principal balance convertible note receivable and all accrued but unpaid interest thereon for fee simple ownership of Needle Rock Farms 24 acres in Delta County, Colorado) and equipment valued at \$2,248, \$500 in Panacea’s Series B Preferred Stock (which was subsequently converted to Exactus common stock under the Securities Exchange Agreement; this balance is reflected in final shares as stated above), and a new \$4,300 promissory note (the “Promissory note receivable”) with a maturity date of June 30, 2026 and a 0% interest rate. The Promissory note receivable is with a related party of Panacea and is fully secured by a first priority lien on Panacea’s headquarters located in Golden, Colorado. All other rights and obligations of the Company in Panacea and Panacea’s affiliate, Quintel-MC Incorporated, were terminated by this transaction—including all warrant rights and obligations for future investment. The conversion was recorded as a non-monetary transaction, based on the fair value of the assets received, and resulted in a gain of \$2,548 which was included within the Condensed Consolidated Statements of Operations and Comprehensive Loss as “Gain on Panacea investment conversion” during 2021.

The Promissory note receivable was issued at a value of \$684 (\$4,300 face value less \$616 discount) and is included within Other assets on the Condensed Consolidated Balance Sheets. As of June 30, 2022 and December 31, 2021, the Promissory note receivable balance was \$3,800 and \$3,741, respectively. The Company intends to hold the Promissory note receivable to maturity and the associated discount will be amortized into interest income over the term of the note. The ownership of Needle Rock Farms and related equipment is included within Property, plant, and equipment, net on the Condensed Consolidated Balance Sheets. The common shares of Exactus, Inc. are considered equity securities in accordance with ASC 321 and are recorded at fair value—changes in fair value will be included within the statement of operations and comprehensive loss. See Note 5 for additional information on the fair value measurements.

On October 25, 2021, Exactus announced the completion of a 1 for 28 reverse stock split as well as an entity name change to Panacea Life Sciences Holdings, Inc. (OTCQB: PLSH). As a result of the reverse stock split, our 91,016,026 shares were adjusted to 3,250,573 shares.

***Investment in Change Agronomy Ltd.***

On December 10, 2021, the Company entered into a subscription agreement to invest £500 (pounds sterling, in thousands), in exchange for 592,888 ordinary shares of Change Agronomy Ltd. ("CAL"), a private company existing under the laws of England, at a price per share of £0.84333. CAL is a vertically integrated sustainable industrial hemp business that combines genetics with leading agronomic techniques and infrastructure to provide full-service industrial hemp products to multiple global end markets. CAL presently has operations in Manitoba, Canada, and Italy. This equity investment was part of an Offer for Subscription by CAL for a minimum total of £3,000 at the same price per ordinary share. Approximately U.S. \$682 in funds were wired to CAL on January 26, 2022, and our investment equated to approximately 1.8% of CAL's total equity.

In accordance with ASU 2019-04, a foreign currency-denominated equity investments that are measured using the measurement alternative are nonmonetary items that should be remeasured using their historical exchange rates. Accordingly, for the three and six-month periods ended June 30, 2022, there is no foreign currency exchange gain or loss recorded in the Condensed Consolidated Statement of Operations and Comprehensive Loss related to the investment in Change Agronomy Ltd.

During the three and six months ended June 30, 2022 and 2021, respectively, there were no impairment triggering events identified for investments.

**NOTE 5. – FAIR VALUE MEASUREMENTS AND SHORT-TERM INVESTMENTS**

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 following table presents information about our assets and liabilities measured at fair value as of June 30, 2022 and December 31, 2021, and indicates the fair value hierarchy of the valuation techniques the Company utilized to determine such fair value:

	Fair Value June 30, 2022			Total
	Level 1	Level 2	Level 3	
<b>Assets</b>				
Short-term investment securities:				
Money market funds	\$ 1,559	\$ —	\$ —	\$ 1,559
Corporate bonds	—	22,015	—	22,015
Total short-term investment securities	\$ 1,559	\$ 22,015	\$ —	\$ 23,574
Investments:				
Panacea Life Sciences Holdings, Inc. common shares	\$ 644	\$ —	\$ —	\$ 644
Change Agronomy Ltd. ordinary shares	—	—	682	682
Total investments	\$ 644	\$ —	\$ 682	\$ 1,326

	Fair Value December 31, 2021			Total
	Level 1	Level 2	Level 3	
<b>Assets</b>				
Short-term investment securities:				
Money market funds	\$ 8,919	\$ —	\$ —	\$ 8,919
Corporate bonds	—	38,481	—	38,481
Total short-term investment securities	\$ 8,919	\$ 38,481	\$ —	\$ 47,400
Investments:				
Panacea Life Sciences Holdings, Inc. common shares	\$ 2,340	\$ —	\$ —	\$ 2,340
Aurora stock warrants	—	—	5	5
Total investments	\$ 2,340	\$ —	\$ 5	\$ 2,345

Money market mutual funds are valued at their daily closing price as reported by the fund. Money market mutual funds held by the Company are open-end mutual funds that are registered with the SEC that generally transact at a stable \$1.00 Net Asset Value (“NAV”) representing its estimated fair value. On a daily basis the fund’s NAV is determined by the fund based on the amortized cost of the funds underlying investments.

Corporate bonds are valued using pricing models maximizing the use of observable inputs for similar securities.

The investment in Panacea Life Sciences Holdings Inc. common shares is considered an equity security with a readily determinable fair value. The fair value is determined using the quotable market price as of the last trading day of the fiscal quarter.

The investment in Change Agronomy Ltd. is in a privately held company and its stock does not have a readily determinable fair value; therefore, the investment is carried at cost less impairment, adjusted for observable price changes in orderly transactions for an identical or similar investment of the same issuer.

The Company recognized interest income on short-term investment securities recorded in Interest income, net on the Condensed Consolidated Statement of Operations and Comprehensive Loss during the three months ended June 30, 2022 and 2021 of \$116 and \$31, respectively, and during the six months ended June 30, 2022 and 2021 of \$264 and \$57, respectively.

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The following table sets forth a summary of the changes in fair value of the Company's Level 3 investments for the six months ended June 30, 2022:

Fair Value at December 31, 2021	\$	5
Unrealized loss on Aurora stock warrants		(5)
Investment in Change Agronomy Ltd. ordinary shares		682
Fair Value at June 30, 2022	\$	<u>682</u>

The following tables set forth a summary of the Company's available-for-sale debt securities from amortized cost basis to fair value as of June 30, 2022 and December 31, 2021:

	Available for Sale Debt Securities June 30, 2022			
	Amortized Cost Basis	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Corporate bonds	\$ 22,539	\$ —	\$ (524)	\$ 22,015

	Available for Sale Debt Securities December 31, 2021			
	Amortized Cost Basis	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Corporate bonds	\$ 38,643	\$ 1	\$ (163)	\$ 38,481

The following table sets forth a summary of the Company's available-for-sale securities at amortized cost basis and fair value by contractual maturity as of June 30, 2022 and December 31, 2021:

	Available for Sale Debt Securities			
	June 30, 2022		December 31, 2021	
	Amortized Cost Basis	Fair Value	Amortized Cost Basis	Fair Value
Due in one year or less	\$ 20,529	\$ 20,066	\$ 8,286	\$ 8,280
Due after one year through five years	2,010	1,949	30,357	30,201
	<u>\$ 22,539</u>	<u>\$ 22,015</u>	<u>\$ 38,643</u>	<u>\$ 38,481</u>

**NOTE 6. – GOODWILL AND OTHER INTANGIBLE ASSETS, NET**

*Goodwill*

The change in the carrying amount of goodwill during fiscal year 2022 was as follows:

Balance at January 1, 2022	\$	—
GVB acquisition (see Note 2)		44,200
Balance at June 30, 2022	\$	<u>44,200</u>



*Intangible Assets*

Total intangible assets at June 30, 2022 and December 31, 2021 consisted of the following:

	June 30, 2022	December 31, 2021
Intangible assets, net		
Patent and trademark costs	\$ 6,287	\$ 5,991
Less: accumulated amortization	(3,503)	(3,303)
Patent and trademark costs, net	2,784	2,688
License fees	3,876	3,876
Less: accumulated amortization	(3,503)	(3,303)
License fees, net	2,554	2,679
MSA signatory costs	2,202	2,202
License fee for predicate cigarette brand	350	350
	<u>\$ 7,890</u>	<u>\$ 7,919</u>

See Note 2 “Business Acquisitions” for additional details regarding intangible assets acquired during 2022 as a result of the acquisition of GVB.

Amortization expense relating to the above intangible assets for the three and six months ended June 30, 2022 amounted to \$63 and \$324, respectively (\$153 and \$303, respectively, for the three and six months ended June 30, 2021).

**NOTE 7. – NOTES AND LOANS PAYABLE**

The table below outlines our notes payable balances as of June 30, 2022 and December 31, 2021:

	June 30, 2022	December 31, 2021
D&O insurance	\$ 1,953	\$ 596
Vehicle loans	125	—
Bridge loan	4,250	—
Total current notes and loans payable	<u>\$ 6,328</u>	<u>\$ 596</u>
Long-term vehicle loans	<u>\$ 253</u>	<u>\$ —</u>

Estimated future principal payments to be made under the above notes and loans payable as of June 30, 2022 are as follows:

Remainder of 2022	\$ 5,642
2023	751
2024	122
2025	59
2026	7
	<u>\$ 6,581</u>

Accretion of non-cash interest expense amounted to \$0 for the three and six months ended June 30, 2022 and \$2 and \$4, respectively, for the three and six months ended June 30, 2021.

*D&O Insurance*

During the second quarter of 2022, the Company renewed its Director and Officer (“D&O”) insurance for a one-year policy premium totaling \$2,394. The Company paid \$400 as a premium down payment and financed the remaining \$1,994 of policy premiums over ten months at a 3.25% annual percentage rate.

During the second quarter of 2021, the Company renewed its D&O insurance for a one-year policy premium totaling \$3,315. The Company paid \$662 as a premium down payment and financed the remaining \$2,653 of policy premiums over nine months at a 3.49% annual percentage rate.

*GVB Bridge Note*

In connection with the acquisition of GVB (see Note 2), the Company assumed the outstanding principal balance of 12% secured promissory note in the principal amount of \$4,250 (“GVB Bridge Note”). The maturity date of the GVB Bridge Note is October 30, 2022. The GVB Bridge Note is secured by GVB’s accounts receivable and all other GVB corporate assets.

*Vehicle Loans*

The Company has various vehicle loans with monthly payments ranging from \$0.5 to \$2.1, interest rates ranging from 0% to 11%, and maturity dates ranging from March 2023 to September 2026.

**NOTE 8. – CAPITAL RAISE AND WARRANT EXERCISE**

*2021 Capital Raise*

On June 7, 2021, the Company and an investor entered into a securities purchase agreement relating to the issuance and sale of shares of common stock pursuant to which the investor purchased 10,000,000 shares of common stock at \$4.00 per share. The net proceeds to the Company from the offering, after deducting placement agent fees and offering expenses, was \$38,206.

*Warrant Exercise*

During the first quarter of 2021, the Company’s prior warrant holders exercised all 11,293,211 outstanding warrants for cash in exchange for common stock. In connection with these exercises, the Company received net proceeds of \$11,782.

**NOTE 9. - COMMITMENTS AND CONTINGENCIES**

**License agreements and sponsored research**– The Company has entered into various license, sponsored research, collaboration, and other agreements (the “Agreements”) with various counter parties in connection with the Company’s plant biotechnology business relating to tobacco, hemp/cannabis and hops. The schedule below summarizes the Company’s commitments, both financial and other, associated with each Agreement. Costs incurred under the Agreements are generally recorded as research and development expenses on the Company’s Condensed Consolidated Statements of Operations and Comprehensive Loss.

Commitment	Counter Party	Product Relationship	Commitment Type	Future Commitments					Total
				2022	2023	2024	2025	2026 & After	
Research Agreement	KeyGene	Hemp / Cannabis	Contract fee	\$ 1,729	\$ 1,860	\$ 1,828	\$ 1,414	\$ 1,630	\$ 8,461 (1)
License Agreement	NCSU	Tobacco	Minimum annual royalty	50	50	50	50	550	750 (2)
License Agreement	NCSU	Tobacco	Minimum annual royalty	50	50	50	50	450	650 (2)
Sublicense Agreement	Anandia Laboratories, Inc.	Hemp / Cannabis	Annual license fee	—	10	10	10	100	130 (3)
Research Agreement	Cannametrix	Hemp / Cannabis	Contract fee	—	667	666	—	—	1,333 (4)
Consulting Agreements	Various	Various	Contract fee	629	870	746	—	—	2,245 (5)
				<u>\$ 2,458</u>	<u>\$ 3,507</u>	<u>\$ 3,350</u>	<u>\$ 1,524</u>	<u>\$ 2,730</u>	<u>\$ 13,569</u>

- (1) Exclusive agreement with the Company in the field of the *Cannabis Sativa L.* plant. The initial term of the agreement was five years with an option for an additional two years. On April 30, 2021, the Company and KeyGene entered into a First Amended and Restated Framework Collaborative Research Agreement which extended the agreement term, from first-quarter 2024 to first-quarter 2027, and preserves the Company's option for an additional 2-year extension, now through first quarter of 2029. On March 30, 2022, the Company and KeyGene entered into a new Framework Collaborative Research Agreement for a term of three years at an aggregate cost of \$1,830 in the field related to the hops plant.

The Company will exclusively own all results and all intellectual property relating to the results of the collaboration with KeyGene (the "Results"). The Company will pay royalties in varying amounts to KeyGene relating to the Company's commercialization in the stated fields of each agreement. The Company has also granted KeyGene a license to commercialize the Results outside of each field and KeyGene will pay royalties in varying amounts to the Company relating to KeyGene's commercialization of the Results outside of each field.

- (2) The minimum annual royalty fee is credited against running royalties on sales of licensed products. The Company is also responsible for reimbursing NCSU for actual third-party patent costs incurred, including capitalized patent costs and patent maintenance costs. These costs vary from year to year and the Company has certain rights to direct the activities that result in these costs.
- (3) The Company is also responsible for the payment of certain costs, including, capitalized patent costs and patent maintenance costs, a running royalty on future net sales of products made from the sublicensed intellectual property, and a sharing of future sublicensing consideration received from sublicensing to third parties in all countries except for Canada. Anandia retains all patent rights, and is responsible for all patent maintenance, in Canada.
- (4) On March 11, 2022, the Company expanded its research agreement with Cannamatrix for hemp/cannabis product development, formulation, and validation for a three-year period at an aggregate cost of \$2,000.
- (5) General corporate consulting agreements.

**Litigation** - The Company is subject to litigation arising from time to time in the ordinary course of its business. The Company does not expect that the ultimate resolution of any pending legal actions will have a material effect on its consolidated results of operations, financial position, or cash flows. However, litigation is subject to inherent uncertainties. As such, there can be no assurance that any pending legal action, which the Company currently believes to be immaterial, will not become material in the future. 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 related expenses. The Company will then continue to monitor the matter for further developments that could affect the amount of any such accrued liability.

#### *Class Action*

On January 21, 2019, Matthew Jackson Bull, a resident of Denver, Colorado, filed a Complaint against the Company, the Company's then Chief Executive Officer, Henry Sicignano III, and the Company's then Chief Financial Officer, John T. Brodfuehrer, in the United States District Court for the Eastern District of New York entitled: Matthew Bull, Individually and on behalf of all others similarly situated, v. 22nd Century Group, Inc., Henry Sicignano III, and John T. Brodfuehrer, Case No. 1:19 cv 00409.

On January 29, 2019, Ian M. Fitch, a resident of Essex County Massachusetts, filed a Complaint against the Company, the Company's then Chief Executive Officer, Henry Sicignano III, and the Company's then Chief Financial Officer, John T. Brodfuehrer, in the United States District Court for the Eastern District of New York entitled: Ian Fitch, Individually and on behalf of all others similarly situated, v. 22nd Century Group, Inc., Henry Sicignano III, and John T. Brodfuehrer, Case No. 2:19 cv 00553.

On May 28, 2019, the plaintiff in the Fitch case voluntarily dismissed that action. On August 1, 2019, the Court in the Bull case issued an order designating Joseph Noto, Garden State Tire Corp, and Stephens Johnson as lead plaintiffs.

On September 16, 2019, pursuant to a joint motion by the parties, the Court in the Bull case transferred the class action to federal district court in the Western District of New York, where it remains pending as Case No. 1:19-cv-01285.

Plaintiffs in the Bull case filed an Amended Complaint on November 19, 2019 that alleges three counts: Count I sues the Company and Messrs. Sicignano and Brodfuehrer and alleges that the Company's quarterly and annual reports, SEC filings, press releases and other public statements and documents contained false statements in violation of Section 10(b) of the Securities Exchange Act and Rule 10b-5; Count II sues Messrs. Sicignano and Brodfuehrer pursuant to Section 10(b) of the Securities Exchange Act and Rule 10b5(a) and (c); and Count III sues Messrs. Sicignano and Brodfuehrer for the allegedly false statements pursuant to Section 20(a) of the Securities Exchange Act. The Amended Complaint seeks to certify a class, and unspecified compensatory and punitive damages, and attorney's fees and costs.

On January 29, 2020, the Company and Messrs. Sicignano and Brodfuehrer filed a Motion to Dismiss the Amended Complaint. On July 31, 2020, the Court heard oral arguments on the motion to dismiss. On January 14, 2021, the Court granted motion, dismissing all claims with prejudice. The Plaintiffs filed a notice of appeal on February 12, 2021 to the Second Circuit Court of Appeals. The Second Circuit granted an expedited briefing schedule and Plaintiff's/Appellant's was filed on April 12, 2021 and the Company's was filed on May 17, 2021. The Second Circuit heard oral arguments on September 2, 2021. On May 24, 2022, the Second Circuit issued its opinion affirming in part, and reversing in part, the District Court's dismissal order. The Second Circuit affirmed the District Court's dismissal of the claims relating to the non-disclosure of stock promotion articles, but reversed the District Court's dismissal order of the claims alleging the non-disclosure of an SEC investigation. The Second Circuit noted in its opinion, however, that the District Court had not addressed certain arguments raised by the Company and Messrs. Sicignano and Brodfuehrer in the Motion to Dismiss the Amended Complaint as to these remaining claims, and remanded the case to the District Court to address these arguments for the dismissal of the remaining claims. The Company and Messrs. Sicignano and Brodfuehrer are now filing a renewed motion to dismiss the remaining claims in the Amended Complaint to address the arguments not previously addressed by the District Court. Briefing on the renewed motion to dismiss is to be completed on October 12, 2022, following which the parties will await a District Court decision on the motion to dismiss, or an order scheduling a hearing for oral argument on the motion.

We believe that the claims are frivolous, meritless and that the Company and Messrs. Sicignano and Brodfuehrer have substantial legal and factual defenses to the remaining claims. We intend to vigorously defend the Company and Messrs. Sicignano and Brodfuehrer against such claims.

#### *Shareholder Derivative Cases*

On February 6, 2019, Melvyn Klein, a resident of Nassau County New York, filed a shareholder derivative claim against the Company, the Company's then Chief Executive Officer, Henry Sicignano III, the Company's Chief Financial Officer, John T. Brodfuehrer, and each member of the Company's Board of Directors in the United States District Court for the Eastern District of New York entitled: Melvyn Klein, derivatively on behalf of 22nd Century Group v. Henry Sicignano, III, Richard M. Sanders, Joseph Alexander Dunn, Nora B. Sullivan, James W. Cornell, John T. Brodfuehrer and 22nd Century Group, Inc., Case No. 1:19 cv 00748. Mr. Klein brings this action derivatively alleging that (i) the director defendants supposedly breached their fiduciary duties for allegedly allowing the Company to make false statements; (ii) the director defendants supposedly wasted corporate assets to defend this lawsuit and the other related lawsuits; (iii) the defendants allegedly violated Section 10(b) of the Securities Exchange Act and Rule 10b 5 promulgated thereunder for allegedly approving or allowing false statements regarding the Company to be made; and (iv) the director defendants allegedly violated Section 14(a) of the Securities Exchange Act and Rule 14a 9 promulgated thereunder for allegedly approving or allowing false statements regarding the Company to be made in the Company's proxy statement.

On February 11, 2019, Stephen Mathew filed a shareholder derivative claim against the Company, the Company's then Chief Executive Officer, Henry Sicignano III, the Company's Chief Financial Officer, John T. Brodfuehrer, and each member of the Company's Board of Directors in the Supreme Court of the State of New York, County of Erie, entitled: Stephen Mathew, derivatively on behalf of 22nd Century Group, Inc. v. Henry Sicignano, III, John T. Brodfuehrer, Richard M. Sanders, Joseph Alexander Dunn, James W. Cornell, Nora B. Sullivan and 22nd Century Group, Inc., Index No. 801786/2019. Mr. Mathew brings this action derivatively generally alleging the same allegations as in the Klein case. The Complaint seeks declaratory relief, unspecified monetary damages, corrective corporate governance actions, and attorney's fees and costs. On August 15, 2019, the Court consolidated the Mathew and Klein actions pursuant to a stipulation by the parties (Western District of New York, Case No. 1-19-cv-0513). We believe that the claims are frivolous, meritless and that the Company and the individual defendants have substantial legal and factual defenses to the claims. We intend to vigorously defend the Company and the individual defendants against such claims.

On June 10, 2019, Judy Rowley filed a shareholder derivative claim against the Company, the Company's then Chief Executive Officer, Henry Sicignano III, the Company's Chief Financial Officer, John T. Brodfuehrer, and each member of the Company's Board of Directors in the Supreme Court of the State of New York, County of Erie, entitled: Judy Rowley, derivatively on behalf of 22nd Century Group, Inc. v. Henry Sicignano, III, Richard M. Sanders, Joseph Alexander Dunn, Nora B. Sullivan, James W. Cornell, John T. Brodfuehrer, and 22nd Century Group, Inc., Index No. 807214/2019. Ms. Rowley brings this action derivatively alleging that the director defendants supposedly breached their fiduciary duties by allegedly allowing the Company to make false statements. The Complaint seeks declaratory relief, unspecified monetary damages, corrective corporate governance actions, and attorney's fees and costs. We believe that the claims are frivolous, meritless and that the Company and the individual defendants have substantial legal and factual defenses to the claims. We intend to vigorously defend the Company and the individual defendants against such claims. On September 13, 2019, the Court ordered the litigation stayed pursuant to a joint stipulation by the parties.

On January 15, 2020, Kevin Broccuto filed a shareholder derivative claim against the Company, the Company's then Chief Executive Officer, Henry Sicignano III, the Company's Chief Financial Officer, John T. Brodfuehrer, and certain members of the Company's prior Board of Directors in the District Court of the State of Nevada, County of Clark, entitled: Kevin Broccuto, derivatively on behalf of 22nd Century Group, Inc. v. James W. Cornell, Richard M. Sanders, Nora B. Sullivan, Henry Sicignano, III, and John T. Brodfuehrer, Case No. A-20-808599. Mr. Broccuto brings this action derivatively alleging three counts: Count I alleges that the defendants breached their fiduciary duties; Count II alleges they committed corporate waste; and Count III that they were unjustly enriched, by allegedly allowing the Company to make false statements.

On February 11, 2020, Jerry Wayne filed a shareholder derivative claim against the Company, the Company's then Chief Executive Officer, Henry Sicignano III, the Company's Chief Financial Officer, John T. Brodfuehrer, and certain members of the Company's prior Board of Directors in the District Court of the State of Nevada, County of Clark, entitled: Jerry Wayne, derivatively on behalf of 22nd Century Group, Inc. v. James W. Cornell, Richard M. Sanders, Nora B. Sullivan, Henry Sicignano, III, and John T. Brodfuehrer, Case No. A-20-808599. Mr. Wayne brings this action derivatively alleging generally the same allegations as the Broccuto case. The Complaint seeks unspecified monetary damages, corrective corporate governance actions, disgorgement of alleged profits and imposition of constructive trusts, and attorney's fees and costs. The Complaint also seeks to declare as unenforceable the Company's Bylaw requiring derivative lawsuits to be filed in Erie County, New York, where the Company is headquartered.

On March 25, 2020, the Court ordered the Broccuto and Wayne cases consolidated and stayed pursuant to a joint stipulation from the parties. On June 27, 2022, the Court ordered that the stay continue until thirty (30) days after the District Court rules on the renewed Motion to Dismiss the Amended Complaint in the Noto Class Action case. We believe that the claims are frivolous, meritless and that the Company and the individual defendants have substantial legal and factual defenses to the claims. We intend to vigorously defend the Company and the individual defendants against such claims.

**NOTE 10 – EQUITY- BASED COMPENSATION**

On May 20, 2021, the Company’s shareholders approved the 22nd Century Group, Inc. 2021 Omnibus Incentive Plan (the “2021 Plan”). The 2021 Plan allows for the granting of equity awards to eligible individuals over the life of the 2021 Plan, including the issuance of up to 5,000,000 shares of the Company’s common stock, in addition to any remaining shares under the Company’s 2014 Omnibus Incentive Plan pursuant to awards under the 2021 Plan. The 2021 Plan 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 the 2021 Plan and the number of shares of common stock to underlie each such award under the 2021 Plan. As of June 30, 2022, the Company had available 5,226,948 shares remaining for future awards under the 2021 Plan.

*Restricted Stock Units (“RSUs”).* We typically grant RSUs to employees and non-employee directors. The following table summarizes the changes in unvested RSUs from December 31, 2021 through June 30, 2022.

	Unvested RSUs	
	Number of Shares in thousands	Weighted Average Grant-date Fair Value \$ per share
Unvested at December 31, 2021	3,165	\$ 2.50
Granted	2,607	\$ 2.19
Vested	(1,664)	\$ 2.39
Forfeited	(71)	\$ 2.40
Unvested at March 31, 2022	4,037	\$ 2.35
Vested	(75)	\$ 0.95
Forfeited	(127)	\$ 2.20
Unvested at June 30, 2022	3,835	\$ 2.38

The fair value of RSUs that vested during the six months ended June 30, 2022 was approximately \$,941 based on the stock price at the time of vesting.

*Stock Options.* Our outstanding stock options were valued using the Black-Scholes option-pricing model on the date of the award. A summary of all stock option activity since December 31, 2021 is as follows:

	Number of Options in thousands	Weighted Average Exercise Price \$ per share	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding at December 31, 2021	5,171	\$ 1.65		
Outstanding at March 31, 2022	5,171	\$ 1.65	3.4 years	\$ 4,107
Exercised	(150)	\$ 1.16		
Forfeited	(100)	\$ 1.39		
Expired	(9)	\$ 2.76		
Outstanding at June 30, 2022	4,912	\$ 1.67	3.3 years	\$ 3,241
Exercisable at June 30, 2022	4,755	\$ 1.64	3.2 years	\$ 3,241

The intrinsic value of a stock option is the amount by which the current market value or the market value upon exercise of the underlying stock exceeds the exercise price of the option.

The Company did not grant any stock options in 2022. In 2021, the weighted average of fair value assumptions used in the Black-Scholes option-pricing model for such grants were as follows:

	2021
Risk-free interest rate (1)	0.54 %
Expected dividend yield (2)	— %
Expected volatility (3)	87.92 %
Expected term of stock options (4)	4.09 years

- (1) The risk-free interest rate is based on the period matching the expected term of the stock options based on the U.S. Treasury yield curve in effect on the grant date.
- (2) The expected dividend yield is assumed as zero. The Company has never paid cash dividends nor does it anticipate paying dividends in the foreseeable future.
- (3) The expected volatility is based on historical volatility of the Company's stock.
- (4) The expected term represents the period of time that options granted are expected to be outstanding based on vesting date and contractual term.

*Compensation Expense.* The Company recognized the following compensation costs, net of actual forfeitures, related to RSUs and stock options:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Sales, general, and administrative	\$ 1,059	\$ 1,197	\$ 2,230	\$ 1,677
Research and development	47	48	89	75
<b>Total RSUs and stock option compensation</b>	<b>\$ 1,106</b>	<b>\$ 1,245</b>	<b>\$ 2,319</b>	<b>\$ 1,752</b>

As of June 30, 2022, unrecognized compensation expense amounted to \$7,290 which is expected to be recognized over a weighted average period of approximately 1.3 years. In addition, there is approximately \$682 of unrecognized compensation expense that requires the achievement of certain milestones which are not yet probable.

#### **NOTE 11. – REVENUE RECOGNITION**

##### *Tobacco*

The Company recognizes revenue when it satisfies a performance obligation by transferring control of the product to a customer. The Company's customer contracts consist of obligations to manufacture the customers' branded filtered cigars and cigarettes. For certain contracts, the performance obligation is satisfied over time as the Company determines, due to contract restrictions, it does not have an alternative use of the product and it has an enforceable right to payment as the product is manufactured. The Company recognizes revenue under those contracts at the unit price stated in the contract based on the units manufactured. Revenue from the sale of the Company's products, which include excise taxes and shipping and handling charges billed to customers, is recognized net of cash discounts, sales returns and allowances. There was no allowance for discounts or returns and allowances at June 30, 2022 and December 31, 2021. Excise taxes recorded in Cost of Goods Sold on the Condensed Consolidated Statement of Operations and Comprehensive Loss for the three months ended June 30, 2022 and 2021 was \$2,834 and \$2,858, respectively. Excise taxes for the six months ended June 30, 2022 and 2021 was \$5,552 and \$4,921, respectively.

*Hemp/Cannabis*

Product sales are generally recognized when the Company satisfies the obligations and transfers control over the goods to the customer. Revenue is recorded at the estimated amount of consideration to which the Company expects to be entitled. For certain sales where the company licenses its formulations for hemp-based products, it recognizes revenue once the products have been sold to customers by the licensee.

When applicable, the Company pays imports duties in the various countries to which it sends products to and bills the customer for such import costs. The Company recognizes the import duties as part of revenue in accordance with ASC 606.

There are no material sales provisions or volume discounts that provide variability in recording revenue amounts.

*Disaggregation of Revenue*

The Company's net revenue is derived from customers located primarily in the United States and is disaggregated by major product line because the Company believes it best depicts the nature, amount, and timing of revenue and cash flows. Revenue recognized from Tobacco products transferred to customers over time represented 49% and 59%, respectively, of total Tobacco revenue for the three and six months ended June 30, 2022, compared to 71% and 68%, respectively, for the three and six months ended June 30, 2021. Revenue recognized from Hemp/cannabis products is all recognized point-in-time.

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Tobacco	\$ 9,971	\$ 8,371	\$ 19,015	\$ 15,177
Hemp/cannabis	4,506	—	4,506	—
Total Revenue, net	<u>\$ 14,477</u>	<u>\$ 8,371</u>	<u>\$ 23,521</u>	<u>\$ 15,177</u>

The following table presents net revenues by significant customers, which are defined as any customer who individually represents 10% or more of disaggregated product line net revenues:

	Three Months Ended June 30,				Six Months Ended June 30,			
	2022		2021		2022		2021	
	Tobacco	Hemp/cannabis	Tobacco		Tobacco	Hemp/cannabis	Tobacco	
Customer A	23.44 %	*	29.06 %		22.61 %	*	24.70 %	
Customer B	18.36 %	*	30.60 %		19.09 %	*	30.39 %	
Customer C	10.80 %	*	13.91 %		11.17 %	*	16.71 %	
Customer D	23.12 %	*	*		25.44 %	*	*	
Customer E	*	*	11.94 %		*	*	14.53 %	
Customer F	12.32 %	*	*		11.68 %	*	*	
Customer G	*	11.04 %	*		*	11.04 %	*	
Customer H	*	29.15 %	*		*	29.15 %	*	
All other customers	11.97 %	59.81 %	14.50 %		10.00 %	59.81 %	13.67 %	

\*Less than 10% of product line's total revenues for the period.



*Contract Assets and Liabilities*

Unbilled receivables (contract assets) represent revenues recognized for performance obligations that have been satisfied but have not been billed. These receivables are included as Accounts receivable, net on the Condensed Consolidated Balance Sheets. Customer payment terms vary depending on the terms of each customer contract, but payment is generally due prior to product shipment or within extended credit terms up to twenty-one (21) days after shipment. Deferred Revenue (contract liabilities) relate to down payments received from customers in advance of satisfying a performance obligation. This deferred revenue is included as Deferred income on the Condensed Consolidated Balance Sheets.

Total contract assets and contract liabilities are as follows:

	June 30, 2022	December 31, 2021
Unbilled receivables	\$ 492	\$ 178
Deferred revenue	(1,083)	(119)
Net contract assets (liabilities)	<u>\$ (591)</u>	<u>\$ 59</u>

During the six months ended June 30, 2022, the Company recognized \$59 of revenue that was included in the contract asset balance as of December 31, 2021. During the six months ended June 30, 2021, the Company recognized \$77 of revenue that was included in the contract liability balance as of December 31, 2020.

**NOTE 12. – EARNINGS PER SHARE**

The following table sets forth the computation of basic and diluted loss per common share for the three and six months ended June 30, 2022 and 2021, respectively. Outstanding options, and RSUs were excluded from the calculation of diluted EPS as the effect was antidilutive.

	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
	(in thousands, except for per-share data)			
Net loss	\$ (11,498)	\$ (4,174)	\$ (20,415)	\$ (9,204)
Weighted average common shares outstanding - basic and diluted	182,004	154,811	172,632	149,564
Net loss per common share - basic and diluted	<u>\$ (0.06)</u>	<u>\$ (0.03)</u>	<u>\$ (0.12)</u>	<u>\$ (0.06)</u>
Anti-dilutive shares are as follows as of June 30:				
Options	4,912	5,776	4,912	5,776
Restricted stock units	3,835	3,185	3,835	3,185
	<u>8,747</u>	<u>8,961</u>	<u>8,747</u>	<u>8,961</u>

## NOTE 13. – SUBSEQUENT EVENTS

### *Capital Raise*

On July 21, 2022, the Company and certain institutional investors (the “Investors”) entered into a securities purchase agreement (the “Securities Purchase Agreement”) relating to the issuance and sale of shares of common stock pursuant to a registered direct offering (the “Registered Offering” and, together with the Private Placement (as defined below), the “Offerings”). The Investors purchased approximately \$35,000 of shares, consisting of an aggregate of 17,073 shares of common stock at a purchase price of \$2.05 per share. The Securities Purchase Agreement provides that, subject to certain exceptions, until the earlier of (i) 90 days after the closing of the Offerings or (ii) the trading day following the date that the Company’s common stock’s closing price exceeds \$3.00 for a period of 10 consecutive trading days, neither the Company nor any of its subsidiaries will issue, enter into any agreement to issue or announce the issuance or proposed issuance of any shares of common stock or common stock equivalents.

The Securities Purchase Agreement provides that, subject to certain exceptions, for a period of six months following the closing of the Offerings, the Company will be prohibited from effecting or entering into an agreement to effect any issuance by the Company or any of its subsidiaries of common stock or common stock equivalents (or a combination of units thereof) involving a variable rate transaction, which generally includes any transaction in which the Company (i) issues or sells any debt or equity securities that are convertible into, exchangeable or exercisable for, or include the right to receive additional shares of common stock either (A) at a conversion price or exchange rate that is based upon and/or varies with the trading prices of or quotations for the shares of common stock at any time after the initial issuance of such securities, or (B) with a conversion, exercise or exchange price that is subject to being reset at some future date after the initial issuance of such debt or equity security or upon the occurrence of specified or contingent events directly or indirectly related to the business of the Company or the market for the common stock or (ii) enters into any agreement, whereby the Company may issue securities at a future determined price.

The net proceeds to the Company from the Offerings, after deducting the fees of Dawson James Securities, Inc. (the “Placement Agent”), the fees of Roth Capital Partners, its financial advisor, and the Company’s estimated offering expenses, were approximately \$32,500. The Offerings closed on July 25, 2022.

Pursuant to the Securities Purchase Agreement, in a concurrent private placement, the Company issued and sold to the Investors warrants (the “Warrants”) to purchase up to 17,073 shares of common stock (the “Private Placement”). The Warrants are exercisable immediately upon issuance at an exercise price of \$2.05 per share of common stock, subject to adjustment in certain circumstances, and expire on July 25, 2027.

Under the Securities Purchase Agreement, the Company has agreed to file a registration statement on Form S-3 providing for the resale of the Warrant Shares by the Investors within 45 days of July 21, 2022.

The Company agreed to pay the Placement Agent a cash fee of 5.0% of the gross proceeds from the Offerings, an additional 5.0% cash fee of any cash exercise of the Warrants and to reimburse the Placement Agent for its expenses, including the reimbursement of legal fees up to an aggregate of \$25. The engagement agreement with the Placement Agent requires the Company to indemnify the Placement Agent and certain of its affiliates against certain customary liabilities.

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

*The following Management’s Discussion and Analysis of Financial Condition and Results of Operations (“MD&A”) should be read in conjunction with, our audited consolidated financial statements, the accompanying notes and the MD&A included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2021, as well as our Condensed Consolidated Financial Statements and the accompanying notes included in Item 1 of this Form 10-Q. Note references are to the notes to Condensed Consolidated Financial Statements included in Item 1 of this Form 10-Q.*

*For purposes of this MD&A, 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. In addition, dollars are in thousands, except per share data or unless otherwise specified.*

### **Forward Looking Statements**

Except for historical information, all of the statements, expectations, and assumptions contained in this section are forward-looking statements. Forward-looking statements typically contain terms such as “anticipate,” “believe,” “consider,” “continue,” “could,” “estimate,” “expect,” “explore,” “foresee,” “goal,” “guidance,” “intend,” “likely,” “may,” “plan,” “potential,” “predict,” “preliminary,” “probable,” “project,” “promising,” “seek,” “should,” “will,” “would,” and similar expressions. Actual results might differ materially from those explicit or implicit in forward-looking statements. Important factors that could cause actual results to differ materially are set forth in “Risk Factors” in our Annual Report on Form 10-K filed on March 1, 2022, in our Quarterly Report on 10-Q for the three months ended March 31, 2022 filed on May 5, 2022 and herein in Part II – Item 1. We undertake no obligation to publicly update or revise any forward-looking statement as a result of new information, future events, or otherwise, except as otherwise required by law. All information provided in this quarterly report is as of the date hereof, and we assume no obligation to and do not intend to update these forward-looking statements, except as required by law.

### **Business Overview**

22nd Century Group, Inc. (Nasdaq: XXII) is a leading agricultural biotechnology company focused on tobacco harm reduction, reduced nicotine tobacco, and improving health and wellness through plant science. In tobacco, hemp/cannabis, and hop plants, we use modern plant breeding technologies, including genetic engineering, gene-editing, and molecular breeding to deliver solutions for the life science and consumer products industries by creating new, proprietary plants with optimized alkaloid and flavonoid profiles as well as improved yields and valuable agronomic traits. Our mission in tobacco is to reduce the harm caused by smoking by introducing adult smokers to our proprietary Very Low Nicotine Content “VLNC” tobacco and cigarette products. The Company received the first and only Food and Drug Administration (“FDA”) Modified Risk Tobacco Product (“MRTP”) authorization of a combustible cigarette in December 2021. In April 2022, we made our VLN<sup>®</sup> reduced nicotine cigarettes available through a pilot conducted in select Circle K stores in Chicago. Our mission in hemp/cannabis is to develop proprietary varieties of hemp with valuable cannabinoid and terpene profiles and other superior agronomic traits, with potential applications in life sciences and consumer products. Our mission in hops is to leverage our experience with tobacco and hemp/cannabis, a close hop relative, and accelerate the development of proprietary specialty hop varieties or valuable traits, with potential applications in life sciences and consumer products. We have a significant intellectual property portfolio of issued patents and patent applications relating to both tobacco and hemp/cannabis plants and have further resources directed towards creating and securing additional intellectual property pertaining to all three franchises.

### **Tobacco Franchise Overview**

In tobacco, we have developed unique and proprietary bright and burley Very Low Nicotine Content (“VLNC”) tobaccos that grow with at least 95% less nicotine than tobacco used in conventional cigarettes. In 2011, we developed our SPECTRUM<sup>®</sup> variable nicotine research cigarettes in collaboration with independent researchers, officials from the U.S. Food and Drug Administration (“FDA”), the National Institute on Drug Abuse (“NIDA”), which is part of the National Institutes of Health (“NIH”), the National Cancer Institute (“NCI”), and the Centers for Disease Control and Prevention (“CDC”). Since 2011, we have provided more than 31.6 million variable nicotine research cigarettes for use in numerous independent clinical studies funded in large part by agencies of the United States federal government. These independent clinical studies are estimated to have been performed at a cost of more than \$125 million. The results of these independent clinical studies have been published in peer-reviewed publications (including the New England Journal of Medicine, the Journal of the American Medical Association, and many others) and indicate that our VLNC tobaccos have been associated with reductions in smoking, nicotine exposure and nicotine dependence with little to no evidence of compensatory smoking and without serious adverse events. Lists of published and on-going clinical studies using our variable nicotine research cigarettes are shown on our website at <https://www.xxii-century.com/vln-clinical-studies/published-clinical-studies-on-very-low-nicotine-content-vlnc-cigarettes> and <https://www.xxii-century.com/vln-clinical-studies/on-going-clinical-studies-on-very-low-nicotine-content-vlnc-cigarettes>. We do not incorporate third party studies or the information on our website into this quarterly report on Form 10-Q.

We believe that our proprietary reduced nicotine content cigarettes, sold under the brand name VLN<sup>®</sup>, have a large global market opportunity. According to a 2021 report by the Foundation for a Smoke Free World, global nicotine retail sales totaled approximately \$853 billion and of that, 84.1% was comprised of combustible cigarettes. According to the CDC and the World Health Organization (“WHO”), there are more than 1 billion global and 30 million U.S. adult smokers. CDC statistics go on to state that more than two-thirds of adult smokers want to quit, yet less than ten percent of them are able to quit successfully. Despite the proliferation of vape and other less harmful nicotine delivery systems, we believe that smokers are actively seeking alternatives to addictive combustible cigarettes. In our consumer perception studies, 60% of adult smokers indicated a likelihood to use VLN<sup>®</sup>.

Our VLN<sup>®</sup> cigarettes contain 95% less nicotine content than conventional cigarettes in a familiar combustible product format that replicates the conventional cigarette smoking experience, including the sensory and experiential elements of taste, scent, smell, and “hand-to-mouth” behavior. On average, the tobacco in VLN<sup>®</sup> cigarettes contain 0.5 milligrams of nicotine per gram of tobacco, an amount cited by the FDA, based on clinical studies, to be “minimally or non-addictive.” It is believed that the reduced nicotine levels in VLN<sup>®</sup> creates a dissociation between the act of smoking and the introduction of nicotine to the bloodstream, which helps adult smokers to smoke less.

Since 2011, our reduced nicotine content cigarettes have been used in more than 50 independent scientific clinical studies by universities and institutions. These studies show that smokers who use our products: (i) reduce their nicotine exposure and dependence, (ii) smoke fewer cigarettes per day, (iii) increase their number of smoke-free days, and (iv) double their quit attempts – all with minimal or no evidence of nicotine withdrawal or compensatory smoking. Our research cigarettes, SPECTRUM<sup>®</sup>, continue to be used in numerous independent, scientific studies to validate the enormous public health benefit identified by the FDA and others of implementing a national product standard requiring all cigarettes to contain “minimally or nonaddictive” levels of nicotine.

In December 2019, the FDA granted a Premarket Tobacco Application (“PMTA”) authorization for our reduced nicotine content cigarettes, giving us the ability to sell our product. On December 23, 2021, the FDA authorized the marketing of VLN<sup>®</sup> King and VLN<sup>®</sup> Menthol King reduced nicotine content cigarettes as Modified Risk Tobacco Products (MRTPs) with a modified exposure classification. In doing so, the FDA stated that VLN<sup>®</sup> - which smokes, tastes, and smells like a conventional cigarette but contains 95% less nicotine than conventional, highly addictive cigarettes – “help reduce exposure to, and consumption of, nicotine for smokers who use them.” In its marketing order granting the MRTP, the FDA authorized an additional fourth claim: “Helps You Smoke Less” that we must use in the advertising and on the packaging of all VLN<sup>®</sup> products where other approved claims are also used.

Following FDA authorization, we commenced activities to launch VLN<sup>®</sup> culminating in initial sales in April 2022 in the Chicago metro area through our retail pilot launch partner, Circle K. Our pilot in Chicago, at more than 150 Circle-K stores, will inform the anticipated rollout of VLN<sup>®</sup> to additional geographies where we will continue to position VLN<sup>®</sup> in the premium pricing segment of the cigarette market. During the second quarter 2022, the pilot and consumer studies have made clear that our approach focusing on awareness, education and trial is working with adult smokers. Our VLN<sup>®</sup> pilot in Chicago has exceeded our expectations driving us to accelerate and expand our launch. We are now testing specific offers designed to increase trial and repeat purchase among existing smokers looking to smoke less/reduce their nicotine consumption while also expanding our presence in Chicago and the State of Illinois. We are also expanding our VLN<sup>®</sup> launch to the state of Colorado ahead of plan. Colorado offers a reduced taxation rate for MRTP authorized products, providing a favorable cost structure for our VLN<sup>®</sup> products in that state compared to traditional premium cigarettes. In addition, we are working closely with a major consumer packaged goods (CPG) distributor and a long-standing specialty distributor covering convenience, grocery, and drug stores across the state, giving us full access to a broad range of more than 3,000 targeted statewide potential points of sale. As of August 9, 2022, we have secured regulatory authorizations to sell VLN<sup>®</sup> in 40 states and the District of Columbia. We have applications pending in all remaining states.

To meet anticipated demand for our VLN<sup>®</sup> products in the U.S. and elsewhere, we planted our largest ever VLN<sup>®</sup> tobacco crop in 2022, which includes our second-generation reduced nicotine tobacco plants. 22nd Century is already seeing higher yields, enhanced quality leaf, improved disease resistance, and a reduction in nutrient inputs. We have also expanded our existing manufacturing operations to increase capacity by 25%, including installation of a new production line and initiation of a second shift.

We also believe that recent political changes will likely be favorable to our business prospects from a policy priority and regulatory standpoint. Under the new administration and new leadership at the FDA and Center for Tobacco Products (“CTP”), we believe that the FDA will refocus on implementing a menthol ban on combustible high nicotine cigarettes and its ground-breaking Comprehensive Plan for Tobacco and Nicotine Regulation, in particular the Agency’s plan to cap the amount of nicotine in

combustible cigarettes to a “minimally or non-addictive” level. We believe that the MRTP authorization and the launch of VLN<sup>®</sup> serves as a starting point for the FDA’s proposed policies.

On January 27, 2022, the FDA posted an update on its FDA Voices site stating that it “remains on track” with its plans to prohibit menthol in combustible tobacco products. We continue to support upcoming FDA action and believe VLN<sup>®</sup> Menthol King reduced nicotine cigarettes could be exempted from the menthol ban to help current menthol smokers transition away from highly addictive nicotine cigarettes. The FDA published a proposed tobacco product standard to ban menthol as a characterizing flavor in cigarettes in April 2022. The proposed FDA rule includes a process for firms to request an exemption from the standard for specific products of certain types on a case-by-case basis, indicating “reduced nicotine” as an example of such exemption. On August 1, 2022, we submitted public comments in support of a tobacco product standard for menthol in cigarettes.

In June 2022, the FDA in a news release announced that the Biden-Harris Administration published plans for future regulatory action that includes the FDA’s plans to develop a proposed product standard that would establish a maximum nicotine level to reduce the addictiveness of cigarettes and certain other combusted tobacco products. A proposed rule for a tobacco product standard for nicotine level of certain tobacco products was published on June 21, 2022, in the Spring 2022 Unified Agenda of Regulatory and Deregulatory Actions.

We continue to iterate on our reduced nicotine technology as we believe that our next generation, non-GMO (genetically modified organism) plant research is the key to commercializing our reduced nicotine content tobacco and technology in international markets where non-GMO products are preferred, or GMO products are banned. Our patented, non-GMO technology can introduce very low nicotine traits into virtually any variety of tobacco, including bright, burley, and oriental. We have successfully applied our non-GMO technology to bright and burley varieties of tobacco and have initiated commercial growing activities for our non-GMO reduced nicotine varieties including, non-GMO VLN<sup>®</sup> bright and burley varieties. We anticipate production of our VLN<sup>®</sup> 2.0 American blend cigarettes beginning in 2023.

### **Hemp/Cannabis Franchise Overview**

In hemp/cannabis, we are developing proprietary hemp/cannabis varieties with increased levels of certain cannabinoids and other desirable agronomic traits with the goal of creating new and valuable intellectual property and plant lines.

Our activities in the United States involve only work with legal hemp in full compliance with U.S. federal and state laws. Hemp and the marijuana plants are part of the same cannabis genus, however, hemp does not have more than 0.3% dry weight content of delta-9-tetrahydrocannabinol (“THC”). While the 2018 Farm Bill legalized hemp and cannabinoids extracted from hemp in the U.S., such extracts remain subject to state laws and regulation by other U.S. federal agencies such as the FDA, U.S. Drug Enforcement Administration (“DEA”), and the U.S. Department of Agriculture (“USDA”). The same plant, with a higher THC content is marijuana, which is legal under certain state laws but not yet legal under U.S. federal law. The similarities between these plants can cause confusion. To reflect this difference in law, sometimes we refer to legal hemp and the legal hemp industry as hemp/cannabis to distinguish this as being separate and apart from marijuana/cannabis which is not legal under U.S. federal law. Our activities with legal hemp have sometimes been incorrectly perceived as us being involved in federally illegal marijuana/cannabis. This is not the case. In the United States, we work only with legal hemp in full compliance with federal and state laws, and outside the U.S., we operate in full compliance with the laws of each country in which we operate.

Our goal is to provide leading companies in the life science, consumer product, and pharmaceutical end-use markets with new, disruptive, and highly differentiated plant lines or ingredients (flower, extracts, distillates, isolates, etc.) derived from hemp/cannabis plants. Most existing hemp/cannabis plant lines do not exhibit the stable genetics, predictable yield, and specific composition of cannabinoids required to fully unlock the value of the hemp/cannabis industry. Our plant genetics and innovative upstream cannabinoid value chain provide for rapid development and optimization of plant products and scale-up as the industry evolves toward mass production.

In May 2022, we completed the acquisition of GVB Biopharma (“GVB”), a privately held contract development and manufacturing organization (CDMO). At the end of the second quarter 2022, integration of the companies is substantially complete, leading to an approximately doubling of our revenue going forward. GVB is believed to be one of the largest providers of hemp-derived active ingredients for the pharmaceutical and consumer goods industries worldwide based on total tonnage. GVB has industry leading market positions and expertise in all facets of the hemp/cannabis industry, which include: research and genetics, proprietary

cryogenic hemp extraction; refining, conversion, and product formulation technology; leading supplier of Active Pharmaceutical Ingredients (API); low-cost, scalable manufacturing capabilities; regulatory and compliance expertise; industry trusted high-quality products; current international capabilities

We believe that GVB's strengths complement our existing upstream and downstream value chains, which includes expertise in cannabinoid receptor science with CannaMetrix, plant research and proprietary genetics through its KeyGene partnership, breeding expertise with Extractas Bioscience (formerly Tasmanian Alkaloids PTY), and cultivation capabilities at Needle Rock Farms. The combination with 22nd Century gives us control of the product cycle from biomass to ingredients to finished goods.

The acquisition of GVB has expanded our global footprint adding U.S. and international assets and capabilities. GVB operates three primary manufacturing facilities that have significant capacity to support growth with limited capital expenditure. These three facilities are located in Grass Valley, Oregon (refinement facility), Las Vegas, Nevada (Private Label/Contract Manufacturing), and Prineville, Oregon (crude extraction). GVB's new Prineville, Oregon facility is one of the largest hemp extraction plants in the world, with expected CBD crude capacity exceeding 20,000 kg/month. The new facility is expected to be fully operational by the end of September when fresh biomass is available, allowing GVB greater vertical integration and improved gross margins as it ramps volume. The Company is actively pursuing additional business development through GVB's existing relationships to further accelerate its growth.

### **Hops Franchise Overview**

We are leveraging our experience with tobacco and hemp/cannabis to accelerate the development of proprietary specialty hop varieties with valuable competitive advantages to increase yields and distinctive aroma, flavor, nutraceutical and medicinal properties, and disease/pest resistance. We believe that our innovative upstream alkaloid plant value chain is critical to unlocking new disruptive hop plant varieties and IP at large-scale. We are leveraging research findings from the closely related hemp/cannabis plant and our strategic partnerships to support the development of our new technologies based on molecular breeding, flowering time, and double haploid breeding to accelerate the stabilization or creation of hop varieties. Industry reliance on high-risk traditional breeding techniques makes hops ripe for disruption with our new accelerated molecular breeding technologies and gene-editing tools.

Hops is a large global addressable market with well-established hops providers and consumer brands. We are actively engaged in discussions with multiple hops growers and consumer product partners to develop specific desired traits in leading hop strains that are already well-accepted by the brewing industry. We have an exclusive agreement with KeyGene for research with the hops plant. We believe hops presents a faster route to commercialization than tobacco and hemp/cannabis due to lower regulatory barriers.

Additional information about our business and operations is contained in our Annual Report on Form 10-K for the year ended December 31, 2021.

### *Corporate Business Highlights*

- R. Hugh Kinsman was appointed Chief Financial Officer on June 16, 2022, expanding his role at GVB Biopharma to include corporate financial leadership functions.
- John J. Miller joined our tobacco business in May 2022, to help achieve the full potential of our tobacco franchise. Mr. Miller was the President and CEO of Swisher International, Inc., the largest manufacturer and exporter of cigars and smokeless tobacco products in America.
- Dr. Calvin Treat joined the Company as our Chief Scientific Officer on May 23, 2022, further enhancing our deep expertise in plant-based biotechnology across all three of our plant franchises. Dr. Treat has led global plant biotechnology programs at Bayer and Monsanto, including corn, soybean, and cotton crop improvement technologies.

**Second Quarter 2022 Financial Highlights:**

- Net revenues for the second quarter of 2022 were \$14,477, an increase of 72.9% from \$8,371 in 2021. The increase was due to increased contract manufacturing volumes as well as the addition of GVB revenue for half of the second quarter.
  - Net revenue from tobacco related products was \$9,971, an increase of 19.1% from 2021.
  - Net revenue from hemp/cannabis related products was \$4,506, compared to \$0 in the prior year, reflecting a partial quarter of GVB revenue following the closing of the acquisition on May 13, 2022.
- Gross profit for the second quarter of 2022 was \$892, an increase of 99.1% compared \$448 in the prior year second quarter.
  - Tobacco gross margin of 10% in the second quarter compared to 5.3% in the prior year reflected a favorable change in mix of tobacco contract manufacturing volumes
  - Excluding the impact of the GVB acquisition, which included \$1.0 million of inventory step-up amortization, hemp/cannabis gross profit as a percentage of revenues for half of the second quarter would have been approximately 22%.
- Total operating expenses for the second quarter 2022 increased to \$11,368 compared to \$7,088 in the prior year driven by:
  - Sales, general and administrative expenses increased by approximately \$3.3 million compared to the prior year period. This was driven primarily by approximately \$1.3 million of GVB expenses, \$0.8 million of transactions costs in connection with the acquisition of GVB, and \$1.2 million of higher strategic consulting and marketing, legal and personnel expenses as we continue to expand the launch of VLN and build our executive management team.
  - Research and development expenses increased by approximately \$1.0 million compared to the prior year period, driven by costs associated with the Company's hemp/cannabis research programs. The Company's R&D investments are expected to continue in future quarters as the Company advances and accelerates the development of new, highly-differentiated hemp/cannabis plants and expands its R&D efforts in hops.
- Operating loss for the second quarter 2022 was \$10,476, compared to \$6,640 in the prior year period.
- Net loss in the second quarter of 2022 was \$11,498, representing a net loss per share of \$0.06.
- As of June 30, 2022, we had \$26,242 in cash, cash equivalents and short-term investments securities.

**Results of Operations**

***Quarter and Year-to-Date June 30, 2022 compared to Quarter and Year-to-Date June 30, 2021.***

*Amounts in thousands, except for share and per share data.*

***Revenue, net***

	Quarter-to-Date		Year-to-Date	
	June 30 2022	June 30 2021	June 30 2022	June 30 2021
Revenue, net	\$ 14,477	\$ 8,371	\$ 23,521	\$ 15,177
Dollar Change from Prior Year	\$ 6,106		\$ 8,344	

The increase in net revenue for the three months ended June 30, 2022, compared to the three months ended June 30, 2021, was due to an increase in tobacco revenues of contract manufactured cigarettes of \$1,680; which includes fulfillment of a SPECTRUM<sup>®</sup> cigarette order of \$306 offset by decreased sales of filtered cigars of \$80 and hemp/cannabis revenue due to the GVB acquisition of \$4,506.

The increase in net revenue for the six months ended June 30, 2022 was due to an increase in tobacco revenues of contract manufactured cigarettes of \$2,710 and increased filtered cigars of \$1,128 and hemp/cannabis revenues due to the GVB acquisition of \$4,506.

**Gross profit**

	Quarter-to-Date		Year-to-Date	
	June 30 2022	June 30 2021	June 30 2022	June 30 2021
Gross profit	\$ 892	\$ 448	\$ 1,200	\$ 963
Percent of Product Sales	6.2 %	5.4 %	5.1 %	6.3 %
Dollar Change from Prior Year	\$ 444		\$ 237	

The increase in gross profit and gross profit as a percent of sales for the three months ended June 30, 2022, compared to the three months ended June 30, 2021, was driven by improved tobacco revenues contract manufactured filtered cigar sales mix due to new customer contracts and price increases taken on contract manufactured cigarettes. Hemp/cannabis gross profit was negligible based on timing of the acquisition of GVB and inventory-step up amortization of \$978.

The increase in gross profit and gross profit as a percent of sales for the six months ended June 30, 2022, compared to the six months ended June 30, 2021, was primarily driven by improved tobacco revenue contract manufactured filtered cigar sales mix due to new customer contracts, cigarette price increases during the second quarter of 2021, and fulfillment of our SPECTRUM® cigarette order. Hemp/cannabis gross profit was negligible based on timing of the acquisition of GVB and inventory-step up amortization of \$978.

**Research and development (“R&D”) expense**

	Quarter-to-Date		Year-to-Date	
	June 30 2022	June 30 2021	June 30 2022	June 30 2021
Research and development	\$ 1,897	\$ 903	\$ 3,036	\$ 1,759
Percent of Product Sales	13.1 %	10.8 %	12.9 %	11.6 %
Dollar Change from Prior Year	\$ 994		\$ 1,277	

The increase in R&D expense for the three months ended June 30, 2022, compared to the three months ended June 30, 2021, was primarily due to increased consulting and professional services of \$463, license, royalty, and contract costs of \$425, personnel expense of \$70 and testing costs of \$21, offset by decreased patent expenses of \$23.

The increase in R&D expense for the six months ended June 30, 2022, compared to the six months ended June 30, 2021, was driven by an increase in R&D contract costs of \$748, consulting and professional services of \$480, and personnel expense of \$52. This decrease was partially offset by decreased patent expenses of \$20 and facilities expense of \$16 for the six months ended June 30, 2022, compared to the prior year period. We continue to prioritize our R&D activities to achieve our strategic and investment priorities.

**Sales, general and administrative expense**

	Quarter-to-Date		Year-to-Date	
	June 30 2022	June 30 2021	June 30 2022	June 30 2021
Sales, general and administrative	\$ 9,471	\$ 6,185	\$ 16,785	\$ 11,015
Percent of Product Sales	65.4 %	73.9 %	71.4 %	72.6 %
Dollar Change from Prior Year	\$ 3,286		\$ 5,770	

The increase in SG&A expense during the three months ended June 30, 2022, as compared to the three months ended June 30, 2021, was driven by additional SG&A costs of \$1,319 from GVB, one-time transaction costs related to the acquisition of



GVB of \$787, strategic consulting expenses of \$757, sales and marketing expenses of \$447, personnel expenses of \$155 and travel and entertainment of \$125. This was partially offset by decreased equity compensation expense of \$138 and insurance expenses of \$83 compared to the respective prior year period.

The increase in SG&A expense during the six months ended June 30, 2022, as compared to the six months ended June 30, 2021, was driven by additional SG&A costs of \$1,319 from GVB, one-time transaction costs related to the acquisition of GVB of \$839, increased strategic consulting expenses of \$2,037, legal fees of \$458, sales and marketing expenses of \$456, equity compensation expense of \$551, and travel and entertainment expenses of \$226. This was partially offset by decreased personnel expense of \$142 compared to the respective prior year period.

We will continue to incur incremental SG&A spending as growth and investment opportunities present themselves.

#### ***Gain on Panacea investment conversion***

On June 30, 2021, the Company entered into a Promissory Note Exchange Agreement with Panacea and a Securities Exchange Agreement with Panacea, Exactus, Inc. (“Exactus”) (OTCQB:EXDI) and certain other Panacea shareholders. Pursuant to the Securities Exchange Agreement, Exactus fully acquired Panacea. These transactions effect the (i) conversion of all of the Company’s existing Series B Preferred Stock in Panacea into 91,016,026 shares of common stock in Exactus valued at \$9,102 as of June 30, 2021 and (ii) the conversion of the Company’s existing debt in Panacea by converting the outstanding \$7,000 principal balance convertible note receivable and all accrued but unpaid interest thereon for fee simple ownership of Needle Rock Farms (224 acres in Delta County, Colorado) and equipment valued at \$2,248, \$500 in Panacea’s Series B Preferred Stock (which was subsequently converted to Exactus common stock under the Securities Exchange Agreement), and a new \$4,300 promissory note (the “Promissory note receivable”) with a maturity date of June 30, 2026 and a 0% interest rate. The Promissory note receivable is with a related party of Panacea and is fully secured by a first priority lien on Panacea’s headquarters located in Golden, Colorado.

The conversion was recorded as a non-monetary transaction, based on the fair value of the assets received, and resulted in a gain of \$2,548 which is included within the Condensed Consolidated Statements of Operations. Our shares of Exactus common stock were valued based on a closing share price of \$.10 per share as published on June 30, 2021. Our investment is described further within Note 4 to our financial statements included herein.

#### ***Unrealized gain (loss) on investment***

	Quarter-to-Date		Year-to-Date	
	June 30 2022	June 30 2021	June 30 2022	June 30 2021
Unrealized gain (loss) on investments	\$ (885)	\$ (176)	\$ (1,702)	\$ (140)
Percent of Product Sales	(6.1)%	(2.1)%	(7.2)%	(0.9)%
Dollar Change from Prior Year	\$ (709)		\$ (1,562)	

Unrealized gain (loss) on investment includes fair value adjustments for our investment in Aurora Cannabis Inc (“Aurora”) stock warrants and our investment in Panacea Life Sciences Holdings, Inc. (“PLSH”) common stock. Both investments are considered equity securities and are adjusted to fair value at each reporting period as discussed within Note 4 to our Condensed Consolidated Financial Statements included herein.

The warrants to purchase 81,164 shares of Aurora common stock were valued at \$0 as of June 30, 2022, using the Black-Scholes pricing model, which amounted to an unrealized loss of \$1 for the three months ended June 30, 2022, and an unrealized loss of \$5 for the six months ended June 30, 2022.

Our shares of PLSH common stock were valued based on the closing share price as of June 30, 2022. As of June 30, 2022, the shares were valued at \$644 which amounted to an unrealized loss of \$884 for the three months ended June 30, 2022, and an unrealized loss of \$1,697 for the six months ended June 30, 2022. Our investment in PLSH is a small microcap stock which can be subject to large market volatility resulting in fluctuations to our net loss and loss per share—due to unrealized gains or losses that will be recognized within the Condensed Consolidated Statements of Operations.

**Interest expense**

	Quarter-to-Date		Year-to-Date	
	June 30 2022	June 30 2021	June 30 2022	June 30 2021
Interest Expense	\$ (77)	\$ (14)	\$ (82)	\$ (21)
Percent of Product Sales	(0.5)%	(0.2)%	(0.4)%	(0.1)%
Dollar Change from Prior Year	\$ (63)		\$ (61)	

Interest expense decreased in 2022, as compared to the prior year period, primarily due to the reduction of note payable balances for our licenses which were fully paid off during the fourth quarter of 2021.

**Liquidity and Capital Resources**

	June 30 2022	December 31, 2021
Cash and cash equivalents	\$ 2,668	\$ 1,336
Short-term investment securities	\$ 23,574	\$ 47,400
Working capital	\$ 26,567	\$ 45,958

Cash, cash equivalents and short-term investment securities decreased by \$22,494 primarily as a result of cash used in operating activities, offset by proceeds of sales of short-term investment securities (and corresponding decrease).

**Working Capital**

As of June 30, 2022, we had working capital of approximately \$26,567 compared to working capital of approximately \$45,958 at December 31, 2021, a decrease of \$19,391. This decrease in working capital was primarily due to a \$9,705 decrease in net current assets and an increase in net current liabilities of \$9,686.

**Summary of Cash Flow**

	Six Months Ended June 30,	
	2022	2021
Cash provided by (used in):		
Operating activities	\$ (19,494)	\$ (12,270)
Investing activities	19,726	(39,667)
Financing activities	1,100	52,945
Net change in cash and cash equivalents	\$ 1,332	\$ 1,008

**Net cash (used in) operating activities**

Cash used in operating activities increased \$7,224 from \$12,270 in 2021 to \$19,494 in 2022. The primary driver for this increase was higher SG&A spending of \$5,770, a \$2,548 gain on the Panacea investment conversion that occurred in 2021, and an increase in cash used for working capital components related to operations in the amount of \$2,488 for the six months ended June 30, 2022, as compared to the six months ended June 30, 2021.

**Net cash provided by (used in) investing activities**

The decrease in cash used in investing activities of \$59,393 was primarily the result of a net increase in the net cash provided by our short-term investments in the amount of \$62,193 offset by an increase in the cash used for acquisition of property, plant and equipment and the acquisition of patents, trademarks and licenses in the amount of \$865 for the six months ended June 30, 2022, as compared to the six months ended June 30, 2021.

### ***Net cash provided by financing activities***

During the six months ended June 30, 2022, cash provided by financing activities decreased by \$51,845 resulting from (i) the net proceeds of \$11,782 resulting from the cash exercises of all outstanding warrants during the first quarter of 2021; (ii) net proceeds of \$38,258 resulting from a capital raise in June 2021; (iii) increased net proceeds from note payable issuances and payments of \$925; and (iv) net proceeds from stock option exercises of \$1,085. This decrease was partially offset by cash paid for taxes related to settlement of restricted stock units of \$469.

### ***Cash demands on operations***

Our principal sources of liquidity are our cash and cash equivalents, short-term investment securities, and cash generated from our Tobacco contract manufacturing business and Hemp/cannabis business. As of June 30, 2022, we had approximately \$26,242 of cash and cash equivalents and short-term investment securities which is a decrease of \$22,494 from December 31, 2021. This decrease was primarily due to the cash used in operating activities. As described below, on July 25, 2022, we completed a \$35,000 above-market registered direct offering with institutional investors generating net proceeds of approximately \$32,500 intended to accelerate the launch of our VLN® products.

Our short-term investment securities, along with the proceeds from the July 2022 capital raise and sustained Tobacco contract manufacturing and Hemp/cannabis sales, will provide sufficient resources for estimated contractual commitments, described further in Note 9 to our Condensed Consolidated Financial Statements included herein, and normal cash requirements for operations well beyond the next twelve months. The Company is selectively deploying capital to accelerate the launch of VLN®, expand tobacco manufacturing operations, invest in GVB's production capacity and increase inventory levels to meet growing demand for both hemp/cannabis and tobacco products and for research and development. 22nd Century's cash requirements are anticipated to decrease, reflecting higher sales volume for VLN® products through fiscal 2023 and continued organic growth of GVB's operations, providing adequate liquidity from the current balance sheet to complete its planned strategic initiatives.

### ***July 2022 Equity capital resources***

On July 25, 2022, we completed a capital raise through a registered direct offering and issued 17,073 shares of common stock for net cash proceeds of \$32,525. This excludes the proceeds, if any, from the exercise of the 17,073 warrants sold in the private placement that occurred concurrently with this offering. The offering proceeds will be used for expansion and acceleration of the launch of our VLN® reduced nicotine content tobacco cigarettes in additional markets, research and development expenses, procurement and development of additional intellectual property rights, working capital and general corporate purposes.

### ***Critical Accounting Policies and Estimates***

The preparation of our Condensed Consolidated Financial Statements in accordance with accounting principles generally accepted in the U.S. requires management to make estimates, assumptions and judgments that affect the amounts reported in the financial statements and accompanying notes. Our estimates, assumptions and judgments are based on historical experience and various other assumptions believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying amount of assets and liabilities that are not readily apparent from other sources. Making estimates, assumptions and judgments about future events is inherently unpredictable and is subject to significant uncertainties, some of which are beyond our control. Management believes the estimates, assumptions and judgments employed and resulting balances reported in the Condensed Consolidated Financial Statements are reasonable; however, actual results could differ materially.

### ***Business Combinations***

The Company accounts for business combinations in accordance with ASC Topic 805, *Business Combinations*. The fair value of the consideration paid is assigned to the underlying net assets of the acquired business based on the respective fair values of identifiable assets acquired and liabilities assumed on the date of acquisition. Any excess purchase price over the fair value of net assets acquired is recorded to goodwill. Determining the fair value of these items requires management's judgment and often also requires the use of independent valuation specialists. Fair value determinations and useful life estimates are based on, among other factors, estimates of expected future cash flows from revenues of the intangible assets acquired, estimates of appropriate discount rates used to present value expected future cash flows, estimated useful lives of the intangible assets acquired and other factors. The

judgments made in the determination of the estimated fair values assigned to the assets acquired and the liabilities assumed, as well as the estimated useful life of certain assets and liabilities, can materially impact the financial statements in periods after acquisition, such as through depreciation and amortization expense. For more information see Note 2 “Business Combinations” of the Notes to Condensed Consolidated Financial Statements.

There have been no other material changes to the information set forth in our Annual Report on Form 10-K for the year ended December 31, 2021.

#### **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, 2021.

#### **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:**

During the three months ended June 30, 2022, the Company's internal controls over financial reporting expanded to include those inherited from the acquisition of GVB, which are currently under evaluation by management. There were no additional changes in our internal control over financial reporting during the quarter ended June 30, 2022 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

## Part II. OTHER INFORMATION

### Item 1. Legal Proceedings

See Note 9 - Commitments and Contingencies – Litigation - to our Condensed Consolidated Financial Statements included in this Quarterly Report for information concerning our on-going litigation. In addition to the lawsuits described in Note 9, from time to time we may be involved in claims arising in the ordinary course of business. To our knowledge other than the cases described in Note 9 to our condensed consolidated financial statements, no material legal proceedings, governmental actions, investigations or claims are currently pending against us or involve us that, in the opinion of our management, could reasonably be expected to have a material adverse effect on our business and financial condition.

### Item 1A. Risk Factors

Except as set forth below in connection with our acquisition of GVB, there have been no material changes from the risk factors disclosed in Item 1A of Part I of our Annual Report on Form 10-K for the year ended December 31, 2021, as filed with the SEC on March 1, 2022 and in Item 1A or Part II of our Quarterly Report on Form 10-Q for the quarter ended March 31, 2022, as filed with the SEC on May 5, 2022.

#### Risk Factors Related to the Cannabis Industry

***We may be unable to successfully integrate GVB's operations into ours and, even if successfully integrated, we may be unable achieve the expected benefits of such acquisition.***

The integration of an acquired company requires, among other things, coordination of administrative functions, research and development operations, accounting and finance functions, and the expansion of information and management systems. Integration, especially a large integration such as the integration of GVB, may prove to be difficult due to the necessity of coordinating geographically separate organizations and integrating key personnel with disparate business backgrounds and accustomed to different corporate cultures. Any difficulties or problems encountered in the integration of GVB's business or operations could have a material adverse effect on our business.

We intend to continue to acquire businesses which we believe will help achieve our business objectives. The integration of an acquired company may cost more than we anticipate, and it is possible that we will incur significant additional unforeseen costs in connection with such integration. In addition, we may only be able to conduct limited due diligence on an acquired company's operations. Following an acquisition, we may be subject to liabilities arising from an acquired company's past or present operations and these liabilities may be greater than the warranty and indemnity limitations that we negotiate. Any liability that is greater than these warranty and indemnity limitations could have a negative impact on our financial condition.

Even if successfully integrated, there can be no assurance that our operating performance after an acquisition such as the acquisition of GVB will be successful or will fulfill management's objectives.

***We have limited supply sources for industrial hemp, and price increases or supply shortages of key raw materials could materially and adversely affect our business, financial condition and results of operations.***

Our hemp-based cannabinoid products are composed of certain key raw materials. If the prices of such raw materials increase significantly, it could result in a significant increase in our product development costs. If raw material prices increase in the future, we may not be able to pass on such price increases to our customers. A significant increase in the price of industrial hemp or other raw materials that cannot be passed on to customers could have a material adverse effect on our business, financial condition and results of operations.

Our success will depend upon the availability of industrial hemp and other raw materials that permit us to meet our labeling claims and quality control standards. The supply of our industrial hemp is subject to the same risks normally associated with agricultural production, such as climactic conditions, insect infestations and availability of manual labor or equipment for harvesting. Any significant delay in or disruption of the supply of raw materials could substantially increase the cost of such materials, could

require product reformulations, the qualification of new suppliers and repackaging and could result in a substantial reduction or termination by us of our sales of certain products, any of which could have a material adverse effect upon us. Accordingly, there can be no assurance that the disruption of our supply sources will not have a material adverse effect on us.

***Loss of key contracts with our customer and/or suppliers, renegotiation of such agreements on less favorable terms or other actions these third parties may take could harm our business.***

Most of our agreements with customers and suppliers of our industrial hemp and hemp-derived products are short term. The loss of these agreements, or the renegotiation of these agreements on less favorable economic or other terms, could limit our ability to procure raw material to manufacture and sell our products. This could negatively affect our ability to meet consumer demand for our products. Upon expiration or termination of these agreements, our competitors may be able to secure industrial hemp from our existing customers or suppliers which will put the company at a competitive disadvantage in the market.

***There is limited availability of clinical studies related to hemp-based products.***

Although hemp plants have a long history of human consumption, there is little long-term experience with human consumption of certain of these innovative product ingredients or combinations thereof in concentrated form. Although we perform research and/or tests the formulation and production of our products, there is limited clinical data regarding the safety and benefits of ingesting industrial hemp-based products. Any instance of illness or negative side effects of ingesting industrial hemp-based products would have a material adverse effect on our business and operations.

***Unfavorable interpretations of laws governing hemp processing activities could subject us to enforcement or other legal proceedings and limit our business and prospects.***

There are no express protections in the United States under applicable federal or state law for possessing or processing hemp biomass derived from lawful hemp not exceeding 0.3% THC on a dry weight basis and intended for use in finished product, but that may temporarily exceed 0.3% THC during the interim processing stages. While it is a common occurrence for hemp biomass to have variance in THC content during interim processing stages after cultivation but prior to use in finished products, there is risk that state or federal regulators or law enforcement could take the position that such hemp biomass is a Schedule I controlled substance in violation of the CSA and similar state laws. In the event that our operations are deemed to violate any laws, we could be subject to enforcement actions and penalties, and any resulting liability could cause us to modify or cease our operations.

***Costs associated with compliance with various laws and regulations could negatively impact our financial results.***

The manufacture, labeling and distribution of hemp-based cannabinoid products is regulated by various federal, state and local agencies. These governmental authorities may commence regulatory or legal proceedings, which could restrict our ability to market such products in the future. The FDA regulates our products to ensure that the products are not adulterated or misbranded. We may also be subject to regulation by other federal, state and local agencies with respect to our hemp-based products. Our advertising activities are subject to regulation by the FTC under the Federal Trade Commission Act. In recent years, the FTC and state attorneys general have initiated numerous investigations of dietary and nutritional supplement companies and products. Any actions or investigations initiated against us by governmental authorities or private litigants could have a material adverse effect on our business, financial condition and results of operations. Any actions or investigations initiated against us by governmental authorities or private litigants could have a material adverse effect on our business, financial condition and results of operations.

The shifting regulatory environment necessitates building and maintaining of robust systems to achieve and maintain compliance in multiple jurisdictions and increases the possibility that we may violate one or more of the legal requirements applicable to our business and products. If our operations are found to be in violation of any applicable laws or regulations, we may be subject to penalties, including, without limitation, civil and criminal penalties, damages, fines, the curtailment or restructuring of our operations, injunctions, or product withdrawals, recalls or seizures, any of which could adversely affect our ability to operate our business, our financial condition and results of operations.

***Uncertainty caused by potential changes to legal regulations could impact the use and acceptance of hemp-derived products.***

There is substantial uncertainty and differing interpretations and opinions among federal, state and local regulatory agencies, legislators, academics and businesses as to the scope of operation of Farm Bill-compliant hemp programs relative to the emerging regulation of cannabinoids and the Controlled Substances Act. These different opinions include, but are not limited to, the regulation of cannabinoids by the DEA and/or the FDA, and the extent to which manufacturers of products containing Farm Bill-compliant cultivators and processors may engage in interstate commerce. The existing uncertainties in the hemp derived product regulatory landscape in the United States cannot be resolved without further federal, and perhaps state-level, legislation and regulation or a definitive judicial interpretation of existing laws and regulations. If these uncertainties are not resolved in the near future or are resolved in the manner inconsistent with our business plan, such uncertainties may have an adverse effect upon our plan of operations and the introduction of our hemp-based products in different markets.

***Potential future international expansion of our business could expose us to additional regulatory risks and compliance costs.***

If we expand internationally or engage in the international sale of our hemp-derived products, we will become subject to the laws and regulations of the foreign jurisdictions in which it operates, or in which it imports or exports products or materials, including, but not limited to, customs regulations in the importing and exporting countries. The varying laws and rapidly changing regulations may impact the Company's operations and ability to ensure compliance. In addition, the Company may avail itself of proposed legislative changes in certain jurisdictions to expand its product portfolio, which expansion may include unknown business and regulatory compliance risks. Failure by the Company to comply with the evolving regulatory framework in any jurisdiction could have a material adverse effect on the Company's business, financial condition and results of operations.

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

None

**Item 3. Default Upon Senior Securities.**

None

**Item 4. Mine Safety Disclosures**

None

**Item 5. Other Information**

None

**Item 6. Exhibits**

Exhibit 2.1† [Reorganization and Acquisition Agreement dated May 13, 2022 \(incorporated by reference from Form 8-K filed on May 18, 2022\).](#)

Exhibit 10.1 [Employment Agreement between the Company and R. Hugh Kinsman dated June 15, 2022 \(incorporated by reference to Form 8-K filed on June 15, 2022\)](#)

Exhibit 31.1 [Section 302 Certification - Chief Executive Officer](#)

Exhibit 31.2 [Section 302 Certification - Chief Financial Officer](#)

Exhibit 32.1 [Certification of Principal 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.INS Inline XBRL Instance Document

101.SCH Inline XBRL Taxonomy Extension Schema Document

101.CAL Inline XBRL Taxonomy Extension Calculation Linkbase Document

101.DEF Inline XBRL Taxonomy Extension Definition Linkbase Document

101.LAB Inline XBRL Taxonomy Extension Label Linkbase Document

101.PRE Inline XBRL Taxonomy Extension Presentation Linkbase Document

Exhibit 104 Cover Page Interactive Data File (formatted as Inline XBRL)

†Schedules and other similar attachments have been omitted pursuant to Item 601(b)(2) of Regulation S-K. The Company hereby undertakes to furnish supplementally copies of any of the omitted schedules and attachments upon request by the U.S. Securities and Exchange Commission.



**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, 2022

/s/ James A. Mish  
James A. Mish  
Chief Executive Officer  
(Principal Executive Officer)

Date: August 9, 2022

/s/ R. Hugh Kinsman  
R. Hugh Kinsman  
Chief Financial Officer  
(Principal Accounting and Financial Officer)

## CERTIFICATIONS

I, James A. Mish, 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, 2022

/s/ James A. Mish  
James A. Mish  
Chief Executive Officer  
(Principal Executive Officer)

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## CERTIFICATIONS

**I, R. Hugh Kinsman, 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, 2022

/s/ R. Hugh Kinsman

R. Hugh Kinsman

Chief Financial Officer

(Principal Accounting and Financial Officer)

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**Written Statement of the Principal 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, 2022 (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, 2022

/s/ James A. Mish  
James A. Mish  
Chief Executive Officer

Date: August 9, 2022

/s/ R. Hugh Kinsman  
R. Hugh Kinsman  
Chief Financial Officer

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