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, 2021

☐ **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	**98-0468420**
(State or other jurisdiction of incorporation)	(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	NYSE American

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	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☒
		Emerging growth company	☐

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

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

As of August 4, 2021, there were 162,735,483 shares of common stock issued and outstanding.

22nd CENTURY GROUP, INC.

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22nd CENTURY GROUP, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(Unaudited)
($ in thousands)

	June 30, 2021	December 31, 2020
ASSETS		
Current assets:		
Cash and cash equivalents	$ 2,037	$ 1,029
Short-term investment securities	60,284	21,313
Accounts receivable, net	2,137	2,159
Inventory, net	2,313	2,034
Prepaid expenses and other assets	3,943	1,806
Total current assets	70,714	28,341
Property, plant and equipment, net	4,847	2,483
Operating leases right-of-use assets, net	595	247
Intangible assets, net	8,119	8,211
Investments	9,200	6,536
Other assets	3,684	5,876
Total assets	$ 97,159	$ 51,694
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Notes payable	$ 2,659	$ 539
Operating lease obligations	174	247
Accounts payable	981	1,116
Accrued expenses	5,072	4,830
Accrued severance	212	339
Deferred income	145	272
Total current liabilities	9,243	7,343
Long-term liabilities:		
Operating lease obligations	423	—
Severance obligations	130	241
Total liabilities	9,796	7,584
Commitments and contingencies (Note 11)		
Shareholders' equity		
10,000,000 preferred shares, $.00001 par value		
300,000,000 common shares, $.00001 par value		
Capital stock issued and outstanding:		
162,685,483 common shares (139,061,690 at December 31, 2020)		
Common stock value	2	1
Capital in excess of par value	241,968	189,439
Accumulated other comprehensive (loss) income	1	74
Accumulated deficit	(154,608)	(145,404)
Total shareholders' equity	87,363	44,110
Total liabilities and shareholders' equity	$ 97,159	$ 51,694

See accompanying notes to consolidated financial statements.

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Revenue:				
Sale of products, net	$ 8,371	$ 6,435	$ 15,177	$ 13,493
Cost of goods sold (exclusive of depreciation shown separately below):				
Products	7,785	6,234	13,944	13,005
Gross profit (loss)	586	201	1,233	488
Operating expenses:				
Research and development	744	957	1,433	1,770
Research and development - MRTP	2	4	14	154
Sales, general and administrative	6,177	3,501	11,006	6,640
Impairment of intangible assets	—	146	—	146
Depreciation	150	157	288	313
Amortization	153	189	303	361
Total operating expenses	7,226	4,954	13,044	9,384
Operating loss	(6,640)	(4,753)	(11,811)	(8,896)
Other income (expense):				
Unrealized gain (loss) on investments	(176)	312	(140)	(133)
Impairment of Panacea investment	—	(1,062)	—	(1,062)
Gain on Panacea investment conversion	2,548	—	2,548	—
Realized gain (loss) on short-term investment securities	—	3	—	—
Interest income, net	108	462	220	1,074
Interest expense	(14)	(19)	(21)	(31)
Total other income (expense)	2,466	(304)	2,607	(152)
Loss before income taxes	(4,174)	(5,057)	(9,204)	(9,048)
Income taxes	—	—	—	38
Net loss	$ (4,174)	$ (5,057)	$ (9,204)	$ (9,086)
Other comprehensive income (loss):				
Unrealized gain (loss) on short-term investment securities	(41)	241	(73)	45
Reclassification of (gain) loss to net loss	—	(3)	—	—
Other comprehensive income (loss)	(41)	238	(73)	45
Comprehensive loss	$ (4,215)	$ (4,819)	$ (9,277)	$ (9,041)
Net loss per common share - basic and diluted	$ (0.03)	$ (0.04)	$ (0.06)	$ (0.07)
Weighted average common shares outstanding - basic and diluted (in thousands)	154,811	138,854	149,564	138,732

See accompanying notes to consolidated financial statements.

22nd CENTURY GROUP, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY
(Unaudited)
($ in thousands except share data)

	Three Months and Six Months Ended June 30, 2021					
	Common Shares Outstanding	Par Value of Common Shares	Capital in Excess of Par Value	Accumulated Other Comprehensive Income	Accumulated Deficit	Total Shareholders' Equity
Balance at December 31, 2020	**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 gain (loss) on short-term investment securities	—	—	—	(32)	—	(32)
Net loss	—	—	—	—	(5,030)	(5,030)
Balance at March 31, 2021	**152,397,501**	**$ 2**	**$ 202,880**	**$ 42**	**$ (150,434)**	**$ 52,490**
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 gain (loss) on short-term investment securities	—	—	—	(41)	—	(41)
Net loss	—	—	—	—	(4,174)	(4,174)
Balance at June 30, 2021	**162,685,483**	**$ 2**	**$ 241,968**	**$ 1**	**$ (154,608)**	**$ 87,363**

	Three Months and Six Months Ended June 30, 2020					
	Common Shares Outstanding	Par Value of Common Shares	Capital in Excess of Par Value	Accumulated Other Comprehensive Income	Accumulated Deficit	Total Shareholders' Equity
Balance at December 31, 2019	**138,362,809**	**$ 1**	**$ 187,735**	**$ 7**	**$ (125,693)**	**$ 62,050**
Stock issued in connection with RSU vesting	491,384	—	—	—	—	—
Equity-based compensation	—	—	480	—	—	480
Unrealized gain (loss) on short-term investment securities	—	—	—	(196)	—	(196)
Reclassification of losses (gains) to net loss	—	—	—	3	—	3
Net loss	—	—	—	—	(4,029)	(4,029)
Balance at March 31, 2020	**138,854,193**	**$ 1**	**$ 188,215**	**$ (186)**	**$ (129,722)**	**$ 58,308**
Equity-based compensation	—	—	376	—	—	376
Unrealized gain (loss) on short-term investment securities	—	—	—	241	—	241
Reclassification of losses (gains) to net loss	—	—	—	(3)	—	(3)
Net loss	—	—	—	—	(5,057)	(5,057)
Balance at June 30, 2020	**138,854,193**	**$ 1**	**$ 188,591**	**$ 52**	**$ (134,779)**	**$ 53,865**

See accompanying notes to consolidated financial statements.

22nd CENTURY GROUP, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)
($ in thousands)

	Six Months Ended June 30,	
	2021	**2020**
Cash flows from operating activities:		
Net loss	$ (9,204)	$ (9,086)
Adjustments to reconcile net loss to cash used in operating activities:		
Impairment of intangible assets	—	146
Impairment of Panacea investment	—	1,062
Amortization and depreciation	466	549
Amortization of license fees	124	125
Amortization of ROU Asset	149	151
Unrealized (gain) loss on investment	140	133
Gain on Panacea investment conversion	(2,548)	—
Accretion of non cash interest expense	4	12
Accretion of non cash interest income	(85)	(306)
Equity-based employee compensation expense	1,752	856
(Increase) decrease in assets:		
Accounts receivable	21	(132)
Inventory	(280)	(503)
Prepaid expenses and other assets	(2,307)	(2,934)
Increase (decrease) in liabilities:		
Operating lease obligations	(148)	(149)
Accounts payable	(140)	(1,032)
Accrued expenses	151	(384)
Accrued severance	(238)	24
Deferred income	(127)	(5)
Net cash provided by (used in) operating activities	(12,270)	(11,473)
Cash flows from investing activities:		
Acquisition of patents, trademarks, and licenses	(179)	(198)
Acquisition of property, plant and equipment	(388)	(42)
Sales and maturities of short-term investment securities	19,037	19,272
Purchase of short-term investment securities	(58,137)	(8,853)
Net cash provided by (used in) investing activities	(39,667)	10,179
Cash flows from financing activities:		
Payment on note payable	(538)	(542)
Proceeds from note payable issuance	2,653	2,195
Net proceeds from option exercise	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)	—
Proceeds from SBA loan	—	1,183
Repayment of SBA loan	—	(1,183)
Net cash provided by (used in) financing activities	52,945	1,653
Net increase (decrease) in cash and cash equivalents	1,008	359
Cash and cash equivalents - beginning of period	1,029	485
Cash and cash equivalents - end of period	$ 2,037	$ 844
Supplemental disclosures of cash flow information:		
Net cash paid for:		
Cash paid during the period for interest	$ 8	$ 6
Non-cash transactions:		
Patent and trademark additions included in accounts payable	$ —	$ 54
Property, plant and equipment additions included in accounts payable	$ 9	$ —
Property, plant and equipment additions included in accrued expenses	$ 7	$ —
Right-of-use assets and corresponding operating lease obligations	$ 497	$ 198
Patent and trademark additions included in accrued expenses	$ 32	$ —
Capital raise issuance fees included in accrued expenses	$ 52	$ —
Panacea investment conversion	$ 12,485	$ —

See accompanying notes to consolidated financial statements.

22nd CENTURY GROUP, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
June 30, 2021
(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 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, 2021 are not necessarily indicative of the results that may be expected for the year ending December 31, 2021. The balance sheet as of December 31, 2020 has been derived from the audited consolidated financial statements at that date but does not include all the information and footnotes required by GAAP for complete financial statements.

These interim consolidated financial statements should be read in conjunction with the December 31, 2020 audited consolidated financial statements and the notes thereto contained in our Annual Report on Form 10-K for the year ended December 31, 2020, as filed with the Securities and Exchange Commission on March 11, 2021.

Principles of Consolidation - The accompanying consolidated financial statements include the accounts of (i) 22nd Century Group, Inc. ("22nd Century Group"); (ii) its four wholly-owned subsidiaries, 22nd Century Limited, LLC ("22nd Century Ltd"), NASCO Products, LLC ("NASCO"), Botanical Genetics, LLC ("Botanical Genetics"), and 22nd Century Group Canada, Inc. ("22nd Century Group Canada"); (iii) two wholly-owned subsidiaries of 22nd Century Ltd, Goodrich Tobacco Company, LLC ("Goodrich Tobacco") and Heracles Pharmaceuticals, LLC ("Heracles Pharma"); and (iv) one wholly-owned subsidiary of Botanical Genetics, 22nd Century Holdings, LLC. This group of subsidiaries is referred to as collectively, ("the Company"). All intercompany accounts and transactions have been eliminated.

Nature of Business - 22nd Century Group is a leading biotechnology company developing disruptive plant-based solutions for the life science, consumer product, and pharmaceutical markets. The Company is focused on technology that allows it to alter the level of nicotine and other nicotinic alkaloids in tobacco plants and the levels of cannabinoids and terpenes in hemp/cannabis plants through genetic engineering and modern plant breeding techniques. 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 risk 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 and 22nd Century Group Canada are two newly formed subsidiaries where 22nd Century Holdings will own and operate the newly acquired Needle Rock Farm assets and 22nd Century Group Canada will allow for future international business opportunities in Canada.

Reclassifications – Certain prior period amounts have been reclassified to conform to the current period's classification. None of these reclassifications had a material impact on our consolidated financial statements.

COVID-19 Pandemic – The COVID-19 pandemic has adversely impacted the U.S. economy and supply chains and created volatility in U.S. financial markets. The COVID-19 pandemic has had a minimal impact on the Company's operations in 2020 and thus far in 2021, 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.

During April 2021, the Company relocated its corporate headquarters into downtown Buffalo, NY. The new office, as well as all of our facilities, continue to operate in compliance with New York and North Carolina guidance (as applicable) related to the

prevention of COVID-19 transmission and employee safety. We also continue to allow remote work arrangements by our employees where job duties permit.

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.

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 2041. 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 ranging from 2028 through 2036. The Company believes that costs associated with becoming a signatory to the MSA and costs related to the acquisition of a predicate cigarette brand have an indefinite life. 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 – 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. On at least an annual basis, the Company assesses whether events or changes in circumstances indicate that the carrying amount may not 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.

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.

Fair Value of Financial Instruments **-** The Company's financial instruments include cash and cash equivalents, short-term investment securities, accounts receivable, investments, a convertible note receivable, 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, certain investments, and certain other assets at fair value which is described further in Note 6.

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 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.

Recent Accounting Pronouncement(s) – 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 are effective for fiscal years beginning after December 15, 2019 and interim periods within those fiscal years—excluding small reporting companies (SRCs) which have an effective date beginning after December 15, 2022 and interim periods within those fiscal years. The Company plans to adopt ASU 2016-13 on January 1, 2022 and is evaluating the expected impacts.

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. - 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, hemp/cannabis inventory, and raw materials inventory. Standard cost is primarily used for finished goods inventory. Inventories are evaluated to determine whether any amounts are not recoverable based on slow moving or obsolete condition and are written off or reserved as appropriate.

Inventories at June 30, 2021 and December 31, 2020 consisted of the following:

	June 30, 2021	December 31, 2020
Inventory - tobacco leaf	$ 863	$ 821
Inventory - hemp/cannabis	68	—
Inventory - finished goods		
Cigarettes and filtered cigars	193	171
Inventory - raw materials		
Cigarette and filtered cigar components	1,289	1,142
Less: inventory reserve	(100)	(100)
	$ 2,313	$ 2,034

NOTE 3. – PROPERTY, PLANT, AND EQUIPMENT, NET

Property, plant, and equipment, net at June 30, 2021 and December 31, 2020 consisted of the following:

	Useful Life	June 30, 2021	December 31, 2020
Land		$ 1,665	$ —
Building and leasehold improvements	7 to 40 years	309	123
Manufacturing equipment	3 to 10 years	5,518	4,893
Office furniture, fixtures and equipment	5 years	119	20
Laboratory equipment	5 years	192	117
Less: accumulated depreciation		(2,956)	(2,670)
Property, plant and equipment, net		$ 4,847	$ 2,483

Depreciation expense was $150 and $288 for the three and six months ended June 30, 2021 ($157 and $313 for the three and six months ended June 30, 2020).

NOTE 4. - RIGHT-OF-USE ASSETS, LEASE OBLIGATIONS, AND OTHER LEASES

The Company leases a manufacturing facility and warehouse in North Carolina, a corporate headquarters in Buffalo, New York, and a laboratory space in Buffalo, New York. During the second quarter of 2021, the Company moved into a new corporate headquarters in downtown Buffalo, NY. The lease has an initial term of 36 months and two 24-month renewal options which are at the Company's discretion. The Company assumed all renewal options in determination of the lease term.

The following table summarizes the Company's discount rate and remaining lease terms:

Weighted average remaining lease term in years	5.5
Weighted average discount rate	3.8 %

Future minimum lease payments as of June 30, 2021 are as follows:

2021	$ 146
2022	85
2023	78
2024	80
2025	82
Thereafter	192
Total lease payments	663
Less: imputed interest	(66)
Total	$ 597

NOTE 5. – INVESTMENTS & OTHER ASSETS

The total carrying value of the Company's investments and other assets at June 30, 2021 and December 31, 2020 consisted of the following:

	June 30, 2021	December 31, 2020
Aurora stock warrants	$ 98	$ 239
Panacea preferred stock	—	5,173
Panacea stock warrant	—	1,124
Exactus common stock	9,102	—
Total Investments	$ 9,200	$ 6,536
Convertible note receivable	$ —	$ 5,876
Promissory note receivable	$ 3,684	$ —

Investment in Panacea Life Sciences, Inc.

Initial Investment:

On December 3, 2019, the Company entered into a securities purchase agreement with Panacea Life Sciences, Inc. ("Panacea") for consideration valued at $13,297 ($12,000 cash and $1,297 of the Company's shares of common stock valued at $1 per share) in exchange for a 15.8% ownership interest. The Company's investment consisted of three instruments: shares of Series B preferred stock ("preferred stock"); a convertible note receivable with a $7,000 face value; and a warrant ("stock warrant") to purchase additional shares of Series B preferred stock, to obtain 51% ownership of Panacea, at an exercise price of $2.344 per share. The convertible note receivable had a term of five years, interest of 10% per annum, and could be converted to shares of Series B preferred stock at the Company's discretion. The embedded conversion option was not considered a derivative instrument for accounting purposes. The preferred stock carried an annual 10% cumulative dividend, compounded annually, and had an implicit put option after the fifth anniversary date so long that the stock warrants had not been exercised. The put option was not considered a derivative instrument for accounting purposes. The stock warrant was exercisable at any time after the fifth anniversary date and would be accelerated if Panacea achieved certain sales targets for two consecutive years. The Series B preferred stock also included first priority equity preferences in the event of a liquidation, sale, or transfer of Panacea assets. These rights entitled the Company to the original Series B issuance price of $7,000 plus any unpaid accrued dividends.

To allocate the cost of the stock warrant, the Company calculated a fair value based on the following assumptions: volatility of 70%, discount of 25% for lack of marketability, and a risk-free rate of 2%. The value of the stock warrant was allocated to the preferred stock and the convertible note receivable, equally, at a discount to the acquisition price. The discount on the preferred stock was determined to be for lack of control and the discount on the convertible note receivable was determined to be for issuing the note at a below market interest rate for similar instruments.

The convertible note receivable and the preferred stock investment were considered available for sale debt securities with a private company that was not traded in active markets. Since observable price quotations were not available at acquisition, fair value

was estimated based on cost less an appropriate discount upon acquisition. The discount of each instrument is accreted into interest income over the respective term as shown within the Company's Consolidated Statements of Operations and Comprehensive Loss. See Note 6 for additional information on these fair value measurements. The stock warrant was recorded at its cost basis in accordance with the practicability exception under ASU 2016-01.

Impairment of Panacea Investment:

As a result of increased competition and other macroeconomic factors, the Company recognized an impairment of$1,062 on the Panacea stock warrant during the second quarter of 2020. The impairment is recorded within the Consolidated Statements of Operations and Comprehensive Loss as "Impairment of Panacea Investment." During the fourth quarter of 2020, the Company entered into a non-binding agreement with Panacea to potentially restructure the investment and business relationship—including the transfer of an agricultural facility and other assets. As of December 31, 2020, the Company adjusted certain assets to represent the fair value outlined in the non-binding agreement.

Conversion of Panacea Investment:

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 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 (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. 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 is included within the Consolidated Statements of Operations and Comprehensive Loss as "Gain on Panacea investment conversion."

The Promissory note receivable was valued at $3,684 ($4,300 face value less $616 discount) and is included within the Consolidated Balance Sheets as "Other Assets." 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 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. See Note 6 for additional information on the fair value measurements.

Investment in Aurora Cannabis, Inc.

The Company has an investment in Aurora Cannabis Inc. ("Aurora") stock warrants that are considered equity securities under ASC 321 – Investments – Equity Securities and a derivative instrument under ASC 815 – Derivatives and Hedging. The stock warrants are not designated as a hedging instrument, and in accordance with ASC 815, the Company's investment in stock warrants are recorded at fair value with changes in fair value recorded to unrealized gain/loss as shown within the Company's Consolidated Statements of Operations and Comprehensive Loss. See Note 6 for additional information on the fair value measurements.

NOTE 6. – 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, 2021 and December 31, 2020, and indicates the fair value hierarchy of the valuation techniques the Company utilized to determine such fair value:

	Fair Value June 30, 2021			
	Level 1	Level 2	Level 3	Total
Assets				
Short-term investment securities:				
Money market funds	$ 43,892	$ —	$ —	$ 43,892
Corporate bonds	—	16,392	—	16,392
Total short-term investment securities	$ 43,892	$ 16,392	$ —	$ 60,284
Investment - Aurora stock warrants	$ —	$ —	$ 98	$ 98
Investment - Exactus common shares	$ 9,102	$ —	$ —	$ 9,102

	Fair Value December 31, 2020			
	Level 1	Level 2	Level 3	Total
Assets				
Short-term investment securities:				
Money market funds	$ 8,636	$ —	$ —	$ 8,636
Corporate bonds	—	12,677	—	12,677
Total short-term investment securities	$ 8,636	$ 12,677	$ —	$ 21,313
Investment - Aurora stock warrants	$ —	$ —	$ 239	$ 239
Investment - Panacea preferred stock	$ —	$ —	$ 5,173	$ 5,173
Convertible note receivable	$ —	$ —	$ 5,876	$ 5,876

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 the Aurora ("ACB") stock warrants is measured at fair value using the Black-Scholes pricing model and is classified within Level 3 of the valuation hierarchy. The unobservable input is an estimated volatility factor of 88% and 137% as of June 30, 2021 and December 31, 2020, respectively. Therefore, changes in market volatility will impact the fair value measurement of our ACB investment.

A 20% increase or decrease in the volatility factor used as of June 30, 2021 would have the impact of increasing or decreasing the fair value measurement of the stock warrants by approximately $73. A 20% increase or decrease in the volatility factor used at December 31, 2020 would have the impact of increasing or decreasing the fair value measurement of the stock warrants by approximately $115.

The investment in Exactus, 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 Panacea convertible note receivable and the preferred stock investment are considered available-for-sale debt securities with a private company that is not traded in active markets. Since observable price quotations were not available, fair value was estimated based on cost less an appropriate discount upon acquisition.

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, 2021:

Fair Value at December 31, 2020	$ 11,288
Unrealized gain as a result of change in fair value	(140)
Accretion of interest on Panacea preferred stock	142
Panacea investment conversion	(11,192)
Fair Value at June 30, 2021	$ 98

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, 2021 and December 31, 2020:

	Available for Sale Debt Securities June 30, 2021			
	Amortized Cost Basis	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Corporate bonds	$ 16,391	$ 1	$ —	$ 16,392

	Available for Sale Debt Securities December 31, 2020			
	Amortized Cost Basis	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Corporate bonds	$ 12,603	$ 74	$ —	$ 12,677
Convertible note receivable	5,876	—	—	5,876
Investment - Panacea preferred stock	5,173	—	—	5,173
	$ 23,652	$ 74	$ —	$ 23,726

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, 2021 and December 31, 2020:

	Available for Sale Debt Securities			
	June 30, 2021		December 31, 2020	
	Amortized Cost Basis	Fair Value	Amortized Cost Basis	Fair Value
Due in one year or less	$ 6,394	$ 6,409	$ 11,692	$ 11,753
Due after one year through five years	9,997	9,983	11,960	11,973
	$ 16,391	$ 16,392	$ 23,652	$ 23,726

NOTE 7. - INTANGIBLE ASSETS

Total intangible assets at June 30, 2021 and December 31, 2020 consisted of the following:

	June 30, 2021	December 31, 2020
Intangible assets, net		
Patent and trademark costs	$ 5,879	$ 5,667
Less: accumulated amortization	(3,115)	(2,936)
Patent and trademark costs, net	2,764	2,731
License fees	3,876	3,876
Less: accumulated amortization	(1,073)	(948)
License fees, net	2,803	2,928
MSA signatory costs	2,202	2,202
License fee for predicate cigarette brand	350	350
	$ 8,119	$ 8,211

Amortization expense relating to the above intangible assets for the three and six months ended June 30, 2021 amounted to $153 and $303 ($189 and $361 for the three and six months ended June 30, 2020). Impairment expense for the three and six months ended June 30, 2020 amounted to $146 (cost of approximately $448 less accumulated amortization of approximately $302) and related to patent intellectual property that would be expired prior to expected commercialization.

NOTE 8. – NOTES PAYABLE

License Fees

On June 22, 2018, the Company entered into the Second Amendment to the License Agreement (the "Second Amendment") with North Carolina State University ("NCSU") that amended an original License Agreement between the Company and NCSU, dated December 8, 2015, and the First Amendment, dated February 14, 2018, to the original License Agreement. Under the terms of the Second Amendment, the Company was obligated to pay NCSU milestone payments totaling $1,200, which originally amounted to a present value of $1,175. As of June 30, 2020, the Company paid the final milestone payment of $300. The cost of the of acquired license amounted to $1,175 and is included in Intangible assets, net on the Company's Consolidated Balance Sheets, and is amortized on a straight-line basis over the last-to-expire patent, which is expected to be in 2036.

On October 22, 2018, the Company entered into a License Agreement with the University of Kentucky. Under the terms of the License Agreement, the Company is obligated to pay the University of Kentucky milestone payments totaling $1,200, of which $300 was payable upon execution, and $300 will be payable annually overthree years on the anniversary of the execution of the License Agreement. The Company has recorded the present value of the obligations under the License Agreement as a note payable that originally amounted to $1,151. The cost of the of acquired licenses amounted to $1,151 and is included in Intangible assets, net on the Company's Consolidated Balance Sheets and will be amortized on a straight-line basis over the last-to-expire patent, which is expected to be in 2033.

D&O Insurance

During the second quarter of 2021, the Company renewed its Director and Officer ("D&O") insurance for aone-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.

During the second quarter of 2020, the Company renewed its Director and Officer ("D&O") insurance for a one-year policy premium totaling $2,744. The Company paid $549 as a premium down payment and financed the remaining $2,195 of policy premiums over nine months at a 3.19% annual percentage rate.

The table below outlines our notes payable balances as of June 30, 2021 and December 31, 2020:

	June 30, 2021	December 31, 2020
License Fees	$ 297	$ 293
D&O Insurance	2,362	246
Total current notes payable	$ 2,659	$ 539

Accretion of non-cash interest expense amounted to $2 and $4 for the three and six months ended June 30, 2021 and $6 and $12 for the three and six months ended June 30, 2020.

NOTE 9. – SEVERANCE LIABILITY

During the second quarter of 2020, the Company recorded severance benefits related to a resignation of $306. The benefits were provided over a twelve-month period.

During 2019, the Company recorded severance benefits of $881. Consistent with certain contractual obligations, $771 of the related benefit will be provided over a period of forty-two months.

The current and long-term accrued severance balance remaining as of June 30, 2021 was $212 and $130, respectively. The current and long-term accrued severance balance remaining as of December 31, 2020 was $339 and $241, respectively.

NOTE 10. – WARRANT EXERCISE AND CAPITAL RAISE

On June 7, 2021, the Company entered into a placement agent agreement (the "Placement Agent Agreement") with Cowen and Company, LLC (the "Placement Agent") relating to the Company's registered direct offering (the "Offering") to a select investor (the "Investor"). In addition, on June 7, 2021, the Company and the Investor entered into a securities purchase agreement relating to the issuance and sale of shares of common stock. 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.

During the first quarter of 2021, the Company's 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. No warrants remain outstanding as of June 30, 2021. The following table summarizes the Company's outstanding warrant activity since December 31, 2020:

	Number of Warrants
Warrants outstanding at December 31, 2020	11,293,211
Warrants exercised in Q1 2021	(11,293,211)
Warrants outstanding at June 30, 2021	—

NOTE 11. - 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 and hemp/cannabis. 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 Consolidated Statements of Operations and Comprehensive Loss.

Commitment	Counter Party	Product Relationship	Commitment Type	Future Commitments 2021	2022	2023	2024	2025 & After	Total
Research Agreement	KeyGene	Hemp / Cannabis	Contract fee	$ 500	$ 1,150	$ 1,200	$ 1,227	$ 2,893	$ 6,970 (1)
License Agreement	NCSU	Tobacco	Annual royalty fee	135	225	—	—	—	360 (2), (3)
License Agreement	NCSU	Tobacco	Minimum annual royalty	13	50	50	50	600	763 (3)
License Agreement	NCSU	Tobacco	Minimum annual royalty	26	50	50	50	500	676 (3)
Research Agreement	NCSU	Tobacco	Contract fee	30	—	—	—	—	30 (4)
Sublicense Agreement	Anandia Laboratories, Inc.	Hemp / Cannabis	Annual license fee	10	10	10	10	110	150 (5)
Research Agreement	Cannametrix	Hemp / Cannabis	Contract fee	51	50	—	—	—	101 (6)
Growing Agreement	Various	Various	Contract fee	78	—	—	—	—	78 (7)
				$ 843	$ 1,535	$ 1,310	$ 1,337	$ 4,103	$ 9,128

(1) Exclusive agreement with the Company with respect to the *Cannabis Sativa L.* plant (the "Field"). 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.

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 Field of certain Results. The Company has also granted KeyGene a license to commercialize the Results outside of the Field and KeyGene will pay royalties in varying amounts to the Company relating to KeyGene's commercialization of the Results outside of the Field.

(2) The license agreement also requires a milestone payment of $150 upon FDA approval or clearance of a product that uses the NCSU licensed technology. The annual royalty fee is credited against running royalties on sales of licensed products.

(3) The Company is also responsible for reimbursing NSCU 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.

(4) On September 11, 2020, the Company entered into a one-year Sponsored Project Agreement with NCSU for continued research of tobacco alkaloid formation.

(5) 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.

(6) On March 1, 2021, the Company entered into a 14-month research agreement with Cannametrix for hemp/cannabis product development, formulation, and validation.

(7) Various R&D growing agreements for hemp / cannabis and tobacco.

Modified Risk Tobacco Product Application ("MRTP Application") – In connection with the Company's MRTP Application for its Very Low Nicotine Content ("VLNC") cigarettes with the FDA, the Company has entered in various contracts with third-party service providers to fulfill various requirements of the MRTP Application. Such contracts include services for clinical trials, perception studies, legal guidance, product testing, and consulting expertise. During the three and six months ended June 30, 2021, the Company incurred expenses relating to these contracts in the approximate amount of $2 and $14, respectively, and $4 and $154 for the three and six months ended June 30, 2020, respectively. The Company will continue to incur consulting and legal expenses as the MRTP Application continues through the FDA review process. The Company cannot currently quantify the additional expenses that the Company will incur in the FDA review process because it will involve various factors that are within the discretion and control of the FDA.

Litigation - In accordance with applicable accounting guidance, the Company establishes an accrued liability for litigation and regulatory matters when those matters present loss contingencies that are both probable and estimable. In such cases, there may be an exposure to loss in excess of any amounts accrued. When a loss contingency is not both probable and estimable, the Company does

not establish an accrued liability. As a litigation or regulatory matter develops, the Company, in conjunction with any outside counsel handling the matter, evaluates on an ongoing basis whether such matter presents a loss contingency that is probable and estimable. If, at the time of evaluation, the loss contingency related to a litigation or regulatory matter is not both probable and estimable, the matter will continue to be monitored for further developments that would make such loss contingency both probable and estimable. When a loss contingency related to a litigation or regulatory matter is deemed to be both probable and estimable, the Company will establish an accrued liability with respect to such loss contingency and record a corresponding amount of 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 allegesthree 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 has 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 has scheduled an oral argument for September 2, 2021.

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 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 Brocutto 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 Brocutto and Wayne cases consolidated and stayed pursuant to a joint stipulation from the parties. 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 12 – EQUITY- BASED COMPENSATION

On May 20, 2021, the stockholders of 22nd Century Group, Inc. (the "Company") approved the 22nd Century Group, Inc. 2021 Omnibus Incentive Plan (the "Plan"). The Plan allows for the granting of equity awards to eligible individuals over the life of the Plan, including the issuance of up to 5,000,000 shares of the Company's common stock and any remaining shares under the

Company's 2014 Omnibus Incentive Plan pursuant to awards under the Plan. The 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 Plan and the number of shares of common stock to underlie each such award under the Plan. As of June 30, 2021, the Company had available 7,089,486 shares remaining for future awards under the Plan.

Restricted Stock Units ("RSUs"). We grant RSUs to employees and non-employee directors which are valued based on the Company's stock price on the award grant date. The following table summarizes the changes in unvested RSUs from December 31, 2020 through June 30, 2021.

	Unvested RSUs	
	Number of Shares	Weighted Average Grant-date Fair Value
	in thousands	$ per share
Unvested at December 31, 2020	2,938	$ 0.85
Granted	1,995	$ 3.20
Vested	(1,234)	$ 0.85
Forfeited	(216)	$ 0.67
Unvested at March 31, 2021	3,483	$ 2.21
Granted	15	$ 4.60
Vested	(288)	$ 0.86
Forfeited	(25)	$ 1.04
Unvested at June 30, 2021	3,185	$ 2.35

The fair value of RSUs that vested during the six months ended June 30, 2021 was approximately $4,903 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, 2020 is as follows:

	Number of Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value
	in thousands	$ per share		
Outstanding at December 31, 2020	6,581	$ 1.50		
Granted	235	$ 3.10		
Exercised	(846)	$ 1.36		
Expired	(6)	$ 2.76		
Outstanding at March 31, 2021	5,964	$ 1.59	4.3 years	$ 7,480
Exercised	(88)	$ 1.21		
Forfeited	(100)	$ 0.80		
Outstanding at June 30, 2021	5,776	$ 1.60	4.1 years	$ 13,265
Exercisable at June 30, 2021	4,940	$ 1.57	3.9 years	$ 14,068

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 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,	
	2021	2020	2021	2020
Sales, general, and administrative	$ 1,197	$ 334	$ 1,677	$ 772
Research and Development	48	42	75	84
Total RSUs and stock option compensation	$ 1,245	$ 376	$ 1,752	$ 856

As of June 30, 2021, unrecognized compensation expense amounted to $6,676 which is expected to be recognized over a weighted average period of approximately 1.3 years. In addition, there is approximately $581 of unrecognized stock option compensation expense that requires the achievement of certain milestones which have yet to be obtained.

NOTE 13. – REVENUE RECOGNITION

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 customer's 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 is recognized net of cash discounts, sales returns and allowances. There was no allowance for discounts or returns and allowances at June 30, 2021 and December 31, 2020.

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 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 Consolidated Balance Sheets.

Total contract assets and contract liabilities are as follows:

	June 30, 2021	December 31, 2020
Unbilled receivables	$ 300	$ 349
Deferred Revenue	(145)	(272)
Net contract assets	$ 155	$ 77

Disaggregation of Revenue

The Company's net sales revenue is derived from customers located primarily in the United States of America and is disaggregated by the timing of revenue recognition—net sales transferred over time and net sales transferred at a point in time. All revenue is related to contract manufacturing.

	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Net sales-over time	$ 5,915	$ 3,718	$ 10,347	$ 8,526
Net sales-point in time	2,456	2,717	4,830	4,967
Total Revenue	$ 8,371	$ 6,435	$ 15,177	$ 13,493

NOTE 14. – EARNINGS PER SHARE

The following table sets forth the computation of basic and diluted earnings (loss) per common share for the three and six months ended June 30, 2021 and 2020, respectively. Outstanding warrants, 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,	
	2021	2020	2021	2020
	(in thousands, except for per-share data)			
Net loss	$ (4,174)	$ (5,057)	$ (9,204)	$ (9,086)
Weighted average common shares outstanding - basic and diluted	154,811	138,854	149,564	138,732
Net loss per common share - basic and diluted	$ (0.03)	$ (0.04)	$ (0.06)	$ (0.07)
Anti-dilutive shares are as follows:				
Warrants	—	11,293	—	11,293
Options	5,776	7,424	5,776	7,424
Restricted stock units	3,185	2,943	3,185	2,943
	8,961	21,660	8,961	21,660

NOTE 15. – SUBSEQUENT EVENTS

On July 28, 2021, the Company signed a lease agreement for a new research and development ("R&D") laboratory in Rockville, MD. The new laboratory space has over four thousand square feet and will support the Company's continued growth and R&D partnerships. The lease has an initial monthly base rent of $12 (escalating 2.5% annually after the first year), a term of 51 months, and an expected commencement date of either late third or early fourth quarter of this year. The lease also calls for abatement of 100% of the base rent for the first five months following the lease commencement date. The Company will recognize the respective right-of-use asset and lease liability for the above lease upon lease commencement.

The current lease on the New York laboratory, currently included within Note 4, has converted to month-to-month.

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

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 11, 2021. 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.

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

Corporate Business Overview

22nd Century Group, Inc. is a biotechnology company developing disruptive, plant-based solutions for the life science, consumer product, and pharmaceutical markets. We are focused on technology that allows us to modulate the level of nicotine and other nicotinic alkaloids in tobacco plants and the levels of cannabinoids and terpenes in hemp/cannabis plants through genetic engineering and modern plant breeding techniques. 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 cigarettes, which contain 95% less nicotine than conventional tobacco and cigarettes. Our mission in hemp/cannabis is to develop proprietary varieties of hemp and cannabis with valuable cannabinoid and terpene profiles and other superior agronomic traits, with potential applications in life sciences and consumer products. We have an intellectual property portfolio of issued patents and patent applications relating to both tobacco and hemp/cannabis plants.

Tobacco Franchise Overview

In tobacco, we have developed unique and proprietary bright and burley VLNC tobaccos that grow with at least 95% less nicotine than tobacco used in conventional cigarettes. In the year 2011, we developed our SPECTRUM® variable nicotine research cigarettes in collaboration with independent researchers, officials from the 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). The results of these studies 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 shown on our website at https://www.xxiicentury.com/vln-clinical-studies/published-clinical-studies-on-very-low-nicotine-content-vlnc-cigarettes and https://www.xxiicentury.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 VLN®, have a massive global market opportunity. In 2018, the global tobacco market was worth $817 billion and of that, $714 billion, or approximately 90% of the global tobacco market is comprised of combustible cigarettes. There are more than 1 billion global and 34 million U.S. adult smokers. More than two-thirds of adult smokers want to quit, yet less than ten percent of them are able to quit successfully. We believe that smokers are actively seeking alternatives to addictive combustible cigarettes. Based on our consumer perception studies, 60% of adult smokers indicate a likelihood to use VLN®.

Our VLN® cigarettes contain 95% less nicotine than conventional cigarettes and are a familiar combustible product format that replicates the conventional cigarette experience, including the sensory and experiential elements of taste, scent, smell, and "hand-to-mouth" behavior. VLN® contains 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". The lack of reward from nicotine creates a dissociation between the act of smoking and nicotine which helps adult smokers reduce the harm caused by smoking.

Since 2011, our reduced nicotine content cigarettes have been used in more than 50 independent scientific clinical studies by universities and institutions. The studies, using our reduced nicotine content tobacco cigarettes, 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.

In December 2019, the FDA granted a Premarket Tobacco Application ("PMTA") authorization for our reduced nicotine content cigarettes, giving us the ability to sell the product. In order to market our reduced nicotine content cigarettes under the brand name VLN®, with pack and advertising claims stating that the product contains 95% less nicotine than conventional tobacco cigarettes, as well as related claims regarding nicotine exposure, we will need to secure a Modified Risk Tobacco Product ("MRTP") authorization from the FDA.

As a part of the MRTP application process, on February 14, 2020, we presented our application for our reduced nicotine content cigarettes, VLN® to the FDA's Tobacco Products Scientific Advisory Committee ("TPSAC") and passed one of the final regulatory milestones. On April 17, 2020 the FDA set May 18, 2020, as the deadline for the submission of public comments on our MRTP application. The public comment period is now closed, and we believe that we are in the final stages of the review and decision-making process.

Our research cigarettes, SPECTRUM®, continue to fuel numerous independent, scientific studies to validate the enormous public health benefit identified by the FDA and others of implementing a national standard requiring all cigarettes to contain "minimally or non-addictive" levels of nicotine. In December 2020, the FDA in coordination with the National Institute on Drug Abuse (NIDA) and others, submitted an order to us for 3.6 million variable nicotine research cigarettes. On April 26, 2021, we announced the fulfillment of the order bringing the total number of research cigarettes provided for public health research to more than 31.6 million cigarettes.

MRTP is only the beginning of our global journey for the tobacco franchise. It will serve as a catalyst for U.S. and international sales of the VLN® brand, including non-genetically modified ("non-GMO") versions of VLN® 2.0 currently in development. Immediately following the MRTP authorization, we plan a series of announcements to share more detail on partnerships, additional offshore international targets, and distribution contingent upon MRTP.

We believe that our next generation non-GMO plant research is the key to commercializing our reduced nicotine content tobacco and technology in international markets. Non-GMO products are critical for success in international markets where non-GMO products are preferred, or genetically modified ("GMO") products are banned. We continue to make progress in our non-GMO tobacco research. In partnership with North Carolina State University, we have completed successful research field trials that have validated new non-GMO methodologies for reducing nicotine in tobacco plants and have consistently achieved reductions in nicotine levels by as much as 99%. During the fourth quarter of 2020, we announced that we were granted a new U.S. patent, No. 10,669,552, entitled "Up-regulation of auxin response factor NbTF7", related to the reduction of nicotine in the tobacco plant. The new technology provides us with a rapid pathway to introduce very low nicotine traits into virtually any variety of tobacco, including bright, burley, and oriental tobacco varieties. We have successfully applied our non-GMO technology to bright and burley varieties of tobacco and have developed a VLN® 2.0 prototype cigarette. We are also using our non-GMO technology to introduce reduced nicotine traits into oriental varieties of tobacco.

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 generating 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. The hemp and the marijuana plants are both part of the same cannabis genus, except that 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 new, disruptive, and highly differentiated plant lines or ingredients (flower, extracts, distillates, isolates, etc.) derived from those 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.

Additional information about our business and operations is contained in our Annual Report on Form 10-K for the year ended December 31, 2020.

Notable Accomplishments and Recent Announcements

Tobacco Franchise:

- We remain highly confident that our MRTP application for VLN® is in the final stages of review with the FDA. Authorization of the application by the FDA remains our number one priority. We are also highly confident that our MRTP application for VLN® has completed the scientific review process and is now in the documentation process, the final stage before the FDA announces its decision. We are in regular contact with officials at the highest levels of the Agency and continue to highlight the public health importance of our MRTP application to encourage a positive outcome. There are no outstanding requests for information from the FDA.

- U.S. pilot program and manufacturing capabilities are in place to launch VLN® in the U.S. within 90 days of receiving MRTP designation. The Company's leadership has successfully launched several tobacco and other plant-based consumer products, providing critical insight into the importance of a well-planned market entry and solid supply chain. We plan to position VLN® in the premium pricing segment of the cigarette market and, therefore, expect it to deliver corresponding margins.

- We initiated the launch process of VLN® in several countries where adult smokers have a strong affinity for new, reduced risk tobacco products and where we believe regulations will allow it to go to market with existing claims and minimal interaction with regulators.

- We have expanded our VLN® tobacco growing program based on latest sales projections. Plans have also been initiated with experienced growers in the southern hemisphere that will allow us to grow and harvest our VLN® tobacco year-round.

- We completed an expansion of testing capabilities, which will allow for rapid, in-house analysis of tobacco This will reduce the production testing cost per VLN®, while also reducing the lead time to uncover key data. Internal testing of the VLN® leaf is scheduled to begin at the facility in August 2021, using the newly installed testing equipment.

- In April 2021, we submitted a formal response to the New Zealand Ministry of Health's Smokefree Aotearoa 2025 Action Plan, offering full support for the Plan's multiple initiatives. New Zealand's Plan includes the possibility of reducing the amount of nicotine allowed in smoked tobacco products to "minimally or non-addictive" levels. Our reduced nicotine content cigarettes already meet the proposed standard, and we are confident that New Zealand can achieve its goal of becoming a "smoke-free" country by introducing regulations to reduce nicotine content levels in cigarettes.

Hemp/Cannabis Franchise:

- We expect to monetize our hemp/cannabis plant lines and IP, beginning in the second half of 2021, in the form of upfront license fees and revenue from the current crop. Next generation plant lines are being accelerated for our 2022 and 2023 revenue programs.

- On May 4, 2021, we announced an agreement to extend and expand our plant research partnership with KeyGene, a global leader in plant research involving high-value genetic traits and increased crop yields. The new agreement extends the length of the collaboration we have with KeyGene to develop new, disruptive hemp/cannabis plants and intellectual property for the life science, medicinal, and pharmaceutical end-use markets. It also expands the partnership to include research and development activity for non-combustible, alternative tobacco plant applications, such as protein production, as well as our third plant franchise.

- We secured partnerships with three additional commercial-scale plant breeders that augment our existing breeding capabilities in close partnership with Aurora Cannabis. Extractas Bioscience, located in the southern hemisphere, and Sawatch Agriculture and Folium Botanical, both located in the northern hemisphere, provide us with year-round growing capabilities. These alkaloid-based plant breeders can help support commercial scale-up and cultivation of disruptive plant lines far faster and beyond the capabilities of independent competitors or in-house breeding in consumer product companies.

- We now control a comprehensive and innovative upstream cannabinoid value chain, an asset we believe is critical to unlocking commercial success for large scale cultivation and extraction. Components of the value chain include plant profiling tailored to the needs of customers (CannaMetrix), genetics to deliver differentiated traits to maximize yield of a specific cannabinoid, or certain taste or fragrance profile (KeyGene), and commercial-scale plant breeding and cultivation of disruptive plant lines, as well as ingredient extraction/purification year-round (Extractas Bioscience, Sawatch Agriculture, Folium Botanical, Aurora Cannabis, Needle Rock Farms, and Panacea).

- On July 1, 2021, we announced a definitive agreement to convert our investment in Panacea Life Sciences, Inc., in line with the ongoing development of our strategic partnership network. Under terms of the agreement, our previous investment was exchanged for ownership of Needle Rock Farms (valued at $2.2 million), a new $4.3 million promissory note receivable, and 91 million shares of Exactus, Inc. common stock (valued at $9.1 million). The transaction is described further within Note 5 to our financial statements included herein.

Third Plant-Based Franchise:

- We will introduce our third franchise on August 30, 2021. We intend to outline its market opportunity, in a high-growth global market estimated at more than $500 billion annually, and will articulate its competitive advantages in the industry. We will also summarize our global plan for the route to market and commercialization in this market, which is not as highly regulated as our first two franchises.

Corporate Business:

- On June 9, 2021, we announced that we entered into a definitive agreement with one institutional investor for the sale of 10 million shares of our common stock at a purchase price of $4.00 per share in a registered direct offering for gross proceeds of $40 million. The offering closed as planned on June 9, 2021. The net proceeds of the financing will be used to support our strategic objectives across all of our plant franchises. More specifically, we intend to use the net proceeds for research and development expenses, capital expenditures, procurement and development of additional intellectual property rights, commercialization of our product portfolio, working capital, and general corporate purposes.

- On June 28, 2021, the Company was added to the Russell 2000®, Russell 3000®, and Russell Global Indexes at the conclusion of the Russell U.S. Indexes annual reconstitution, effective at the opening of the U.S. equity markets.

- On July 23, 2021, new research coverage of the Company was initiated by Vivien Azer, beverages, tobacco, and cannabis senior analyst at Cowen & Company, LLC.

Second Quarter 2021 Financial Highlights:

- Net sales for the second quarter of 2021 were a record $8.4 million, an increase of greater than 30% from $6.4 million in the prior year period. Net sales for the first half of 2021 were a record $15.2 million, an increase of 13% from $13.5 million in the prior year period.

- Gross profit margin increased $385 thousand for the three months ended June 30, 2021, compared to the prior year respective period— a sixth consecutive quarter of year-over-year improvement.

- Net loss in the second quarter of 2021 was $(4.2) million, a favorable decrease of $883 thousand compared to the prior year period, representing a net loss per share of $(0.03). This compares to the second quarter of 2020 net loss of $(5.1) million, or $(0.04) per share.

- Our cash, cash equivalents, and short-term investment securities increased to $62.3 million as of June 30, 2021, compared to $30.9 million as of March 31, 2021.

Results of Operations

Quarter and Year-to-Date June, 30 2021 compared to Quarter and Year-to-Date June 30, 2020.

All amounts in thousands, except for share and per share data.

Revenue - Sale of products, net

	Quarter-to-Date		Year-to-Date	
	June 30 2021	June 30 2020	June 30 2021	June 30 2020
Sale of products, net	$ 8,371	$ 6,435	$ 15,177	$ 13,493
Dollar Change from Prior Year	$ 1,936		$ 1,684	

The increase in sales revenue for the three months ended June 30, 2021, compared to the three months ended June 30, 2020, was due to increases in sales of contract manufactured filtered cigars and cigarettes. Filtered cigar sales increased by approximately $1,755 and cigarette sales increased by $181 —both driven by increased volume and pricing compared to the prior year period.

The increase in sales revenue for the six months ended June 30, 2021 was primarily the result of increased sales of contract manufactured filtered cigars of $1,882, driven by increased volume, and fulfillment of our SPECTRUM® cigarette order of $680 which did not occur in the prior period. This was partially offset by decreased sales of contract manufactured cigarettes of $878 which was primarily due to lower volume in the first quarter of 2021 as compared to the respective prior year period.

Cost of goods sold - Products / Gross profit (loss)

	Quarter-to-Date		Year-to-Date	
	June 30 2021	June 30 2020	June 30 2021	June 30 2020
Cost of goods sold	$ 7,785	$ 6,234	$ 13,944	$ 13,005
Percent of Product Sales	93.0 %	96.9 %	91.9 %	96.4 %
Dollar Change from Prior Year	$ 1,551		$ 939	

	Quarter-to-Date		Year-to-Date	
	June 30 2021	June 30 2020	June 30 2021	June 30 2020
Gross profit	$ 586	$ 201	$ 1,233	$ 488
Percent of Product Sales	7.0 %	3.1 %	8.1 %	3.6 %
Dollar Change from Prior Year	$ 385		$ 745	

The increase in gross profit for the three months ended June 30, 2021, compared to the three months ended June 30, 2020, was driven by improved contract manufactured filtered cigar sales mix due to new customer contracts and price increases taken on contract manufactured cigarettes.

The increase in gross profit for the six months ended June 30, 2021, compared to the six months ended June 30, 2020, was primarily driven by improved 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.

Research and development ("R&D") expense

	Quarter-to-Date		Year-to-Date	
	June 30 2021	June 30 2020	June 30 2021	June 30 2020
Research and Development	$ 744	$ 957	$ 1,433	$ 1,770
Percent of Product Sales	8.9 %	14.9 %	9.4 %	13.1 %
Dollar Change from Prior Year	$ (213)		$ (336)	

The decrease in R&D expense for the three months ended June 30, 2021, compared to the three months ended June 30, 2020, was due to lower consulting and professional services of $125, lower R&D contract costs of $64, and lower personnel expense of $68 due to a more focused R&D headcount to accomplish our strategies. This decrease was partially offset by increased patent expenses of $70 for the three months ended June 30, 2021, compared to the prior year period.

Lower R&D expense for the six months ended June 30, 2021, compared to the six months ended June 30, 2020, was driven by a decrease in R&D personnel expense of $173, a decrease in R&D contract costs of $99, and a decrease in consulting and professional services of $98. This decrease was partially offset by increased patent expenses of $97 for the six months ended June 30, 2021, compared to the prior year period. We continue to prioritize our R&D activities to achieve our strategic and investment priorities.

Research and development expense - MRTP

	Quarter-to-Date		Year-to-Date	
	June 30 2021	June 30 2020	June 30 2021	June 30 2020
Research and Development - MRTP	$ 2	$ 4	$ 14	$ 154
Percent of Product Sales	0.0 %	0.1 %	0.1 %	1.1 %
Dollar Change from Prior Year	$ (2)		$ (140)	

MRTP expenses for three and six months ended June 30, 2021 declined as we submitted our MRTP application to the FDA during 2019. MRTP-related expenses for 2021 are primarily related to continued consulting services related to our application while 2020 expenses are primarily related to our February 14, 2020 Tobacco Products Scientific Advisory Committee (TPSAC) hearing.

Sales, general and administrative expense

	Quarter-to-Date		Year-to-Date	
	June 30 2021	June 30 2020	June 30 2021	June 30 2020
Sales, general and administrative	$ 6,177	$ 3,501	$ 11,006	$ 6,640
Percent of Product Sales	73.8 %	54.4 %	72.5 %	49.2 %
Dollar Change from Prior Year	$ 2,676		$ 4,366	

The increase in SG&A expense during the three months ended June 30, 2021, as compared to the prior year respective period, was driven by increased investor relations and strategic consulting expenses of $1,255, increased equity compensation expense of $865, increased insurance expense of $275, increased board of director fees of $149, increased marketing expenses primarily related to VLN® activities of $52, increased legal costs of $43, and increased travel expense of $39.

The increase in SG&A expense during the six months ended June 30, 2021, as compared to the prior year respective period, was driven by increased investor relations and consulting expenses of $1,732, increased equity compensation expense of $905, increased insurance expenses of $879, increased personnel expenses of $697 due to the hiring of the new management team including the Chief Executive Officer and Chief Financial Officer in the second quarter of 2020, increased board of director fees of $164, increased marketing expenses primarily related to VLN® activities of $164, and increased facilities expenses of $56 due to the relocation to our new corporate headquarters. These increases in SG&A were partially offset by lower legal fees of $241 compared to the respective prior year period.

We have deployed this incremental SG&A spending to continue our corporate investment as we move quickly to market readiness in both tobacco and hemp/cannabis. We will continue to incur incremental SG&A spending as growth and investment opportunities present themselves.

Depreciation expense

	Quarter-to-Date		Year-to-Date	
	June 30 2021	June 30 2020	June 30 2021	June 30 2020
Depreciation	$ 150	$ 157	$ 288	$ 313
Percent of Product Sales	1.8 %	2.5 %	1.9 %	2.3 %
Dollar Change from Prior Year	$ (7)		$ (25)	

The decrease in depreciation expense during the three and six months ended June 30, 2021, as compared to the prior year respective periods, was due to a lower property, plant, and equipment depreciable base primarily due to impairments taken for the Williamsville corporate office during the fourth quarter of 2020.

Amortization expense

	Quarter-to-Date		Year-to-Date	
	June 30 2021	June 30 2020	June 30 2021	June 30 2020
Amortization	$ 153	$ 189	$ 303	$ 361
Percent of Product Sales	1.8 %	2.9 %	2.0 %	2.7 %
Dollar Change from Prior Year	$ (36)		$ (58)	

The decrease in amortization expense during the three and six months ended June 30, 2021, as compared to the prior year respective periods, was due to a lower intangible asset depreciable base primarily due to impairments taken during 2020.

Unrealized gain (loss) on investment

	Quarter-to-Date		Year-to-Date	
	June 30 2021	June 30 2020	June 30 2021	June 30 2020
Unrealized gain (loss) on investments	$ (176)	$ 312	$ (140)	$ (133)
Percent of Product Sales	(2.1)%	4.9 %	(0.9)%	(1.0)%
Dollar Change from Prior Year	$ (488)		$ (7)	

The warrants to purchase 81,164 shares of Aurora Cannabis, Inc ("Aurora") common stock are considered an equity security and are recorded at fair value. We recorded the fair value of the stock warrants of $98 at June 30, 2021, using the Black-Scholes pricing model, and recorded an unrealized loss on the warrants in the amount of $176 for the three months ended June 30, 2021, and an unrealized loss of $140 for the six months ended June 30, 2021.

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 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. The shares will be subject to market volatility and will result in fluctuations of our net loss and loss per share due to future unrealized gains or losses that will be recognized within the Consolidated Statements of Operations. Our investment is described further within Note 5 to our financial statements included herein.

Interest income, net

	Quarter-to-Date		Year-to-Date	
	June 30 2021	June 30 2020	June 30 2021	June 30 2020
Interest Income, net	$ 108	$ 462	$ 220	$ 1,074
Percent of Product Sales	1.3 %	7.2 %	1.5 %	8.0 %
Dollar Change from Prior Year	$ (354)		$ (854)	

Interest income, net (interest income less investment fees) for the six months ended June 30, 2021 is comprised of cash interest income of $135 and non-cash interest accretion of $85. Cash interest income is earned on our short-term investment securities and non-cash interest income on our Panacea preferred stock investment and accretion of short-term investment securities purchased at a discount or premium. Interest income, net (interest income less investment fees) for the six months ended June 30, 2020 is comprised of cash interest income on our short-term investment securities of $421, cash interest income on the Panacea convertible note receivable of $347, and non-cash interest accretion of $306.

The decrease in interest income for the three months ended June 30, 2021, as compared the prior year respective period, was primarily due to lower cash interest income on our short-term investment securities and lower cash and non-cash interest income related to our Panacea investment. Cash interest income, net on our short-term investment securities decreased $122, due to lower bond interest yields, and interest income related to our Panacea investment decreased by $200 due to our investment conversion described within Note 5 to our financial statement included herein.

The decrease in interest income for the six months ended June 30, 2021, as compared the prior year respective period, was primarily due to lower cash interest income on our short-term investment securities and lower Panacea interest income due to the conversion of our Panacea investment described within Note 5 to our financial statements included herein. Cash interest income, net on our short-term investment securities decreased $287, due to lower bond interest yields, and interest income related to our Panacea investment decreased by $511.

Interest expense

	Quarter-to-Date		Year-to-Date	
	June 30 2021	June 30 2020	June 30 2021	June 30 2020
Interest Expense	$ (14)	$ (19)	$ (21)	$ (31)
Percent of Product Sales	(0.2)%	(0.3)%	(0.1)%	(0.2)%
Dollar Change from Prior Year	$ 5		$ 10	

Interest expense for the three and six months ended June 30, 2021 decreased primarily due to the interest accretion on a note payable to NCSU which was fully paid off during the second quarter of 2020.

Net loss

	Quarter-to-Date		Year-to-Date	
	June 30 2021	June 30 2020	June 30 2021	June 30 2020
Net Loss	$ (4,174)	$ (5,057)	$ (9,204)	$ (9,086)
Percent of Product Sales	(49.9)%	(78.6)%	(60.7)%	(67.3)%
Dollar Change from Prior Year	$ 883		$ (118)	

The decrease in net loss for the three months ended June 30, 2021, as compared to the same period during the prior year, was primarily the result of an increase in gross profit of $385, a gain on our Panacea investment conversion of $2,548, and a 2020 impairment of $1,062 which did not repeat in 2021. This was partially offset by increased operating expenses of $2,272, an unrealized loss of $176 on our Aurora warrants during the three months ended June 30, 2021 compared to an unrealized gain of $312 for the three months ended June 30, 2020, and lower interest income of $354.

The increase in net loss for the six months ended June 30, 2021, as compared to the same period during the prior year, was primarily the result of increased operating expenses of $3,660 and lower interest income in the amount of $854. This was partially offset by an increase in gross profit of $745, a gain on our Panacea investment conversion of $2,548, and a 2020 impairment of $1,062 which did not repeat in 2021.

Other Comprehensive Income (Loss)

	Quarter-to-Date		Year-to-Date	
	June 30 2021	June 30 2020	June 30 2021	June 30 2020
Other Comprehensive Income (Loss)	$ (41)	$ 238	$ (73)	$ 45
Percent of Product Sales	(0.5)%	3.7 %	(0.5)%	0.3 %
Dollar Change from Prior Year	$ (279)		$ (118)	

We maintain an account for short-term investment securities that are classified as available-for-sale securities and consist of money market funds and corporate bonds with maturities greater than three months at the time of acquisition. Unrealized gains and losses on short-term investment securities (the adjustment to fair value) are recorded as other comprehensive income or loss. We recorded an unrealized loss on short-term investment securities in the amount of $41 resulting in other comprehensive loss of $41 for the three months ended June 30, 2021. For the three months ended June 30, 2020, we recorded an unrealized gain on short-term investment securities in the amount of $241 and recorded a reclassification of gains to net loss in the amount of $3, resulting in other comprehensive income of $238 for the three months ended June 30, 2020. For the six months ended June 30, 2021, we recorded an unrealized loss on short-term investment securities in the amount of $73 resulting in other comprehensive loss of $73. For the six months ended June 30, 2020, we recorded an unrealized gain on short-term investment securities of $45 resulting in other comprehensive income of $45.

Liquidity and Capital Resources

	Quarter-to-Date		Year-to-Date	
	June 30 2021	June 30 2020	June 30 2021	June 30 2020
Net cash provided by (used in) operating activities	$ (8,359)	$ (6,811)	$ (12,270)	$ (11,473)
Net cash provided by (used in) investing activities	(31,132)	5,283	(39,667)	10,179
Net cash provided by (used in) financing activities	40,256	1,653	52,945	1,653
Net increase (decrease) in cash and cash equivalents	765	125	1,008	359
Cash and cash equivalents - beginning of period	1,272	719	1,029	485
Cash and cash equivalents - end of period	$ 2,037	$ 844	$ 2,037	$ 844
Short-term investment securities	$ 60,284	$ 28,103	$ 60,284	$ 28,103

Working Capital

As of June 30, 2021, we had working capital of approximately $61,471 compared to working capital of approximately $20,998 at December 31, 2020 an increase of $40,473. This increase in working capital was primarily due to a $39,979 increase in cash, cash equivalents and short-term investment securities resulting from (i) net proceeds of $11,782 resulting from the cash exercises of all outstanding warrants during the first quarter of 2021; and (ii) net proceeds of $38,258 resulting from a capital raise in June 2021 described below. This increase in cash and cash equivalents was offset by other changes in working capital required for operating activities.

On June 7, 2021, we entered into a placement agent agreement (the "Placement Agent Agreement") with Cowen and Company, LLC (the "Placement Agent") relating to a registered direct offering (the "Offering") to a select investor (the "Investor"). Pursuant to the Placement Agent Agreement, we agreed to pay the Placement Agent a cash fee of 3.0% of the gross proceeds from the Offering. The Placement Agent Agreement requires us to indemnify the Placement Agent and certain of its affiliates against certain customary liabilities. In addition, on June 7, 2021, we and the Investor entered into a securities purchase agreement (the "Securities Purchase Agreement") relating to the issuance and sale of shares of common stock. The Investor purchased $40,000 of shares, consisting of an aggregate of 10,000,000 shares of common stock at $4.00 per share, resulting in net proceeds of $38,206. The Securities Purchase Agreement provides that, subject to certain exceptions, until the earlier of (i) 90 days after July 9, 2021 or (ii) the trading day following the date that the common stock's closing price exceeds $6.00 for a period of 10 consecutive trading days, neither we nor any of our 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 common stock was offered and sold pursuant to our Form S-3 shelf registration statement.

Net cash used in operating activities

The increase of cash used in operations in the amount of $797 was due to an increase in the cash portion of the net loss in the amount of $2,844 which was offset by a decrease in cash used for working capital components related to operations in the amount of $2,047 for the six months ended June 30, 2021 as compared to the six months ended June 30, 2020.

Net cash provided by investing activities

The increase in cash used in investing activities of $49,846 was primarily the result of an increase in the net cash used for our short-term investments in the amount of $49,519 and 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 $327—year-to-date 2021 compared to year-to-date 2020. The increase in cash used in our short-term investments was primarily due to increased funds for investment, from the warrant exercises and capital raise described above, while the increased cash used for acquisition of machinery and equipment was primarily due to new office furnishings and improvements at our newly relocated corporate headquarters.

Net cash provided by financing activities

During the six months ended June 30, 2021, cash provided by financing activities increased by $51,292 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 of note payable issuances and payments of $462; and (iv) net proceeds from stock option exercises of $1,259. This increase 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 contract manufacturing business. As of June 30, 2021, we had approximately $62,321 of cash and cash equivalents and short-term investments which is an increase of $39,979 from December 31, 2020. This increase was primarily due to the cash exercise of our outstanding warrants in the first quarter of 2021 and a capital raise in the second quarter of 2021. Our short-term investment securities, along with sustained contract manufacturing sales, provide sufficient resources for estimated contractual commitments, described further in Note 11 to our consolidated financial statements included herein, and normal cash requirements for operations well beyond the next twelve months. In addition to the commitments described in Note 11 to our consolidated financial statements

included herein, we have secured contracts with select tobacco farmers to assist with the 2021 growing of our VLNC tobacco. These contracts will increase the quantity of our current leaf inventory which will help support expected demand of VLN®, if MTRP authorization is granted by the FDA. The cost of such growing efforts is dependent on the final agricultural yields and leaf quality, but we expect the cost to range between $1.5 million and $1.9 million. We also believe that we have appropriate liquidity to successfully manufacture and distribute our VLN® cigarette within 90 days of MRTP authorization by the FDA, if granted in 2021, and appropriate liquidity for continued R&D investment in all of our plant franchises.

We also have an effective S-3 shelf registration statement on file with the U.S. Securities and Exchange Commission (SEC), which provides us flexibility and optionality to raise additional capital as needed. However, there can be no assurance that capital will be available to us on acceptable terms or at all.

Critical Accounting Policies and Estimates

There have been no material changes to the information set forth in our Annual Report on Form 10-K for the year ended December 31, 2020.

Inflation

Inflation did not have a material effect on our operating results for the six months ended June 30, 2021 and 2020, respectively.

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 4. Controls and Procedures

(a) Evaluation of Disclosure Controls and Procedures:

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

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

(b) Changes in Internal Control over Financial Reporting:

There were no changes in the Company’s internal controls over financial reporting during the second quarter of 2021 that have materially affected, or are reasonably likely to materially affect, the Company’s internal controls over financial reporting.

Part II. OTHER INFORMATION

Item 1. Legal Proceedings

See Note 11 - Commitments and Contingencies – Litigation - to our consolidated financial statements included in this Quarterly Report for information concerning our on-going litigation. In addition to the lawsuits described in Note 11, 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 11 to our 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

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, 2020, as filed with the SEC on March 11, 2021.

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 10.1	First Amended and Restated Framework Collaborative Research Agreement between 22nd Century Group, Inc. and Keygene N.V. dated April 16, 2021. †
Exhibit 10.2	Promissory Note Exchange Agreement between 22nd Century Group, Inc. and Panacea dated June 30, 2021.
Exhibit 10.3	Securities Exchange Agreement between 22nd Century Group, Inc. and PLS, Exactus, Inc. dated June 30, 2021.
Exhibit 10.4	22nd Century Group, Inc. 2021 Omnibus Incentive Plan (incorporated by reference from Appendix A to the Company's definitive proxy statement filed April 5, 2021).
Exhibit 10.5	Form of Stock Option Award Agreement under 2021 Omnibus Incentive Plan (incorporated by reference to Exhibit 10.2 to the Company's Form 8-K filed with the Commission on May 21, 2021).
Exhibit 10.6	Form of Executive Restricted Stock Unit Award under 2021 Omnibus Incentive Plan (incorporated by reference to Exhibit 10.3 of the Company's Form 8-K filed with the Commission on May 21, 2021).
Exhibit 10.7	Form of Director Restricted Stock Unit Award under 2021 Omnibus Incentive Plan (incorporated by reference to Exhibit 10.4 of the Company's Form 8-K filed with the Commission on May 21, 2021).
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	XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
Exhibit 104	Cover Page Interactive Data File - The cover page interactive data file does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document

†Certain portions of the exhibit have been omitted pursuant Regulation S-K Item 601(b) because it is both (i) not material to investors and (ii) likely to cause competitive harm to the Company if publicly disclosed.

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 5, 2021

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

Date: August 5, 2021

/s/ John Franzino
John Franzino
Chief Financial Officer
(Principal Accounting and Financial Officer)

Exhibit 10.1

EXECUTION VERSION

[*] = CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY BRACKETS, HAS BEEN OMITTED BECAUSE IT IS BOTH (1) NOT MATERIAL TO INVESTORS AND (2) LIKELY TO CAUSE COMPETITIVE HARM TO THE COMPANY IF PUBLICLY DISCLOSED.

FRAMEWORK COLLABORATIVE RESEARCH AGREEMENT

by

KEYGENE N.V.

and

22nd Century Group, Inc.

FIRST AMENDED AND RESTATED FRAMEWORK

COLLABORATIVE RESEARCH AGREEMENT

This First Amended and Restated Framework Collaborative Research Agreement (the "**Agreement**"), is executed this 16th day of April (the "**Execution Date**"), 2021, but is effective as of the 14th day of April 2019 ("**Effective Date**") by and between **Keygene N.V.**, a company organized and existing under the laws of The Netherlands, having its registered office at Agro Business Park 90, 6708 PW Wageningen, The Netherlands, duly represented by its co-CEO's, Dr. Arjen van Tunen and Henny Wilpshaar, (hereinafter further referred to as "**KeyGene**"), and **22nd Century Group, Inc.**, a corporation organized and existing under the laws of State of Nevada in the United States of America, having its principal offices at 500 Seneca Street, Suite 507, Buffalo, New York 14204, United States of America, duly represented by its President and Chief Executive Officer, James A. Mish (hereinafter further referred to as "**XXII**"), and amends and restates in its entirety the Original Agreement (defined below) with reference to the following facts.

RECITALS

WHEREAS, XXII is a company active in, amongst others, the field of cannabis and hemp, and has proprietary expertise, knowledge and germplasm relating to cannabis and hemp;

WHEREAS, KeyGene is a company active in the field of agricultural biotechnology, genomics and phenomics, and has proprietary expertise, knowledge and technologies for generating and analyzing molecular genetic and phenotypic data, molecular mutagenesis, lead discovery and lead validation, breeding tool and/or trait development;

WHEREAS, On the Effective Date, XXII entered into a Framework Collaborative Research Agreement (the "**Original Agreement**") under which KeyGene was to provide certain research, consulting and advisory services for XXII; and

WHEREAS, the Parties wish to enter into this Agreement in order to replace in its entirety the Original Agreement.

NOW, THEREFORE, in consideration of the mutual premises and promises contained herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereto intending to be legally bound do hereby agree as follows:

Article 1 - Definitions

In this Agreement the following terms, either in plural or in single form, have the following meanings:

1.1 **Affiliate**: means any entity directly or indirectly controlled by a Party, where, for the purposes of this definition "**control**" means the actual power, either directly or indirectly through one or more intermediaries, to determine the management and policy of an entity in a decisive way, whether through the direct or indirect ownership of more than fifty percent (50%) of the voting shares, or by contract or otherwise.

1.2 **Biological Material**: means any and all XXII proprietary germplasm and other biological material supplied by XXII to KeyGene for the execution of a Project.

1.3 **Change of Control**: means with regard to a Party any of the following: (i) such Party sells, leases or exchanges all or substantially all of its assets to any other person or entity; or (ii) at least fifty percent (50%) of the outstanding voting shares in such Party are sold to a third party; or (iii) any other event pursuant to which the persons or entities that Control such Party immediately prior to such event do no longer Control such Party immediately after such event. "**Control**" for this purpose means: owner or holder of fifty percent (50%) or more of the voting stock or other equity interest of the Party with the power to vote, or the power in fact to control the management decisions of such Party through the ownership of securities, or by contract, or otherwise.

1.4 **Consultancy Services**: means the expert assistance and general advice requested by XXII to be supplied by KeyGene to XXII in accordance with a PAS.

1.5 **Contract Year** : means each consecutive twelve (12) month period from the Effective Date or its applicable calendar year anniversary.

1.6 **Exclusivity Period**: means the period that XXII pays at least the Minimum Research Funding Amount during each Contract Year as Research Funding, not exceeding a period of ten (10) Contract Years; provided, however, that (i) the Exclusivity Period shall end immediately upon any termination of this Agreement upon any termination of this Agreement (A) in accordance with Section 12.2 or (B) by KeyGene in accordance with Section 12.3 and (ii) upon any termination of this Agreement by XXII in accordance with Section 12.3, the Exclusivity Period shall continue through the end of the ninety-sixth (96^{th}) month after the Effective Date.

1.7 **Field**: means any and all use of, research regarding, and/or commercialization of hemp and/or cannabis (all versions and types of the genus *Cannabis Sativa L plant*), and/or any parts thereof, for any and all purposes, including but not limited to human, medical, agricultural, veterinary, therapeutic and other such purposes.

1.8 **KeyGene Background**: means all protocols, methods, procedures, know-how, trade secrets, information, data (e.g. sequences), biological materials, software, technologies and/or combinations thereof, whether in electronic form or not and whether or not laid down in protocols, and all intellectual property rights related thereto, owned by, licensed in or otherwise in the possession of KeyGene (i) as of the Effective Date or (ii) after the Effective Date if discovered independently by KeyGene and not in furtherance of this Agreement, in each case which are required or may otherwise be useful for the performance of a specific Project.

1.9 **KeyGene Identified Targets**: means Results that constitute or are based on genes, alleles and other regulatory elements that are identified by KeyGene in the course of a Project (i.e. KeySeeQ output), other than publicly known regulatory elements.

1.10 **Non-KeyGene Identified Targets**: means Results that constitute or are based on genes, alleles and other regulators that are publicly known regulatory elements.

1.11 **Net Sales**: means (i) the gross revenue received by XXII and its Affiliates from the sale of Project Technology Results, KeyGene Identified Targets, Non-KeyGene Identified Targets and/or products or services that incorporate, are based on or use Project Technology Results, KeyGene Identified Targets or Non-KeyGene Identified Targets, less (ii) returns, allowances or credits, rebates, excise, sales, use or value-added taxes or other fees imposed by government entities, tariffs, costs of packing, transportation and insurance, delivery charges, cash and trade discounts allowed, and import or export duties.

1.12 **KeyGene Net Sales**: means (i) the gross revenue received by KeyGene and its Affiliates from the sale of Results and/or products or services that incorporate, are based on or use Results, less (ii) returns, allowances or credits, rebates, excise, sales, use or value-added taxes or other fees imposed by government entities, tariffs, costs of packing, transportation and insurance, delivery charges, cash and trade discounts allowed, and import or export duties.

1.13 **License Income**: means any and all gross revenue actually received by XXII and its Affiliates in consideration of the grant of a license in respect of the Project Technology Results, KeyGene Identified Targets and/or Non-KeyGene Identified Targets. License Income includes running royalties, upfront fees, annual fees and milestone fees actually paid by such licensee to XXII. It does not include any consideration paid to XXII or its Affiliates for research and development work or other non-commercial work with such licensee in connection with the grant of such license.

1.14 **KeyGene License Income**: means any and all gross revenue actually received by KeyGene and its Affiliates in consideration of the grant of a sublicense in respect of the Results. KeyGene License Income includes running royalties, upfront fees, annual fees and milestone fees actually paid by such licensee to KeyGene. It does not include any consideration paid to KeyGene or its Affiliates for research and development work or other non-commercial work with such licensee in connection with the grant of such license.

1.15 **Other Income:** means amounts payable in respect of a Contract Year pursuant to Section 7.2, 7.8 and 7.9.

1.16 **Party** or **Parties** means KeyGene and/or XXII, as the context may require.

1.17 **PAS** or **Project Approval Sheet** or **Statement of Work**: means a written document a template of which is attached as **Annex 1** to this Agreement, agreed to in writing by both Parties and to be attached to and incorporated in this Agreement, containing the following elements, if applicable:

(i) the objective of the Project;

(ii) the type of Project;

(iii) a description of XXII Background and Biological Material and KeyGene Background to be contributed by the Parties to the extent needed to conduct the Project;

(iv) the Project proposal or work plan, including milestones if applicable, and the intended deliverables as to expected Results;

(v) a description of the consultancy to be rendered by KeyGene (if applicable);

(vi) the R&D amounts and consultancy fee for the Project pursuant to Article 7; and

(vii) the duration of the Project.

1.18 **Project**: means the research, development and/or consultancy activities to be performed by KeyGene, as further detailed in a PAS.

1.19 **Project Technology Results**: means (i) any and all protocols, methods, procedures, know-how, software, inventions, technologies and/or combinations thereof, whether in electronic form or not and whether or not laid down in protocols that (A) is developed, created and/or generated by KeyGene from the execution of a Project, (B) is applicable to the Field, and (C) is expressly a deliverable of a Project as further detailed in a PAS and/or is otherwise expressly agreed by the Parties prior to the commencement of a respective Project as being a Project Technology Result, unless otherwise agreed to in writing by the Parties after the commencement of a Project and (ii) any other protocols, methods, procedures or technologies that may be separately approved by the Steering Committee as Project Technology Results.

1.20 **Research Funding**: means the aggregate amounts payable by XXII to KeyGene under the Projects pursuant to Sections 7.1 (R&D amounts) and 7.2 (consultancy fees).

1.21 **Residual Expertise**: means protocols, methods, procedures, know-how, software, inventions, technologies and/or combinations thereof, whether in electronic form or not and whether or not laid down in protocols that (i) is developed, created and/or generated by KeyGene from the execution of a Project, (ii) is not specific to the Field, and (iii) is a generic crop technology that has general applicability outside the Field. Without limiting the foregoing and for the avoidance of doubt, Residual Expertise does not include Project Technology Results, KeyGene Identified Targets or Non-KeyGene Identified Targets.

1.22 **Results**: means any and all data (e.g., genotype data, expression data, transcriptomatics data, metabolomic data, and sequences), plant materials, information, biological materials, genes, plant varieties, maps, analysis, improvements, results, deliverables, discoveries, inventions, work product, know-how and/or combinations thereof, whether in electronic form or not and whether or not laid down in protocols, and all intellectual property rights related thereto, (i) developed, created, resulting and/or generated from the execution of a Project, (ii) delivered by KeyGene to XXII under this Agreement (including any PAS), (iii) otherwise invented, reduced to practice, created, developed or made by KeyGene in the performance of the Consultancy Services and/or (iv) derived, generated, developed or propagated from any Biological Material, in each case excluding Residual Expertise and KeyGene Background. Results includes Project Technology Results.

1.23 **Steering Committee**: has the meaning as defined in Article 5.

1.24 **XXII Background**: means all protocols, methods, procedures, know-how, trade secrets, information, data (e.g. sequences), Biological Material, software, technologies and/or combinations thereof, whether in electronic form or not and whether or not laid down in protocols, and all intellectual property rights related thereto, owned by, licensed in or otherwise in the possession of XXII (i) as of the Effective Date or (ii) after the Effective Date if discovered independently by XXII and not in furtherance of this Agreement, in each case which are required or may otherwise be useful for the performance of a specific Project.

Article 2 - Scope of the Agreement and Exclusivity

2.1 This Agreement describes the terms and conditions under which KeyGene will conduct mutually agreed research, services and/or consultancy in the Field.

2.2 During the Exclusivity Period, KeyGene and its Affiliates will not work with, provide any services to, provide any assistance or advise to, be engaged by, or provide any scientific information or deliverable to any third party in the Field. During the Exclusivity Period, KeyGene and its Affiliates will provide consulting services solely to XXII in the Field. For sake of clarity, KeyGene is entitled to conduct internal research in the Field during the Exclusivity Period for KeyGene's internal knowledge, but not with or for any third party.

2.3 Master Development Agreement [*]. The Parties have expressed their wish to further expand their collaboration to other crops and therefore have agreed to enter into negotiations regarding a Master Development Agreement in the field of [*] (hereinafter referred to as "MDA"). Among other things, the MDA will: (A) incorporate a Steering Committee; (B) establish an Executive Committee to review the programs in the field of cannabis, [*], under terms to be negotiated; (C) include as initial statements of work projects for [*]; and (D) provide for R&D amounts and other compensation in 2021 of at least US $200,000. The Parties agree, acting in good faith, to use reasonable efforts to agree and enter into the MDA at or before the end of the Negotiation Period (as defined below). KeyGene is open to discussing exclusivity for results or fields. It is expressly understood by the Parties that this Section 2.3 is not intended to, and does not, constitute an agreement to consummate or to enter into the MDA, and neither Party will have any rights or obligations of any kind whatsoever with respect to the MDA by virtue of this agreement or any other written or oral expression by any Party hereto unless and until a definitive agreement relating thereto between the Parties is executed and delivered, other than for the matters specifically agreed to herein. During 180 (one hundred and eighty) days following the Execution Date the Parties will enter into good faith negotiations of the MDA (hereinafter referred to as the "Negotiation Period"). The Parties may agree, at any time during the Negotiation Period, to extend such period past the 180 days for up to two (2) additional 90 day periods. During the Negotiation Period KeyGene hereby agrees that it considers XXII as preferred partner for collaboration in [*], and KeyGene shall therefore during the Negotiation Period not enter into discussions in nor perform any project and/or consultancy services to any third party in the field of [*]. XXII may terminate negotiations of the MDA at any time in its sole discretion. In the event XXII terminates

the negotiations or the Negotiation Period ends and there is no new agreement between the parties on the subject matter detailed in this Section 2.3, the Minimum Research Funding for Contract Year 4 (CY 2022) will increase by two hundred thousand US dollars ($200,000) to one million four hundred thousand US dollars ($1,400,000).

Article 3 - Initiation and execution of Projects

Initiation of the activities

3.1 Upon written request from XXII to initiate a new Project, and provided KeyGene has no obligations towards third parties preventing it from entering into such new Project, the Parties will promptly commence and diligently pursue good faith discussions with a view to executing a PAS covering such new Project. The Parties will aim to execute such PAS within three (3) months following such written request. During the Exclusivity Period, KeyGene agrees that KeyGene and its Affiliates will not enter into any agreements with or obligations towards any third party that would prevent KeyGene from entering into a new Project in the Field with XXII.

3.2 All terms and conditions of this Agreement will start to apply to such new Project as of the latest signature date of the PAS which incorporates such PAS into this Agreement.

3.3 The first Projects to be conducted by KeyGene pursuant to and governed by this Agreement are attached hereto as **Annex 2**. Annex 2 will be updated from time to time with additional mutually agreed upon Projects.

3.4 In case of a conflict between the terms of this Agreement and any more specific terms included in any PAS attached hereto and incorporated in this Agreement, the more specific terms of the PAS shall prevail; provided, however, that notwithstanding anything contain in this Agreement of any PAS to the contrary, nothing in any PAS shall adversely affect XXII's exclusive rights in the Field during the Exclusivity Period. In case of conflict between the terms of this Agreement and any PAS that is due to conflict of law, the terms of this Agreement shall prevail.

Performance of the activities

3.5 KeyGene shall use commercially reasonable efforts, including but not limited to the assignment of all necessary qualified personnel and all of its technology resources, and including where applicable and agreed, the KeyGene Background, to execute the activities assigned to it under each agreed Project substantially in accordance with the planning and objectives as described in the applicable PAS. KeyGene shall, furthermore, execute its activities under this Agreement in accordance with generally accepted scientific and ethical standards.

3.6 XXII shall supply to KeyGene the XXII Background and Biological Material required to execute each agreed Project in a timely and suitable manner as mutually agreed in writing by the Parties, all as described in the applicable PAS and as may be further expressly agreed in writing between the Parties.

3.7 KeyGene shall keep and maintain lab records documenting its activities and results pursuant to each agreed Project, in a manner that is appropriate for the purpose of protecting

the intellectual property rights attaching to such results and for regulatory purposes and for the use of such information by XXII in XXII's use of the Results in its scientific and/or commercial activities. Without limiting the foregoing, KeyGene will (i) promptly and fully inform XXII in writing of any Results setting forth in reasonable detail the nature of the Results, (ii) promptly deliver to XXII the Results, including without limitation a stand-alone software program, operating system and all data related to Results, which will be resident and fully operable on XXII's or XXII's designees computer server(s), together with any other software, files or tools, needed to fully access, search and use any such data (including without limitation any related genome annotations), (iii) cause all of KeyGene's agents, owners, consultants, contractors, servants, representatives and employees to assign all right, title and interest in and to any and all Results to XXII, (iv) execute and deliver to XXII each document, instrument and other writing, and take any other action, reasonably requested by XXII to assist or facilitate XXII in protecting XXII's interest in any Results (including, without limitation, assisting with XXII's preparation of any patent, plant variety right, copyright or trademark application) or to vest all right, title and interest in Results in XXII, and (v) execute, acknowledge and deliver promptly to XXII such written instruments and do and cause to be done all matter of things and other acts as may be necessary, appropriate or convenient in the reasonable opinion of XXII to obtain, secure and maintain United States and/or foreign patents, United States and/or foreign plant variety rights, United States or foreign copyright registrations, or any other legal protections in any country (where reasonable out-of-pocket costs incurred by KeyGene in doing so will be reimbursed by XXII) and to vest the entire right, title and interest in the Results in XXII.

3.8 KeyGene shall only be allowed to subcontract any part of its activities under this Agreement to a third party if such subcontractor and such subcontracted activity has been mutually agreed to in writing by the Parties in a PAS prior to KeyGene utilizing such third-party subcontractor, all as described in the applicable PAS, and further provided that KeyGene shall ensure that KeyGene's subcontractor is obligated to and complies with all the intellectual property and confidentiality terms and conditions of this Agreement as if such subcontractor was a party to this Agreement; provided, however, that XXII acknowledges and agrees that KeyGene may freely subcontract any part of its activities under this Agreement to KeyGene's Affiliates, including, without limitation, KeyGene's U.S. subsidiary, KeyGene, Inc. KeyGene shall ensure that all subcontracts that may expose any subcontractor to Confidential Information, Biological Material and/or Results incorporate the terms and conditions of this Agreement, to the extent applicable, including, without limitation (i) each subcontractor's level of service, systems, and control which must be at least as stringent as those required of KeyGene under this Agreement, and (ii) the terms and conditions of this Agreement relating to confidentiality, security and intellectual property ownership and rights. KeyGene will be solely liable for all acts and omissions by all subcontractors and third-parties utilized by KeyGene, including all costs, expenses, charges and other obligations of and/or to any such third-party. Any act or omission of any subcontractor or third-party utilized by KeyGene shall be deemed an act or omission of KeyGene. Any breach of these terms and conditions by its subcontractor will be regarded as a default by KeyGene itself.

Reporting & Supply of Deliverables

3.9 The Parties shall consult each other and discuss the progress of the Project(s) as often as necessary for reaching the objectives of the Project(s). Without prejudice to the generality of the foregoing, KeyGene shall provide a written progress report to XXII no less than every six (6) months and a final report within two (2) months upon completion of each Project ("**Report**"). Such consultation and reporting are hereby delegated to the Steering Committee.

3.10 Delivery of Results which are biological material shall be done in compliance with applicable laws and regulations.

Article 4 - Consultancy

4.1 If Consultancy Services are expressly desired by XXII as set forth in a PAS, then the Steering Committee shall define the content and nature of such Consultancy Services. Such Consultancy Services may include but are not limited to general advice, the establishment of new project plans, the exchange of personnel at each other's premises, and advice on strategies for protection of intellectual property rights.

4.2 Unless expressly agreed otherwise in writing, the Consultancy Services will be started by KeyGene as soon as possible after the signature date of the corresponding PAS in which XXII has expressly requested such Consulting Services.

4.3 Where necessary, KeyGene is entitled to replace employees it has assigned to perform the Consultancy Services without obtaining XXII's advance permission to do so, provided however that KeyGene shall inform XXII thereof as soon as possible and that such replacement involves employees with equal or greater expertise and who are able the perform the Consultancy Services effectively.

4.4 KeyGene, in furnishing the Consultancy Services, will be acting as an independent contractor. Nothing in this Agreement shall create any relationship of agent and principal, partnership, or employer and employee between the Parties or between one of the Parties and the other Party's employees.

Article 5 - Steering Committee

5.1 The Parties hereby establish a Steering Committee to identify, coordinate and supervise the Project(s), as well as the general collaboration between the Parties.

5.2 The Steering Committee consists of two (2) representatives of each Party. Each Party shall be entitled to appoint and withdraw its representative at its sole discretion. In the event a member of the Steering Committee is absent for a period of more than four (4) months, the Party with such absent representative shall appoint a substitute-representative on behalf of such Party.

5.3 The Steering Committee shall meet at least six (6) times per year, alternating in person or by means of telephone/videoconferencing. Meetings in persons shall be at the premises of either XXII's offices or KeyGene's United States offices in Maryland, except that KeyGene may elect not more than one time each Contract Year to conduct an in-person

meeting at KeyGene's office in The Netherlands, in all cases as mutually agreed by the Steering Committee. If meetings take place at the premises of XXII more than twice per year, the travel costs and accommodation costs of the KeyGene members of the Steering Committee shall be reimbursed by XXII.

5.4 The Steering Committee shall be responsible for the coordination of the design and the follow up of the Project(s). The Steering Committee shall convene to discuss and recommend on any critical decision to be made in such Project(s).

5.5 During the meeting of the Steering Committee, the representatives of each Party shall describe the progress, milestones, planning and financial status of the Project(s), and any other aspects of all then ongoing issues related to the Project(s) or other interesting developments that are of relevance to both Parties, and potential new projects pursuant to Section 3.1.

5.6 The Steering Committee is not authorized to take binding decisions on behalf of the Parties, unless expressly agreed otherwise in writing by the Parties. The role of the Steering Committee shall be to advise the Parties.

Article 6 - Biological Material

6.1 XXII shall supply KeyGene with the Biological Material in the quantities mutually agreed upon by KeyGene and XXII as set out in the applicable PAS and on the delivery date as set out in the applicable PAS. XXII acknowledges that KeyGene can only start with the execution of its activities under the Project(s) once it has received the Biological Material and associated XXII Background that it requires to conduct its activities under the Project(s).

6.2 The Biological Material shall be supplied in a form mutually agreed upon by KeyGene and XXII as set out in the applicable PAS. XXII shall use commercially reasonable efforts to ensure that the Biological Material is of the condition for analysis and/or other agreed use as set out in the applicable PAS. In the event the Biological Material is not of the condition as set out in the applicable PAS as mutually determined by the Parties, then XXII shall as soon as possible supply proper Biological Material and KeyGene will postpone the execution of its activities under the affected Project(s) accordingly. In the event XXII is not able to supply the proper Biological Material as set out in the applicable PAS within a reasonable time frame and in accordance with the PAS, the Parties shall mutually agree in good faith whether to amend or to terminate the affected Project(s).

6.3 KeyGene shall use the Biological Material with caution and prudence, and with a degree of professional skill, sound practice and judgment normally exercised in any experimental work performed by recognized professionals in the field of research or testing of materials like the Biological Material. The Parties shall comply in all material respects with all laws and governmental rules, regulations and guidelines which are provided with and applicable to the import, export, inter-state transport, growing, use and disposition of the Biological Materials, and all of such Party's other activities under this Agreement, including without limitation biosafety procedures. All expenses necessary and incurred in connection with

complying with the applicable laws and regulations shall be the responsibility of the applicable Party. In no event shall either Party be liable for any use by the other Party ("**Commercializing Party**") of the Biological Material or for any claim, liability, cost, expense, damage, deficiency, loss or obligation, of any kind or nature (including, without limitation, reasonable attorneys' fees and other costs and expenses of defense) that may arise from or in connection with the Commercializing Party's use, handling, storage, or disposition of the Biological Material.

6.4 The Biological Material shall be used solely by employees of KeyGene (or KeyGene's subcontractors approved by XXII under this Agreement) who are involved in the Project(s). KeyGene will not give access to the Biological Material, any Results which comprise biological or tangible materials, any derivatives of Biological Material, and/or any portion thereof (collectively, the "**Restricted Material**") to any person or entity, except KeyGene's sub-contractors approved by XXII under this Agreement or those persons under KeyGene's direct supervision and control. KeyGene shall not, by action or inaction, give, cause or allow access to, make available, distribute, convey, transfer, sell or disclose by any means any Restricted Material to any third party without the prior written consent of XXII.

6.5 All expenses in connection with the supply of the Biological Material by XXII to KeyGene will be borne by XXII. XXII shall be responsible at XXII's cost and expense for obtaining all necessary permits/approvals/licenses for the import/export of the Biological Material from/to KeyGene's facilities/laboratories in the United States. KeyGene shall be responsible for any importation of the Biological Material to any KeyGene facilities outside of the United States, provided that XXII shall reimburse KeyGene for any pre-approved shipping costs for such Biological Materials that are transported by KeyGene outside of the United States.

6.6 XXII warrants that the Biological Material will meet the quality standards set forth in the applicable PAS, or XXII will inform KeyGene in advance of any deficiencies in the Biological Materials with respect to such standards. KeyGene will then decide if the Biological Material will be used in the Project(s) by KeyGene. Furthermore, XXII represents and warrants to KeyGene that XXII has all rights (including, if applicable, any necessary regulatory approvals and clearances) and title in the Biological Material necessary for the delivery to, and use by, KeyGene as contemplated by the PAS.

6.7 Unless expressly agreed otherwise in writing, KeyGene will return or, at XXII's option, destroy all Restricted Material after completion or termination of the Project(s). All Restricted Material shall be the sole and exclusive property of XXII.

Article 7 - R&D Funding, Milestones, Minimum Commitment and Other Payments

R&D Funding and Consultancy Fees

7.1 As remuneration for the activities executed by KeyGene in connection with each agreed Project pursuant to this Agreement, XXII shall pay to KeyGene the R&D amounts set out in the associated PAS, in each case which shall be due as follows unless otherwise mutually agree in the associated PAS: (i) seventy percent (70%) of the total amount due under the

PAS will be paid by XXII to KeyGene at the commencement of the Project to which such PAS relates and (ii) the remaining thirty percent (30%) of the total amount due under the PAS will be paid by XXII to KeyGene within thirty (30) days after the Parties mutually agree that KeyGene has achieved the milestones set forth in **Annex 3** attached to this Agreement, which are applicable to each Project, as may be further described in greater detail in the PAS for the Project ("**Milestone Fees**").

7.2 The remuneration for the Consultancy Services is on an hourly fee basis. The consultancy fee for the Consultancy Services will be negotiated as part of the relevant PAS. These rates are excluding travelling and other out-of-pocket expenses pre-approved in writing by XXII prior to being incurred and then actually incurred by KeyGene in the performance of the Consultancy Services, which shall be invoiced separately on a cost basis. All reimbursable expenses of KeyGene, including without limitation any travel expenses, must be preapproved in writing by XXII and no fees or expenses shall be paid by XXII unless agreed to in writing in advance of their incursion. Unless agreed otherwise in writing by the Parties, KeyGene may invoice the consultancy hours and expenses on a monthly basis. KeyGene reserves the right, once per calendar year, for the first time on the first anniversary of the Effective Date, to increase the hourly fee, which increase shall not be more than three percent (3%) per calendar year.

7.3 Within sixty (60) days after the end of each Contract Year, KeyGene shall send a written overview of the amounts actually due from and/or paid by XXII for Projects and/or the Consultancy Services rendered by KeyGene and its Affiliates in such preceding Contract Year ("**Actual Expenditure**").

Minimum Research Funding to maintain Exclusivity

7.4 If and as long as XXII pays to KeyGene in Research Funding per Contract Year an aggregate amount of (i) no less than one million two hundred thousand US dollars (US $1,200,000), except in the case of Contract Year 3 the Parties have agreed, taking into account Section 2.3, that said amount will be reduced to no less than eight hundred thousand US dollars (US $800,000), less (ii) (A) any Milestone Fees due to KeyGene upon the achievement of milestones identified for completion during such Contract Year but not yet completed through no fault of XXII under this Agreement and therefore not yet paid for such Contract Year pursuant to Section 7.1 and, (B) in the case of Contract Year 6 and each Contract Year thereafter, up to two hundred thousand US dollars ($200,000) of Other Income in respect of each such Contract Year (the "**Minimum Research Funding Amount**"), the Exclusivity Period and Section 2.2 shall apply (for a maximum of ten (10) Contract Years). As of Contract Year 6 the Minimum Research Funding Amount shall be increased each Contract Year by three percent (3%). If in any Contract Year the Research Funding is less than said Minimum Research Funding Amount, XXII has the right to pay the balance to KeyGene within thirty (30) days after receipt by XXII of the Actual Expenditure report from KeyGene for such Contract Year and, if such balance payment is made prior to the expiration of such thirty (30) day period, then the Exclusivity Period shall continue. In the absence of payment of such Minimum Research Funding Amount and/or payment of the balance for any Contract Year, the Exclusivity Period shall end on the day after the expiration of such thirty (30) day period. KeyGene hereby agrees that if, in any

Contract Year, (i) Other Income is greater than or equal to two million US dollars ($2,000,000), (ii) the MDA is in full force and effect and (iii) XXII spends at least four hundred thousand US dollars ($400,000) in research projects to be performed by KeyGene outside the Field, KeyGene herewith agrees that the Minimum Research Funding Amount for the subsequent Contract Year shall be decreased by four hundred thousand US dollars ($400,000). For purposes of clarity this allocation does not increase any minimum payments required under the MDA. (For example, with $2,000,000 or more in Other Income, Minimum Research Funding Amount could be $600,000 in cannabis research, $400,000 in [*], and $200,000 offset by Other Income as of Contract Year 6 to equal the $1,200,000 Minimum Research Funding commitment for cannabis.)

Patent Milestones

7.5 XXII shall be responsible for and shall solely control all intellectual property filings regarding the Results with legal counsel selected by XXII in XXII's sole and absolute discretion. KeyGene will cooperate fully with XXII in such filing, prosecution, and maintenance.

7.6 XXII will pay KeyGene twenty five thousand US dollars (US $25,000) on the filing of each first patent application in a patent family (on a patent family by patent family basis) claiming, incorporating or otherwise based in material part on a KeyGene Identified Target or a Project Technology Result.

7.7 XXII will pay KeyGene fifty thousand US dollars (US $50,000) on the granting of each first patent in a patent family (on a patent family by patent family basis) claiming, incorporating or otherwise based in material part on a KeyGene Identified Target or a Project Technology Result.

Royalties to KeyGene

7.8 XXII will pay to KeyGene a royalty on Net Sales as follows:

i. Four percent (4%) of Net Sales of KeyGene Identified Targets, or products or services that incorporate, are based on, or otherwise make use of KeyGene Identified Targets;

ii. Two percent (2%) of Net Sales of Non-KeyGene Identified Targets, or products or services that incorporate, are based on, or otherwise make use of Non-KeyGene Identified Targets;

iii. A royalty on Net Sales of Project Technology Results, or products or services that incorporate, are based on, or otherwise make use of Project

Technology Results, in each case in the amount (if any) as may be mutually agreed by the Parties on a Project by Project basis in the applicable PAS.

7.9 XXII will pay to KeyGene a royalty on License Income related to KeyGene Identified Targets and Non-KeyGene Identified Targets of twenty five percent (25%) of such License Income. A Royalty on License Income related to Project Technology Results will be agreed on a Project by Project basis in the applicable PAS.

7.10 If XXII would require a third party license to obtain or maintain freedom to operate to commercialize the Results, or otherwise require a license to be able to commercialize the Results without infringing third party rights, XXII may deduct such royalty from the royalty owed to KeyGene, provided that the resulting royalty payable to KeyGene by XXII shall never be less than fifty percent (50%) of the royalty otherwise owed to KeyGene. For the avoidance of doubt: this anti-stacking clause is only applicable when the commercialization of the Results *as such* would, in absence of a license, infringe third party intellectual property rights. If XXII would desire to commercialize the Results in a formulated form and/or in combination with a device or other product or in a special packaging, royalties payable by XXII for such formulation and/or other product and/or packaging are not deductible from royalties payable to KeyGene.

Royalties to XXII

7.11 KeyGene will pay to XXII a royalty on KeyGene Net Sales as follows:

i. Four percent (4%) of KeyGene Net Sales of KeyGene Identified Targets, or products or services that incorporate, are based on, or otherwise make use of KeyGene Identified Targets;

ii. Two percent (2%) of KeyGene Net Sales of Results other than KeyGene Identified Targets and Project Technology Results, or products or services that incorporate, are based on, or otherwise make use of such Results (other than KeyGene Identified Targets and Project Technology Results);

iii. A royalty on KeyGene Net Sales of Project Technology Results, or products or services that incorporate, are based on, or otherwise make use of Project Technology Results, in each case in the amount (if any) as may be mutually agreed by the Parties on a Project by Project basis in the applicable PAS.

7.12 KeyGene will pay to XXII a royalty on KeyGene License Income of twenty five percent (25%) of such KeyGene License Income.

General

7.13 Royalties shall be payable within forty-five (45) days after the end of each calendar quarter in which royalties are earned under this Agreement and such royalty payments shall be accompanied with a specification of the Net Sales received by the paying Party and its Affiliates and License Income received by the paying Party and its Affiliates from licensees in such calendar quarter and a calculation of the royalties thus due to the other Party.

7.14 If requested in writing by either Party, the other Party shall, and shall require that its Affiliates and licensees shall, at all reasonable times during normal business hours permit an independent certified public accountant to make an examination and audit of all records required to be kept pursuant to this Article 7, such examination and audit not to occur more than once each calendar year. Prompt adjustment shall be made for any errors disclosed by such examination. If said audit reveals underpayments to the Party performing the audit in excess of five percent (5%) of the payments made to it, then the under-paying Party will reimburse the auditing Party for all reasonable costs associated with such audit within ten (10) days of receipt of notice from the auditing Party setting forth such costs of the independent certified public accountant.

7.15 Each Party will bear its own costs and expenses in connection with its activities under the Project(s), including costs for employees and material related to the Project(s).

7.16 All amounts payable under this Agreement are non-refundable and non-creditable. All payments shall be net payments without deduction of any bank or transfer charges or withholding taxes.

7.17 All amounts payable under this Agreement are inclusive of value added tax and excise or sales taxes or levies, and shall be due within thirty (30) days of the date of the relevant invoice, effectively in the currency of the United States, without the right to set off or withholding payment, by remittance by electronic wire transfer of funds to a bank account as specified in the invoice or by payment by certified cheque.

7.17.1 Withholding taxes. If applicable laws, rules or regulations require the withholding of taxes with respect to any amounts payable under this Agreement, the applicable Party shall make such withholding payments and shall subtract the amount thereof from the payments due to the other Party. The withholding Party shall submit to the other Party appropriate proof of payment of the withheld taxes as well as the official receipts within a reasonable period of time. The withholding Party shall provide the other Party reasonable assistance in order to allow the other Party to obtain the benefit of any present or future treaty against double taxation which may apply to the payments due by the withholding Party to the other Party.

7.18 If a Party fails to make any payment due and payable under this Agreement by the due date for payment, then such Party shall pay monthly interest on the overdue amount at the rate of one percent (1%). Such interest shall accrue on a daily basis from the due date until actual payment of the overdue amount. Such Party shall pay the interest together with the overdue amount. After a year, interest due shall also bear interest at the rate of one percent (1%). Moreover, such Party will be charged with all any actual expenses of judicial and extra-judicial collection.

Article 8 - Ownership & IP Rights & Licenses

Background / Biological Material

8.1 XXII shall own and retain ownership of the XXII Background including all intellectual property rights related thereto. KeyGene shall not receive any rights and licenses to use the XXII Background other than for the performance of the activities under a PAS and/or as agreed explicitly in this Agreement.

8.2 KeyGene shall own and retain ownership of the KeyGene Background including all intellectual property rights related thereto. XXII shall not receive any rights and licenses to use the KeyGene Background other than for the performance of the activities under a PAS and/or as agreed explicitly in this Agreement, which includes the license by KeyGene to XXII of the KeyGene Background as provided in Section 8.6 of this Agreement.

Foreground

8.3 XXII shall exclusively own all the Results, including all intellectual property rights related thereto, unless otherwise mutually agreed to in writing in the PAS. For the sake of clarity, such ownership right includes the full power of disposal, derivation, propagation, sublicense and enforcement unless otherwise agreed in this Agreement or a PAS.

8.4 KeyGene hereby assigns, transfers and conveys to XXII all right, title and interest in and to the Results. KeyGene shall execute and deliver to XXII such documents, instrument and other writings reasonably requested by XXII to vest all right, title and interest in the Results in XXII.

8.5 KeyGene shall exclusively own all Residual Expertise, including all intellectual property rights related thereto. For the sake of clarity, such ownership right includes the full power of disposal, derivation, propagation, sublicense and enforcement.

8.6 KeyGene hereby grants to XXII and its Affiliates a worldwide, non-exclusive, perpetual, royalty-free right and license, with the right to sublicense, license in the Field to the KeyGene Background and the Residual Expertise to the extent needed by XXII to protect the Results, to protect any intellectual property rights in the Results and/or to commercialize in the Field the Results, including without limitation any Project Technology Result. It is agreed that the *Cannaibis Sativa* L. protoplast regeneration protocol to be developed in the first Project will be a Project Technology Result.

8.7 During the Exclusivity Period, XXII hereby grants to KeyGene and its Affiliates a worldwide and exclusive right and license, with the right to sublicense, to use, commercialize and apply the Results (including intellectual property rights related thereto) outside the Field (i.e. in crops or plant species other than hemp and cannabis) as it deems fit; provided, however, that KeyGene and its Affiliates shall not sublicense, use, commercialize, or apply, and shall have not right to sublicense, use, commercialize, or apply, the Results in [*]. After the Exclusivity Period, XXII hereby grants to KeyGene and its Affiliates a worldwide and non-exclusive right and license, with the right to sublicense, to use, commercialize and apply the Results (including intellectual property rights related thereto) outside the Field (i.e. in crops or plant species other than hemp and cannabis) as it deems fit; provided, however, that KeyGene and its Affiliates shall not sublicense, use, commercialize, or apply, and shall have not right to sublicense, use, commercialize, or apply, the Results in [*].

8.8 Nothing else in this Agreement shall be construed as granting to the other Party any right and/or license with respect to Biological Material, XXII Background, KeyGene Background and/or Results, other than as explicitly stated in this Agreement.

Article 9 - Confidentiality

9.1 XXII undertakes to hold all KeyGene Background, or any part thereof, and any information (including data, protocols and documents) related thereto, (hereinafter referred to as "**KeyGene's Confidential Information**"), in strictest confidence and shall, therefore, not disclose KeyGene's Confidential Information in whatever form, either in whole or in part, to a third party with the exception of Affiliates, which Affiliates shall be bound by the same confidentiality undertaking as XXII, nor make KeyGene's Confidential Information publicly available, unless KeyGene has given its previous written consent thereto.

9.2 KeyGene undertakes to hold all XXII Background, Biological Material and Results, or any part thereof, and any information (including data, protocols and documents) related thereto, (hereinafter referred to as "**XXII's Confidential Information**"), in strictest confidence and shall, therefore, not disclose XXII's Confidential Information in whatever form, either in whole or in part, to a third party with the exception of Affiliates, which Affiliates shall be bound by the same confidentiality undertaking as KeyGene, nor make XXII's Confidential Information publicly available, unless XXII has given its previous written consent thereto.

9.3 The confidentiality obligations set out in this Article 9 will remain in full force and effect (i) during the full term of this Agreement and for a period of ten (10) years after the date of termination or expiration. The confidentiality obligations will not be applicable to that part of the KeyGene's Confidential Information or XXII's Confidential Information where a Party is able to demonstrate by written records that:

(a) it was already in the public domain at the time of supply by the disclosing Party or that it has become part of the public domain after the time of supply by the disclosing Party, otherwise than through breach or omission on the part of the receiving Party or any of its Affiliates; or

(b) it was already in the possession of the receiving Party or any of its Affiliates at the time of supply by the disclosing Party as evidenced by tangible contemporaneous written records; or

(c) it has been lawfully supplied to the receiving Party or any of its Affiliates by a third party, without such third party being under any confidentiality obligation; or

(d) it is required to be disclosed, (i) by operation of law, statute, rule, regulation or by order of a court of competent jurisdiction or a government authority or relevant securities exchange having competent jurisdiction, or, (ii) in connection with any notification, registration or authorization requirements related to the research, development, production and/or commercialization of products resulting from the use of the Results, or, (iii) in connection with any application for intellectual

property rights covering results generated under this Agreement, provided the Party applying for such intellectual property rights owns such results and/or has the right under this Agreement to file an application to obtain intellectual property rights covering such results, provided that, to the extent it is legally permitted to do so, the disclosing Party gives the other Party as much advance notice of disclosure as possible in order to permit the other Party the opportunity to seek and obtain legal protections against such disclosure.

9.4 For the sake of clarity, the confidentiality obligations set out in this Article 9 shall not impede the exercise of the rights and licenses expressly granted to the Parties under this Agreement.

9.5 Any proposals for Projects or Consultancy Services written by KeyGene shall also be considered KeyGene's Confidential Information. Only after prior written approval by KeyGene may XXII share the information contained within such proposals with third parties.

9.6 The Parties shall hold the terms of this Agreement and any PAS in strictest confidence and shall not disclose or allow the disclosure of the terms of this Agreement, any PAS, or any part thereof, to any third party or make the terms of this Agreement or any PAS publicly available unless the Parties have agreed otherwise or unless disclosure is required by law, rule or regulation, including but not limited to the securities laws of the United States and the rules and regulations of the U.S. Securities and Exchange Commission and/or the New York Stock Exchange American market.

Article 10 - Publications and Disclosure

10.1 After signing of this Agreement, by mutual agreement of the Parties and on a mutually agreed date, the Parties may send out a mutually agreed press announcement about the existence of this Agreement between the Parties; provided, however that if XXII is required to disclose and/or file this Agreement sooner by applicable law, rule or regulation, then XXII shall be permitted to do so in a timely manner since XXII cannot be late in its required public filings as a public company. Any further press communication other than the agreed press announcement about the Agreement may only be done by either Party after prior written consent of the other Party.

10.2 XXII shall not publish the Results without the prior written consent of KeyGene if KeyGene's name is identified in such publication. XXII may publish or publicly disclose any of the Results without the prior written consent of KeyGene so long as KeyGene's name is not identified in or is identifiable from such publication or disclosure.

Article 11 - Disclaimers and Limitations of liability

11.1 The Parties cannot guarantee and extend no warranties to each other that:

a. any Results or Project Technology Results, including the desired Results or Project Technology Results as specified in the PAS(s), will be obtained by executing the Project and/or rendering the Consultancy Services; or

b. the Results or Project Technology Results will not contain any immaterial errors and/or inaccuracies.

c. the Results or Project Technology Results are suitable for the purpose for which the respective Parties wishes to use them or that the respective Parties will be able to use and/or apply the Results or Project Technology Results;

d. the Results and Project Technology Results, the use and/or application thereof, and/or other acts in relation thereto, will not knowingly infringe any patent or any other intellectual property right or license of a third party.

11.2 XXII shall in all cases be entirely and solely responsible and liable for XXII's use and/or application of, and/or XXII's other acts in relation to the Results. XXII will use the Results and Project Technology Results only in accordance with the applicable laws including, where applicable, good clinical practices, good manufacturing practices and personal data protection laws. KeyGene represents and warrants that it will use commercially reasonable efforts to ensure that all of its work, the Results and the Project Technology Results will be free from any material errors and inaccuracies and will not knowingly (without the obligation to perform a "freedom to operate" or similar search) infringe any patent or other intellectual property right or license of a third-party.

11.3 Any recommendations, opinions or findings expressed by KeyGene employees during the Consultancy Services or stated in the Report are based on circumstances and facts as they existed at the time KeyGene performed such Consultancy Services or produced such Report. Any changes in such circumstances and facts upon which such Consultancy Services and/or Report are based may adversely affect any recommendations, opinions or findings contained in such Report, in which case KeyGene shall notify XXII in writing of such changes in a timely manner after KeyGene becomes aware of such changes.

11.4 KeyGene shall in all cases be entirely and solely responsible and liable for KeyGene's use and/or application of, and/or KeyGene's other acts in relation to the Results. KeyGene will use the Results and Project Technology Results only in accordance with the applicable laws including, where applicable, good clinical practices, good manufacturing practices and personal data protection laws.

11.5 Save for maliciously intentional or grossly negligent acts by the directors or officers of KeyGene, KeyGene, its shareholders, officers, directors, representatives and/or agents shall not be liable for any damage arising out of or in connection with the interpretation, use, inability to use and/or application of the Results and the Report by XXII, its Affiliates and licensees or arising out of or in connection with the infringement of third party intellectual property rights. In no circumstances shall KeyGene be liable for loss, damage, costs, or expenses of any nature whatsoever incurred or suffered by the other Party or its Affiliates, whether in contract, tort (including negligence), breach of statutory duty, or

otherwise, that is (i) of an indirect, special or consequential nature or for (ii) any loss of profits, revenue, reputation, business opportunity, or goodwill. Nothing in this Agreement shall exclude any person's liability to the extent that it may not be so excluded under applicable law, including any liability for death or personal injury caused by that person's negligence, or liability for fraud or fraudulent representation. Save for maliciously intentional or grossly negligent acts by the directors or officers of XXII, XXII, its shareholders, officers, directors, representatives and/or agents shall not be liable for any damage arising out of or in connection with the interpretation, use, inability to use and/or application of the Biological Material, XXII Background and the Results by KeyGene, its Affiliates and licensees or arising out of or in connection with the infringement of third party intellectual property rights. In no circumstances shall XXII be liable for loss, damage, costs, or expenses of any nature whatsover incurred or suffered by the other Party or its Affiliates, whether in contract, tort (including negligence), breach of statutory duty, or otherwise, that is (i) of an indirect, special or consequential nature or for (ii) any loss of profits, revenue, reputation, business opportunity, or goodwill. Nothing in this Agreement shall exclude any person's liability to the extent that it may not be so excluded under applicable law, including any liability for death or personal injury caused by that person's negligence, or liability for fraud or fraudulent representation.

11.6 XXII shall, subject to the limitations set forth in Section 11.5, indemnify, defend and hold harmless KeyGene and its Affiliates, and their respective directors, officers or representatives, if any, from and against all damages, losses, obligations, liabilities (including without limitation patent infringement and product liability), claims, actions or courses of action, encumbrances, costs and expenses, (including without limitation reasonable attorney's fees), suffered, sustained, incurred or required to be paid arising out of, based upon, in connection with or as a result of:

(i) XXII's and/or its Affiliate's use and/or application of, and/or other acts in relation to, any of the Biological Material, KeyGene Background, Results or Project Technology Results, and/or

(ii) XXII's and/or its Affiliate's use of any data, products or materials developed or generated by making use of and/or applying the Biological Material, KeyGene Background, the Results or Project Technology Results or any part thereof, and/or

(iii) Any negligent or intentional breach of this Agreement by XXII and/or its Affiliates.

11.7 KeyGene shall, subject to the limitations set forth in Section 11.5, indemnify, defend and hold harmless XXII and its Affiliates, and their respective directors, officers or representatives, if any, from and against all damages, losses, obligations, liabilities (including without limitation patent infringement and product liability), claims, actions or courses of action, encumbrances, costs and expenses, (including without limitation reasonable attorney's fees), suffered, sustained, incurred or required to be paid arising out of, based upon, in connection with or as a result of:

(i) KeyGene and/or its Affiliate's use and/or application of, and/or other acts in relation to, any of the Biological Material, XXII Background, the Results, the Project Technology Results, and/or

(ii) KeyGene's and/or its Affiliate's use of any data, products or materials developed or generated by making use of and/or applying the Biological Material, XXII Background, the Results, or Project Technology Results or any part thereof, and/or

(iii) Any negligent or intentional breach of this Agreement by KeyGene and/or its Affiliates.

Article 12 - Term and Termination

12.1 This Agreement will come into force and effect on the Effective Date and, other than provided below, will have a duration of eight (8) Contract Years. Prior to the end of the seventh (7 th) Contract Year, the Parties may by mutual agreement extend the Agreement for another two (2) Contract Years (the " **First Extension Period**"), in which event the Steering Committee shall come up with additional Projects. If there is a First Extension Period, during the last hundred eighty 180 days of such Period ("**Second Extension Negotiation Period**"), KeyGene and XXII will, at XXII's request, enter into good faith negotiations for a further extension of the Agreement for an additional two (2) Contract Years or such longer period as may be agreed by the Parties. 12.2

12.2 This Agreement may be terminated at any time upon mutual written consent of the Parties hereto.

12.3 Each of the Parties is entitled to forthwith terminate this Agreement in writing, in the event that:

a. the other Party has breached one or more of its material obligations under this Agreement and such breach is either not capable of being remedied (such as breach of confidentiality obligations) or, if capable of being remedied, is not remedied within thirty (30) days after the breaching Party has received written notification requesting such breach to be remedied; and/or

b. the other Party is declared bankrupt or a petition for the bankruptcy or suspension of debt of this Party is filed or this Party passes a resolution or a court makes an order for its winding up (otherwise by way of solvent liquidation where the emergent company assumes its obligations); and/or the other Party suspends, threatens to suspend, payment of its debts or is unable to pay its debts as they fall due or admits inability to pay its debts or is deemed unable to pay its debts within the meaning of applicable bankruptcy or insolvency laws to which such Party is subject, or a petition is filed, a notice is given, a resolution is passed, or an order is made, for or in connection with the winding up of that other Party, other than for the sole purpose of a scheme for a solvent amalgamation of that other Party with

one or more other companies or the solvent reconstruction of the ther Party, or a court makes an order for its winding up.

Article 13 - Consequences of termination

13.1 In the event a Project is terminated, the Agreement shall not be affected and shall remain in full force and effect.

13.2 In the event the Agreement is terminated pursuant to Section 12.2, the Projects and/or Consultancy Services that have not yet finalized before the termination date of the Agreement shall remain in full force and effect until the delivery of the Report(s) of the Projects and payment of all sums due thereunder.

13.3 On termination of the Agreement, unless such things are needed by such Party to perform its obligations under a Project (and then only until such time), as soon as reasonably practical:

(a) KeyGene shall return or destroy, as directed by XXII, any Biological Material; and

(b) The Parties shall return all of the other Party's equipment and materials. Until these are returned that Party shall be solely responsible for the safe-keeping.

13.4 In the event the Agreement is terminated for cause pursuant to Section 12.3, the following consequences shall occur:

(a) the Projects and the Consultancy Services shall immediately be terminated per the termination date of the Agreement; and

(b) all sums that became due from XXII to KeyGene for Projects and Consultancy Services prior to the date of termination shall remain due and outstanding from XXII to KeyGene and shall be promptly paid thereafter by XXII to KeyGene; and

(c) all sums that became due from KeyGene to XXII under this Agreement prior to the date of termination shall remain due and outstanding from KeyGene to XXII and shall be promptly paid thereafter by KeyGene to XXII.

(d) KeyGene shall return or destroy, as directed by XXII, any Results.

13.5 The rights and licenses granted under or pursuant to this Agreement shall continue notwithstanding any expiry or termination of this Agreement except that either Party is entitled to terminate such rights and licenses immediately in writing in the event that:

(a) any material terms of such rights and licenses have been breached and such breach is either not capable of being remedied (such as breach of confidentiality obligations) or, if capable of being remedied, not remedied within thirty (30) days after the breaching Party has received written notification requesting such breach to be remedied; and/or

(b) the other Party suspends, threatens to suspend, payment of its debts or is unable to pay its debts as they fall due or admits inability to pay its debts or is deemed unable to pay its debts, or a petition is filed, a notice is given, a resolution is passed, or an order is made, for or in connection with the winding up of that other Party, other than for the sole purpose of a scheme for a solvent amalgamation of that other Party with one or more other companies or the solvent reconstruction of the other Party, or a court makes an order for its winding up.

13.6 The provisions of this Agreement that by their nature are intended to survive termination or expiration shall survive termination or expiration of this Agreement, which shall include in any event Section 2.2 (but only during the Exclusivity Period), Sections 6.4, 6.6 and 6.7 (Biological Material), Sections 7.5 - 7.20 (Milestones and Royalties and subject to the term provided in Section 13.7), Sections 8.1 - 8.8 (Ownership, IP Rights and, subject to Section 13.5, the licenses), Articles 9 (Confidentiality), 10 (Publication), 11 (Disclaimers and Limitations of Liability), 13 (Consequences of Termination), 14(Notices), 15 (Governing Law and Dispute Resolution), Sections 16.1 (warranty), 16.3 (force majeure), 16.4 (assignment), 16.5 (severability), 16.7 (variation), 16.9 (rights and remedies), 16.10 (equitable rights), 16.11 (rights of third parties) and 16.12 (entire agreement), as well as Article 1 (Definitions) to the extent the definitions are used in the surviving Articles, shall survive and remain in full force effect after the termination or expiration of this Agreement or of any specific Project and/or Consultancy Services hereunder.

13.7 Notwithstanding any termination or expiration of this Agreement, the royalty payment, reporting and audit obligations of each Party to the other Party shall continue until the later of (i) expiration of the last to expire patents or plant variety rights included in the Results or (ii) fifteen (15) years from the Effective Date if no such patents or plant variety rights issue in the United States.

Article 14 - Notices

14.1 Any notice required to be given under this Agreement shall be deemed to be sufficiently given, only if sent by overnight international delivery service, or by email, with receipt confirmed, addressed to the Party to be notified at its address shown below, or at such other address and/or contact person as may later be furnished by either Party in writing to the notifying Party.

	If to KeyGene:	If to XXII:
Address	Keygene N.V. PO Box 216 6700 AE Wageningen The Netherlands	22nd Century Group, Inc. 500 Seneca Street, Suite 507 Buffalo, New York 14204 United States of America
Attn.	Managing Director	Chief Executive Officer
Email		

Article 15 - Governing law and dispute resolution

15.1 This Agreement shall be governed by and construed and interpreted in accordance with the laws of the State of New York, United States.

15.2 These dispute resolution procedures shall be the exclusive means for resolution of disputes arising out of or relating to this Agreement, or its breach.

15.3 If a dispute arises out of or relates to this Agreement, or its breach, the disputing Party may give the other Party written notice of any dispute not resolved in the normal course of business. Within thirty (30) days after delivery of the written notice, executives who have authority to settle the controversy and who are at a higher level of management than the persons with direct responsibility for administration of this Agreement shall meet at a mutually acceptable time and place and thereafter as often as they reasonably deem necessary, to attempt to resolve the dispute.

15.4 If the dispute has not been resolved by negotiation within forty-five (45) days after delivery of the initial notice of negotiation, or if the Parties failed to meet within thirty (30) days after delivery, the Parties agree to attempt to resolve the dispute through mediation by a sole mediator selected by the Parties or, at any time at the option of a Party, to mediation under the ICC Mediation Rules.

15.5 If not thus resolved, the Parties agree to submit the matter to settlement proceedings under the ICC ADR Rules. If the dispute has not been settled pursuant to the said Rules within forty-five (45) days following the filing of a Request for ADR or within such other period as the Parties may agree in writing, such dispute shall, upon the written request of either Party, be finally settled under the Rules of Arbitration of the International Chamber of Commerce by one arbitrator appointed in accordance with the said Rules of Arbitration. The place of arbitration shall be New York, USA. The proceedings shall be conducted in the English language.

Article 16 - Miscellaneous

16.1 Each Party represents and warrants:

(a) that any and all of its Affiliates, to which any rights and licensed are granted hereunder, will properly and timely fulfill any and all of the obligations hereunder and any default or breach of any of the provisions of this Agreement by any Affiliate will be observed and construed as a breach or default of the concerning provision by the Party concerned; and

(b) that it has full power and authority to carry out the actions contemplated under this Agreement.

16.2 For the purposes of this Agreement, a Force Majeure Event shall mean an event, condition, or circumstances or its effect which:

(a) is beyond the reasonable control of and occurs without fault or negligence on the part of the Party claiming it as a Force Majeure Event; and

(b) causes a delay or disruption in the performance of any obligation under this Agreement despite all reasonable efforts of the Party claiming it as a Force Majeure Event to prevent it or mitigate its effects.

16.3 Neither Party shall be in breach of this Agreement nor liable for delay in performing, or failure to perform, any of its obligations under this Agreement if such delay or failure result from any of the Force Majeure Event. In such circumstances the time for performance shall be extended by a period equivalent to the period which performance shall be delayed or failed to be performed. If the period of delay or non-performance caused by any of the Force Majeure Event continues for twelve (12) weeks the Party not affected may terminate this Agreement by giving thirty (30) days' written notice to the affected Party. Upon termination thereof, neither party shall have any further claims against the other party in relation to any breach arising from a Force Majeure Event.

16.4 A Party shall not be entitled to assign or transfer the rights and obligations of this Agreement, either in whole or in part, without the prior written consent of the other Party.

16.5 Should any provision in this Agreement or any document related to it turn out to be invalid, illegal or unenforceable, it will not affect the validity or enforceability of this Agreement as far as the provisions other than the invalid provisions are concerned. In that event, the aim of the Parties shall be to replace the provision that is invalid by one that is valid and in line with the intention of the Parties upon entering into this Agreement.

16.6 Any amendments or additions made to this Agreement shall only be valid and binding between the Parties if made in writing and executed by authorized signatories of both Parties.

16.7 No variation of this Agreement shall be effective unless it is in writing and signed by the Parties (or their authorised representatives). Any variation of this Agreement agreed by the Parties in accordance with this Section shall be deemed to apply to all future Projects entered after the date of such variation, but shall not apply to Projects already in force at that date unless such variation specifically so provides.

16.8 Nothing in this Agreement shall give either Party any authority to act or make representations or commitments on behalf of the other Party or to create any contractual liability to a third party on behalf of the other Party, and nothing in this Agreement is intended to, or shall be deemed to, establish any partnership between any of the Parties.

16.9 The rights and remedies provided in this Agreement are in addition to, and not exclusive of, any rights and remedies provided by law.

16.10 Without prejudice to any other rights or remedies that a Party ("**First Party**") may have, the other Party ("**Other Party**") acknowledges and agrees that damages alone would not be an adequate remedy for any breach of the terms of this Agreement by the First Party. Accordingly, the First party shall be entitled to the remedies of injunction, specific performance or other equitable relief for any threatened or actual breach of the terms of this Agreement.

16.11 A party which is not a party to this Agreement shall not have any rights under this Agreement to enforce any term of this Agreement.

16.12 This Agreement comprises the entire agreement between the Parties and supersedes and extinguishes all previous drafts, agreements, arrangements and understandings between them whether written or oral, relating to its subject matter. Effective upon the Execution Date, the Original Agreement shall be amended and restated in its entirety by this Agreement.

16.13 Headings are for convenience only.

remainder of page intentionally left blank

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed in twofold by their duly authorized representatives.

Keygene N.V.

/s/ Dr. Arjen J. van Tunen
Name: Dr. Arjen J. van Tunen
Title: co-CEO
Date:

22nd Century Group, Inc.

/s/ James A. Mish
Name: James A. Mish
Title: President & Chief Executive Officer
Date:

Keygene N.V.

/s/ Henny Wilpshaar
Name: Henny Wilpshaar
Title: co-CEO
Date:

[*] = CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY BRACKETS, HAS BEEN OMITTED BECAUSE IT IS BOTH (1) NOT MATERIAL TO INVESTORS AND (2) LIKELY TO CAUSE COMPETITIVE HARM TO THE COMPANY IF PUBLICLY DISCLOSED.

PROMISSORY NOTE EXCHANGE AGREEMENT

THIS PROMISSORY NOTE EXCHANGE AGREEMENT (this "**Agreement**") is made this 30th day of June, 2021 (the ***"Effective Date"***), by and between **PANACEA LIFE SCIENCES INC.**, a Colorado corporation with an address of 5910 South University Blvd, C18-193, Greenwood Village, CO 80121 ("**Seller**"), **J & N REAL ESTATE COMPANY, L.L.C.**, a Colorado limited liability company with an address of 5910 South University Blvd, C18-193, Greenwood Village, CO 80121 ("**Borrower**"), **22ND CENTURY GROUP, INC.** , a Nevada corporation or its assignees or with an address of 8560 Main Street, Suite 4, Williamsville, New York 14221 (" **22CG**") and **22ND CENTURY HOLDINGS, LLC**, a Delaware limited liability company with an address of 8560 Main Street, Suite 4, Williamsville, New York 14221 (**"Holdings",** and together with 22CG, **"Buyer"**).

W I T N E S S E T H:

WHEREAS, 22CG is the holder of that certain $7,000,000 Convertible Note dated December 3, 2019 made by Seller in favor of 22CG (the ***"Existing Note"***); and

WHEREAS, Seller is the fee simple owner of certain real property and improvements located in Delta County, Colorado, further identified as tax parcel identification number 300514715 and comprised of approximately 234.394 acres of land, together with all rights and appurtenances pertaining thereto, which is identified as Parcel B on the survey map attached to this Agreement as **Exhibit A** attached hereto and made a part hereof (the ***"Farm Parcel"***); and

WHEREAS, Borrower is the fee simple owner of certain real property and improvements located at 16194 W 45th Drive, Golden Colorado, further identified on **Exhibit B** attached hereto and made a part hereof (the ***"Golden Parcel"***) (for purposes of this Agreement, the Farm Parcel (as and only with respect to Seller) and the Golden Parcel (as and only with respect to Borrower) are referred to herein, individually and collectively, as the context requires, as the ***"Premises"***); and

WHEREAS, the parties desire to consummate the following transactions at the Closing: (i) the transfer by Seller of the Farm Parcel, and all personal property located thereon, to Holdings, an affiliate of, and wholly owned by, 22CG, for a value equal to the Purchase Price (as hereinafter defined); (ii) Buyer converting $500,000.00 of the original outstanding principal balance of the Existing Note into Seller's Series B Preferred Stock; (iii) as to the Existing Note, (a) the outstanding balance under the Existing Note being reduced to $4,300,000.00 by reason of the events, and correlating consideration received by 22CG (whether directly or as the sole owner of Holdings), under subsections (i) and (ii), and (b) 22CG assigning to Borrower, and Borrower assuming from 22CG, all of 22CG's right, title and interest in, to and under the Existing Note; and (iv) in consideration of Borrower's assumption of 22CG's right, title and interest in, to and under the Existing Note, the issuance by Borrower of a new $4,300,000 promissory note from Borrower to 22CG, which new note is to be secured by a first deed of trust on the Golden Parcel; and

WHEREAS, 22CG currently occupies the Farm Parcel pursuant to an oral occupancy arrangement between Seller and 22CG (the **"Crop Lease"**), which Crop Lease is to expire and terminate upon the Closing;

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. **Sale of Farm Parcel**.

1.1 Seller agrees to sell and convey to Holdings, and Holdings agrees to purchase from Seller, the Farm Parcel upon the terms and subject to the conditions of this Agreement.

1.2 The Farm Parcel shall include all of the right, title, and interest of Seller (solely as to the owner of the Farm Parcel), if any, in and to the following:

1.2.1 All buildings, improvements and structures located on the Farm Parcel;

1.2.2 All machinery, fixtures, equipment and other personal property located on or attached or appurtenant to the Farm Parcel;

1.2.3 All strips and gores of land adjoining or abutting the Farm Parcel, if any;

1.2.4 All right of Seller, if any, in and to land lying in the bed of any street, road, avenue or alley, opened or proposed, in front of, running through or adjoining the Farm Parcel;

1.2.5 All easements, privileges or rights-of-way over, contiguous or adjoining the Farm Parcel, and all other rights belonging to and accruing to the benefit of the Farm Parcel;

1.2.6 All appurtenances and hereditaments belonging or in any way appertaining to the Farm Parcel;

1.2.7 All mineral, oil and gas, or other minerals and subsurface assets appurtenant to, or relating in any way, to the Farm Parcel;

1.2.8 To the extent they may be transferred under applicable law and otherwise at no additional cost or expense to Seller, all of Seller's licenses, permits, approvals and authorizations required for the use and operation of all or any portion of the Farm Parcel;

1.2.9 All Seller's rights and interests into the crops growing on the Farm Parcel as of the Closing Date; and

1.2.10 All of the Seller's water rights appurtenant to the Farm Parcel, servicing the Farm Parcel and/or owned by Seller and relating in any way to the Farm Parcel.

2. **Consideration.**

2.1 The consideration for the transactions contemplated under this Agreement are comprised, in the aggregate, of the following actions and amounts, as applicable, being executed, performed and/or delivered, as applicable, as of the Closing Date, all subject to and otherwise in accordance with the terms and conditions of this Agreement: (i) Seller transferring to Holdings the Farm Parcel for an allocated value of $2,200,000.00 ("**Purchase Price**"), (ii) Seller increasing the stated value of the existing Series B Preferred Stock held by 22CG in Seller by $500,000.00 ("**Increased Series B Value**"), (iii) 22CG assigning all of its right, title and interest in, to and under the Existing Note (with the outstanding principal balance thereunder reduced by the consideration received by 22CG (whether directly or as the sole owner of Holdings) by reason of its acquisition of the Farm Parcel for the allocated Purchase Price and the Increased Series B Value), to Borrower by executing and delivering the Allonge to Existing Note (as hereinafter defined) and (iv) and in consideration of such assumption by Borrower of the Existing Note in accordance with the Existing Note Allonge, Borrower executing and delivering to 22CG the New Note and Deed of Trust. The Purchase Price for the Farm Parcel shall be allocated as follows: (i) $1,770,000.00 for the real property and improvements which constitute a part of the Farm Parcel; and (ii) $430,000.00 for the equipment, machinery and other personal property which constitute a part of the Farm Parcel.

3. **Exchange of Existing Note.**

3.1 At the Closing, (a) 22CG will execute and deliver to Borrower an allonge to the Existing Note in a form reasonably acceptable to 22CG and Borrower (the "**Allonge to Existing Note**") and (b) in consideration of Borrower receiving the Allonge to Existing Note, the $4,300,000 outstanding balance under the Existing Note originally due to 22CG shall be exchanged for a new promissory note payable from Borrower to 22CG in the principal amount of $4,300,000 in the form attached hereto as **Exhibit C-1** (the **"New Note"**). The New Note shall be secured by a first deed of trust on the Golden Parcel, which deed of trust shall be in the form attached hereto as **Exhibit D** (the **"Deed of Trust"**).

4. **Closing.** The Closing of the purchase of the Premises (the "**Closing**") shall take place via escrow at the offices of the Title Company on the same day as, and immediately following, the execution of this Agreement by the Parties (the "**Closing Date**").

5 **Title and Conveyance**.

5.1 At the Closing, Seller agrees to assign and convey to Holdings, for a designated value equal to the Purchase Price, good, marketable, fee simple title of the Farm Parcel, free and clear of all liens, encumbrances, easements and restrictions, except for the Permitted Encumbrances. For purposes of this Agreement, "**Permitted Encumbrances**" as to each respective Premises shall mean, collectively, (i) local, state and federal laws, ordinances or governmental regulations, including, but not limited to, building and zoning laws, ordinances and regulations, now

or hereafter in effect relating to the applicable Premises, respectively, (ii) real estate taxes and assessments for the year of Closing and subsequent years, a lien not yet due and payable, (iii) assessments and dues imposed by any property owners' association for the year of Closing and subsequent years, a lien not yet due and payable, (iv) all matters created by, through or under Buyer and/or its employees, contractors, representatives, professionals and/or agents (provided the foregoing shall not be deemed to grant any right to Buyer to bind the Farm Parcel on or before the Closing Date, or to bind the Golden Parcel, respectively), (v) with respect to the Farm Parcel, all covenants, restrictions, easements, agreements and other matters of record (including, without limitation, the Quiet Title Action and CMI Lien (as hereinafter defined)) and (vi) with respect to the Golden Parcel, all matters disclosed in that Commitment for Title Insurance issued by Fidelity National Title Insurance Company dated May 27, 2021 as last amended prior to the Closing.

6. **Representations and Warranties of Seller, Borrower and Buyer**.

6.1. Seller represents and warrants to Buyer that the statements contained in this Section 6.1 are correct and complete as of the date of this Agreement and, subject to Section 6.5 below, will be correct and complete, as of the Closing:

6.1.1 Seller is a duly formed and validly existing Colorado corporation, organized under the laws of the jurisdiction of its formation and is qualified under the laws of the jurisdiction of its formation to conduct business therein. Seller has the full legal right, power and authority to enter into this Agreement and all documents now or hereafter to be executed by Seller pursuant to this Agreement (collectively referred to as the "**Seller's Documents**"), to perform all of the obligations of Seller contained herein and under the Seller's Documents and to consummate the transaction applicable to Seller contemplated hereby.

6.1.2 Except in connection with that quiet title action filed by DD Needle Rock Ranch, LLC under case number 21CV30005 ("**Quiet Title Action**"), no other action, suit or other proceeding (including, but not limited to, condemnation actions) is pending or, to Seller's knowledge, has been threatened that concerns or involves its Premises or Seller's interest in its Premises.

6.1.3 Except in connection with the Crop Lease and Permitted Encumbrances, (i) no portion of its Premises is occupied or used in any other manner by any other person or entity other than Seller and/or Seller's employees, contractors, representatives, professionals and/or agents, and (ii) there are no leases, subleases, licenses, concessions, occupancy agreements or other agreements (written or oral) in effect with respect to its Premises that would survive the Closing. Except Buyer in connection with this Agreement, no other person or entity has any right or option to purchase or otherwise acquire its Premises or any portion thereof, or any other rights with respect to its Premises**.**

6.1.4 To Seller's knowledge, there are no outstanding violations of any laws, ordinances, orders, regulations or requirements of any federal, state, county or municipal authority or any insurance carrier ("**Laws**") affecting its Premises or any portion thereof (including, without limitation, Environmental Laws, the Americans with Disabilities Act, federal and state laws

regulating the operation of as hemp farm) and Seller has not received any written notices of violation thereof that remains outstanding.

6.1.5 Excepting that certain Statement of Lien filed by CMI Legacy, L.L.C. in the official records of Jefferson County, Colorado and having a file number of 2020163362 ("**CMI Lien**"), and excluding any work performed and/or materials furnished to, or on behalf of, Buyer, in connection with the Crop Lease, no work has been performed at its Premises by, or on behalf of, Seller, and no materials have been furnished to its Premises by, or on behalf of, Seller, which though not presently the subject of a lien might give rise, prior to Closing, to mechanics', materialmen's or other liens against Seller's interest in its Premises, or any portion thereof.

6.1.6 To Seller's knowledge, its Premises is zoned to permit Seller's current (as of the Effective Date) use of same and to the best of Seller's knowledge there is no threatened change in the zoning classification of its Premises or any portion thereof.

6.1.7 Excluding any permits required to be maintained by Buyer in connection with its operations under the Crop Lease, to Seller's knowledge, all other permits lawfully required for Seller's current (as of the Effective Date) operation of the Premises, if any, have been obtained and are in full force and effect.

6.1.8 Except for this Agreement and the Crop Lease, Seller has not entered into any other contract to sell or lease its Premises or any part thereof and Seller will not do so during the term of this Agreement.

6.1.9 Seller represents and warrants to Buyer that, to its actual knowledge and except as otherwise disclosed to the Buyer, it has not received any written notice or report claiming or alleging: (1) that the Premises is not currently, as of the Effective Date, in compliance with all applicable Environmental Laws (as hereinafter defined); (2) that any Hazardous Substances (as hereinafter defined) have been released or are otherwise present, at, on, in, upon, beneath or about the Premises in violation of Environmental Laws; (3) that the Premises contains underground tanks of any type; (4) that Seller may be a potentially responsible party under any Environmental Laws for any currently, as of the Effective Date, ongoing investigation or remediation of Hazardous Substances on or in the vicinity of the Premises. The term **"Environmental Laws,"** as used in this Agreement, shall mean collectively, all U.S. federal, national, state and local laws, statutes, rules, regulations, ordinances, codes, common law, directives, decisions, and orders (including all amendments thereto) pertaining to environmental matters (which includes air, water vapor, surface water, groundwater, soil, natural resources, chemical use, health, safety, sanitation, zoning, land use, etc.), Hazardous Substances, and/or the protection of the environment or human health, including but not limited to, the Comprehensive Environmental Response, Compensation and Liability Act, the Resource Conservation and Recovery Act, the Clean Air Act, the Federal Water Pollution Control Act, the Safe Water Drinking Act, the Toxic Substance Control Act, the Hazardous Materials Transportation Act, the Occupational Safety and Health Act, and/or any other applicable Environmental Laws and/or the rules and regulations promulgated thereunder. For purposes hereof, **"Hazardous Substances"** shall mean and include, without limitation: (a) any hazardous materials, hazardous wastes,

hazardous substances and toxic substances as those or similar terms are defined under any Environmental Laws; (b) any asbestos or any material that contains any hydrated mineral silicate, including chrysolite, amosite, crocidolite, tremolite, anthophylite and/or actinolite, whether friable or non-friable; (c) any polychlorinated biphenyls or polychlorinated biphenyl-containing materials or fluids; (d) radon; (e) any other hazardous, radioactive, toxic or noxious substance, material, pollutant, contaminant or solid, liquid or gaseous waste; (f) any petroleum, petroleum hydrocarbons, petroleum products, crude oil or any fractions thereof, natural gas or synthetic gas; and (g) any substance that, whether by its nature or its use, is or becomes subject to regulation under any Environmental Laws or with respect to which any Environmental Laws or governmental entity requires or will require environmental investigation, monitoring or remediation.

6.1.10 Except for the Permitted Encumbrances, Seller, to its knowledge, has good and marketable title to its Premises together with all improvements and fixtures thereon that are owned by Seller, and all appurtenances and rights thereto, if any, that run to the benefit of its Parcel.

6.1.11 Seller is not a "foreign person" within the meaning of Section 1445 of the United States Internal Revenue Code of 1986, as amended, and the regulations issued thereunder.

6.2 Borrower represents and warrants to Buyer that the statements contained in this Section 6.2 are correct and complete as of the date of this Agreement and, subject to Section 6.5 below, will be correct and complete as of the Closing:

6.2.1 Borrower is a duly formed and validly existing Colorado limited liability company, organized under the laws of the jurisdiction of its formation and is qualified under the laws of the jurisdiction of its formation to conduct business therein. Borrower has the full legal right, power and authority to enter into this Agreement and all documents now or hereafter to be executed by Borrower pursuant to this Agreement (collectively referred to as the "**Borrower's Documents**"), to perform all of the obligations of Borrower contained herein and under the Borrower's Documents and to consummate the transactions applicable to Borrower contemplated hereby.

6.2.2 No action, suit or other proceeding (including, but not limited to, condemnation actions) is pending or, to Borrower's knowledge, has been threatened that concerns or involves its Premises or Borrower's interest in its Premises.

6.2.3 To Borrower's knowledge, there are no outstanding violations of any Laws affecting its Premises, or any portion thereof (including, without limitation, Environmental Laws, the Americans with Disabilities Act, federal and state laws regulating the operation of as hemp farm), and Borrower has not received any written notices of violation thereof that remains outstanding.

6.2.4 No work has been performed at its Premises by, or on behalf of, Borrower, and no materials have been furnished to its Premises by, or on behalf of, Borrower, which though not presently the subject of a lien might give rise, prior to Closing, to mechanics', materialmen's or other liens against Borrower's interest in its Premises, or any portion thereof.

6.2.5 To Borrower's knowledge, its Premises is zoned to permit Borrower's current (as of the Effective Date) use of same, and to the best of Borrower's knowledge, there is no threatened change in the zoning classification of its Premises, or any portion thereof.

6.2.6 To Seller's knowledge, all permits necessary for Borrower' current (as of the Effective Date) operation of its Premises, if any, have been obtained and are in full force and effect.

6.2.7 Except for the Permitted Encumbrances, Borrower, to its knowledge, has good and marketable title to its Premises, together with all improvements and fixtures thereon that are owned by Borrower, and all appurtenances and rights thereto, if any, that run to the benefit of its Premises.

6.2.8 Borrower is not a "foreign person" within the meaning of Section 1445 of the United States Internal Revenue Code of 1986, as amended, and the regulations issued thereunder.

6.2.9 Borrower represents and warrants to Buyer that, to its actual knowledge and except as otherwise disclosed to the Buyer, it has not received any written notice or report claiming or alleging: (1) that its Premises is not currently, as of the Effective Date, in compliance with all applicable Environmental Laws; (2) that any Hazardous Substances have been released or are otherwise present, at, on, in, upon, beneath or about the Premises in violation of Environmental Laws; (3) that its Premises contains underground tanks of any type; (4) that Borrower may be a potentially responsible party under any Environmental Laws for any currently, as of the Effective Date, ongoing investigation or remediation of Hazardous Substances on or in the vicinity of its Premises.

6.3 Buyer represents and warrants to Seller and Borrower that the statements contained in this Section 6.3 are correct and complete as of the date of this Agreement and will be correct and complete as of the Closing:

6.3.1 each Buyer is a duly formed and validly existing entity, organized under the laws of the jurisdiction of its formation and is qualified under the laws of the jurisdiction of its formation to conduct business therein. Buyer has the full legal right, power and authority to enter into this Agreement and all documents now or hereafter to be executed by Buyer pursuant to this Agreement (collectively referred to as the "**Buyer's Documents**"), to perform all of the obligations of Buyer contained herein and under the Buyer's Documents and to consummate the transactions applicable to Buyer contemplated hereby.

6.3.2 This Agreement has been duly executed and delivered by Buyer and is the valid and binding obligation of Buyer, enforceable in accordance with its terms. Performance under this Agreement will not result in any breach of or default (or an event which would, with the passage of time or the giving of notice or both, constitute a default) under any material agreement or other instrument which is either binding upon or enforceable against Buyer.

6.3.3 No bankruptcy, insolvency, reorganization or similar action or proceeding, whether voluntary or involuntary, is pending or threatened against Buyer.

6.3.4 As to 22CG, 22CG is the sole owner of (a) all right, title and interest in and to the Existing Note, free and clear of any liens, encumbrances, pledges, security interests and/or claims of, or by, any third-party and (b) all interest in Holdings.

6.4 Subject to the terms and conditions of Section 6.5, the representations, warranties and covenants of Seller, Borrower and Buyer set forth in this Section 6 and elsewhere in this Agreement shall be true, accurate and correct, in all material respects, upon the execution of this Agreement and as of the Closing. The representations, warranties and covenants of Seller, Borrower and Buyer set forth in this Section 6 and elsewhere in this Agreement will not survive the Closing.

6.5 Neither Seller nor Borrower shall have any liability with respect to any of its respective representations, warranties and covenants hereunder if, prior to Closing, Buyer has knowledge of any breach of a representation, warranty or covenant of Seller or Borrower, respectively and as applicable, hereunder, or Buyer obtains knowledge that contradicts any of Seller's or Borrower's, respectively and as applicable, representations, warranties or covenants hereunder (and the representations, warranties or covenants of Seller and Borrower, respectively and as applicable, shall be deemed to be modified thereby to be accurate), and Buyer nevertheless consummates the transaction contemplated by this Agreement (in which event any such breach or contradiction shall be deemed waived by Buyer). Terms such as "**knowledge**," "**to the best of [a party's] knowledge**" or like phrases mean the actual present and conscious awareness or knowledge of such party, without any duty of inquiry or investigation, and otherwise said terms do not include constructive knowledge, imputed knowledge, or knowledge such party does not have but could have obtained through further investigation or inquiry.

7. Conditions to Closing

7.1 Buyer's obligations to close hereunder, in addition to any and all other applicable conditions set forth in this Agreement, shall be subject to the satisfaction of each of the following conditions, any one or more of which may be waived by Buyer in writing:

7.1.1 Seller and Borrower shall have complied in all material respects with all obligations and covenants required by this Agreement to be complied with by Seller and Borrower as of the Closing Date.

7.1.2 The representations and warranties of Seller and Borrower contained in this Agreement shall have been true in all material respects when made, and shall be true in all material respects on the Closing Date.

8. **Provisions with Respect to Closing.**

8.1 At Closing, Seller shall deliver to Holdings the following documents, duly executed and acknowledged:

8.1.1 a limited warranty deed to the Farm Parcel in a form reasonably acceptable to Seller and Holdings, duly executed by Seller and acknowledged and in proper form for recording with state transfer taxes paid by Holdings (the "**Deed**");

8.1.2 a bill of sale in a form reasonably acceptable to Seller and Holdings, duly executed by Seller, transferring to Holdings, without warranty or representation, any right, title and interest in the personal property and all crops included within the Farm Parcel;

8.1.3 reasonably appropriate documents, duly executed by Seller, in order to transfer title to any vehicles (including without limitation that truck located at the Farm Parcel) and/or equipment titled in Seller's name that is otherwise included within the Farm Parcel to Holdings; provided, however, Seller and Holdings acknowledge and agree that, to the extent the parties are unable to consummate the transfer of title to such vehicles with the applicable governing authority as of the Closing Date, the parties will, instead, fully cooperate post-Closing to effectuate such transfer of title.

8.1.4 all keys in Seller's actual possession to all locks on the Farm Parcel;

8.1.5 such evidence or affidavits as may be reasonably required by Holdings or the Title Company regarding the status of title and the authority of the persons executing the various documents on behalf of Seller in connection with the transactions contemplated hereby, provided such evidence and affidavits, and the terms and conditions thereof, are consistent with the terms and conditions of this Agreement and do not impose a greater liability upon Seller;

8.1.6 all other documents Seller is required to deliver pursuant to the provisions of this Agreement and any additional documents reasonably required in connection with this Agreement, provided such documents, and the terms and conditions thereof, are consistent with the terms and conditions of this Agreement and do not impose an greater liability upon Seller.

8.2 At Closing, Borrower shall deliver to 22CG the following documents, duly executed and acknowledged:

8.2.1 The New Note, duly executed by Borrower;

8.2.2 The Deed of Trust, duly executed by Borrower and acknowledged and in proper form for recording;

8.2.3 A certificate of property, casualty and liability insurance benefitting Holdings and complying with the terms and provisions set forth in the Deed of Trust; and

8.2.4 Intentionally Omitted;

8.2.5 Intentionally Omitted; and

8.2.6 All other documents Borrower is required to deliver pursuant to the provisions of this Agreement and any additional documents reasonably required in connection with this Agreement, provided such documents, and the terms and conditions thereof, are consistent with the terms and conditions of this Agreement and do not impose an greater liability upon Borrower.

8.3 At Closing, 22CG and/or Holdings, as applicable, shall deliver to Seller and/or Borrower, as applicable, the following documents, duly executed and acknowledged: (i) the Allonge to Existing Note, together with the original of the Existing Note; (ii) to the extent there are any existing UCC-1 financing statements securing the Existing Note, form UCC-3s reflecting assignment of 22CG's lien thereunder on all of Seller's assets to Borrower, all in proper form for recording; (iii) such evidence or affidavits as may be reasonably required by Seller, Borrower or the Title Company regarding the authority of the persons executing the various documents on behalf of Buyer in connection with the transactions contemplated hereby, provided such evidence and affidavits, and the terms and conditions thereof, are consistent with the terms and conditions of this Agreement and do not impose an greater liability upon Seller; and (iv) all other documents Buyer is required to deliver pursuant to the provisions of this Agreement and any additional documents reasonably required in connection with this Agreement, provided such documents, and the terms and conditions thereof, are consistent with the terms and conditions of this Agreement and do not impose an greater liability upon Buyer.

8.4 Buyer, Borrower and Seller shall each execute and deliver at Closing applicable state and local conveyance tax forms and Buyer, Borrower and Seller shall mutually execute and deliver to each other a closing statement in customary form, acceptable to all parties.

9. **Prorations and Expenses.** The following items shall be apportioned as of 11:59 P.M. of the day immediately preceding the Closing Date:

9.1 At the Closing, the real property taxes and assessments on the Farm Parcel shall be prorated as of the Closing Date.

9.2 As a result of Buyer's obligations under the Crop Lease, there will be no proration for, and Buyer will be solely responsible for, the costs, expenses and fees for services for electricity, gas, water, refuse collection and other utilities or services for the Farm Parcel.

9.3 Seller and Borrower shall pay all costs of discharging any existing deeds of trust related to its respective Premises. Buyer will be responsible for the full cost of all tax and recording fees on any documents relating to the transfer of Seller's right, title and interest in and to the Farm Parcel (including, without limitation, any transfer tax) and relating to the Deed of Trust (including, without limitation, any deed of trust tax), and all sales taxes. Buyer shall pay the cost of the Title Commitment and title insurance premiums. Buyer shall be responsible for all costs related to its due diligence investigations. Each party shall pay fifty percent (50%) of the escrow charges of the Title Company in connection with the Closing of this transaction. Each party shall pay their

respective attorneys' fees. All other Closing costs shall be paid for in accordance with local custom in Delta County, Colorado, for commercial properties.

10. **Brokerage.** Seller, Borrower and Buyer each represent and warrant to the other that they have not dealt with any broker or other intermediary to whom a fee or commission is payable in connection with or relating to the sale and purchase of the Premises. Seller, Borrower and Buyer hereby agree to defend, indemnify and hold the other harmless from and against any and all liability, claim, charge or damages, including without limitation, counsel fees and court costs, incurred by the other as a result of any breach of the foregoing representations and obligations. The provisions of this Section 10 shall survive the Closing.

11. **Risk of Loss**. The risk of loss or damage to any of the improvements or property on the Premises by fire, vandalism or other casualty or hazards (each a "**Casualty Event**") from the date hereof to and including the date of the Closing shall be on Seller and Borrower, respectively and as applicable. In the event of any such loss, Seller and Borrower shall notify Buyer of such fact and Buyer may elect, by the delivery of written notice to Seller and Borrower prior to the Closing Date, to either terminate this Agreement, or Buyer may proceed to Closing notwithstanding the loss or damage, the Purchase Price shall be as set forth herein and, as to the Farm Parcel only, Buyer shall accept an assignment of the proceeds of the insurance payable by reason of the loss or damage.

12. **Default by Buyer, Borrower or Seller; Termination of Agreement.**

12.1 Buyer's Default.

Should Buyer default on its obligations provided herein then Seller and Borrower shall so notify Buyer in writing specifying the nature of the default. Buyer shall have ten (10) days from the date of such notice to cure the default. If Buyer fails to cure said breach within said ten (10) day period or otherwise resolve the matter to Seller's and Borrower's reasonable satisfaction, Seller and Borrower shall have the option (a) to terminate this Agreement upon notice to Buyer. (b) pursue an action for specific performance against the applicable defaulting party, or (c) waive such default and proceed to Closing. In the event of a valid termination by Seller and Borrower pursuant to this Section 12.1, this Agreement shall terminate and the parties hereto shall be released from any further obligations hereunder each to the other except for those matters which, by their terms, survive the termination of this Agreement.

12.2 Seller's or Borrower's Default.

In the event Seller or Borrower, as applicable, fails to perform or observe any of the covenants or obligations to be performed or observed by Seller or Borrower under this Agreement at or prior to Closing, then Buyer shall so notify Seller and Borrower in writing specifying the nature of the default. Seller and Borrower shall have ten (10) days from the date of such notice to cure the default. If Seller and/or Borrower fails to cure said breach within said ten (10) day period or otherwise resolve the matter to Buyer's reasonable satisfaction, Buyer shall be entitled, as its sole and exclusive remedies, to either (a) terminate this Agreement by delivery of written notice to Seller and Borrower, (b) pursue an action for specific performance against the applicable defaulting party, or (c) waive such

default and proceed to Closing without any reduction in the Purchase Price. In the event of a valid termination by Buyer pursuant to this Section 12.2, this Agreement shall terminate and the parties hereto shall be released from any further obligations hereunder each to the other except for those matters which, by their terms, survive the termination of this Agreement.

Notwithstanding anything contained in this Article 12 to the contrary, there shall be no notice requirement and/or correlating cure or grace period in the event a party fails to timely consummate the Closing on the Closing Date in accordance with this Agreement

13. **Notices**. All notices, requests and other communications under this Agreement shall be in writing and shall be delivered personally, or shall be sent by overnight delivery service, next Business Day delivery, to the addresses of each party first set forth above, or to such other address of which Seller or Buyer shall have given notice as herein provided. Notices hereunder shall be sufficient if given by counsel to the parties as set forth above. All such notices, requests and other communications shall be deemed to have been sufficiently given for all purposes hereof on the first Business Day after delivery to an overnight delivery service.

14. **Miscellaneous.**

14.1 This Agreement shall be binding upon and shall inure to the benefit of the parties hereto and their respective heirs, executors, administrators, legal representatives and assigns.

14.2 Buyer may at any time assign its interests in this Agreement, without Seller's consent, only to an affiliated entity to be formed for the purpose of consummating the acquisition of the Farm Parcel contemplated by this Agreement.

14.3 This Agreement may be executed in counterparts, each of which shall be deemed an original, and all of such counterparts together shall constitute one and the same Agreement. This Agreement may be executed by facsimile, portable document format or other electronic means, and any counterpart executed and delivered by such electronic means shall be binding as an original.

14.4 No delay or omission by either party hereto in exercising any right shall impair any such right or be construed to be a waiver of such right.

14.5 This Agreement shall be governed by the laws of the State of Colorado.

14.6 Time is of the essence for the purposes of this Agreement.

14.7 If the time period by which any right, option or election provided under this Agreement must be exercised, or by which any act required hereunder must be performed, or by which the Closing must be held, expires on a Saturday, Sunday or legal or bank holiday, then such time period will be automatically extended through the close of business on the next regularly scheduled Business Day. For purposes of this Agreement, a "**Business Day**" shall mean any day which is not a Saturday, Sunday or legal or bank holiday.

14.8 The parties each agree to do, execute, acknowledge and deliver all such further reasonable acts, instruments and assurances and to take all such further reasonable action before or after the Closing as shall be necessary or desirable to fully carry out this Agreement and to fully consummate and effect the transactions contemplated hereby, provided such acts, instruments, assurances and actions, and the terms and conditions thereof (as applicable), are consistent with the terms and conditions of this Agreement and do not impose an greater liability upon a party. The provisions of this Section 14.8 shall survive the Closing for a period not to exceed one hundred eighty (180) days.

14.9 In the event any provision or portion of this Agreement is held by any court of competent jurisdiction to be invalid or unenforceable, such holding will not affect the remainder hereof, and the remaining provisions shall continue in full force and effect to the same extent as would have been the case had such invalid or unenforceable provision or portion never been a part hereof.

14.10 This Agreement (including the documents, instruments and agreements referred to in this Agreement) constitutes the entire agreement of the parties hereto with respect to the subject matter hereof and supersedes all prior agreements and understandings, both written and oral, among the parties with respect to the subject matter hereof and is not intended to confer upon any other person any rights or remedies hereunder. Any agreement hereafter made shall be ineffective to change, modify or discharge this Agreement in whole or in part unless such agreement is in writing and signed by the party against whom enforcement of the change, modification or discharge is sought.

14.11 All exhibits mentioned in this Agreement shall be attached to this Agreement and shall form an integral part hereof.

14.12 Notwithstanding anything contained in this Agreement to the contrary, (i) all Seller warranties, representations, obligations, duties, liabilities, undertakings, agreements and covenants provided for under this Agreement are provided only with respect to Seller, the Farm Parcel and its respective ownership interest in the Farm Parcel, (ii) all Borrower's warranties, representations, obligations, duties, liabilities, undertakings, agreements and covenants provided for under this Agreement are provided only with respect to Borrower, the Golden Parcel and its respective ownership interest in the Golden Parcel, (iii) Seller shall not be deemed to make, agree to, provide, incur, guaranty or otherwise undertake (as and where applicable) any warranty, representation, obligation, duty, liability, undertaking, agreement and/or covenant of Borrower and/or with respect to the Golden Parcel and (iv) Borrower shall not be deemed to make, agree to, provide, incur, guaranty or otherwise undertake (as and where applicable) any warranty, representation, obligation, duty, liability, undertaking, agreement and/or covenant of Seller and/or with respect to the Seller Parcel (or any portion thereof).

14.13 BUYER ACKNOWLEDGES AND AGREES THAT, EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, THE SELLER'S DOCUMENTS (AS TO SELLER ONLY) AND THE BORROWER'S DOCUMENTS (AS TO BORROWER ONLY) (COLLECTIVELY, " **EXPRESS REPRESENTATIONS**"), IT IS UNDERSTOOD AND AGREED THAT NEITHER SELLER, BORROWER NOR ANY OF THEIR RESPECTIVE PRINCIPALS, PARTNERS, MEMBERS, MANAGERS, DIRECTORS, OFFICERS,

EMPLOYEES, AGENTS, AFFILIATES OR REPRESENTATIVES HAVE AT ANY TIME MADE, AND ARE NOT NOW MAKING, AND THEY SPECIFICALLY DISCLAIM, ANY AND ALL WARRANTIES, REPRESENTATIONS OR GUARANTIES OF ANY KIND OR CHARACTER, EXPRESS OR IMPLIED, WITH RESPECT TO THE PREMISES, INCLUDING, BUT NOT LIMITED TO, WARRANTIES, REPRESENTATIONS OR GUARANTIES AS TO (1) MATTERS OF TITLE, (2) ENVIRONMENTAL MATTERS RELATING TO THE PREMISES, OR ANY PORTION THEREOF, INCLUDING, WITHOUT LIMITATION, THE PRESENCE OF HAZARDOUS MATERIALS IN, ON, UNDER OR IN THE VICINITY OF THE PREMISES, (3) GEOLOGICAL CONDITIONS, INCLUDING, WITHOUT LIMITATION, SUBSIDENCE, SUBSURFACE CONDITIONS, WATER TABLE, UNDERGROUND WATER RESERVOIRS, LIMITATIONS REGARDING THE WITHDRAWAL OF WATER, AND GEOLOGIC FAULTS AND THE RESULTING DAMAGE OF PAST AND/OR FUTURE FAULTING, (4) WHETHER, AND TO THE EXTENT TO WHICH THE PREMISES, OR ANY PORTION THEREOF, IS AFFECTED BY ANY STREAM (SURFACE OR UNDERGROUND), BODY OF WATER, WETLANDS, FLOOD PRONE AREA, FLOOD PLAIN, FLOODWAY OR SPECIAL FLOOD HAZARD, (5) DRAINAGE, (6) SOIL CONDITIONS, INCLUDING THE EXISTENCE OF INSTABILITY, PAST SOIL REPAIRS, SOIL ADDITIONS OR CONDITIONS OF SOIL FILL, OR SUSCEPTIBILITY TO LANDSLIDES, OR THE SUFFICIENCY OF ANY UNDERSHORING, (7) THE PRESENCE OF ENDANGERED SPECIES OR ANY WETLANDS OR OTHER ENVIRONMENTALLY SENSITIVE OR PROTECTED AREAS, (8) ZONING OR BUILDING ENTITLEMENTS TO WHICH THE PREMISES, OR ANY PORTION THEREOF, MAY BE SUBJECT, (9) THE AVAILABILITY OF ANY UTILITIES TO THE PREMISES, OR ANY PORTION THEREOF, INCLUDING, WITHOUT LIMITATION, WATER, SEWAGE, GAS AND ELECTRIC, (10) USAGES OF ADJOINING LAND OR OTHER LAND IN THE VICINITY OF THE PREMISES, OR ANY PORTION THEREOF, (11) ACCESS TO THE PREMISES, OR ANY PORTION THEREOF, (12) THE VALUE, COMPLIANCE WITH THE PLANS AND SPECIFICATIONS, SIZE, LOCATION, AGE, USE, DESIGN, QUALITY, DESCRIPTION, SUITABILITY, STRUCTURAL INTEGRITY, OPERATION, TITLE TO, OR PHYSICAL OR FINANCIAL CONDITION OF THE PREMISES OR ANY PORTION THEREOF, OR ANY INCOME, EXPENSES, CHARGES, LIENS, ENCUMBRANCES, RIGHTS OR CLAIMS ON OR AFFECTING OR PERTAINING TO THE PREMISES OR ANY PART THEREOF, (13) THE CONDITION OR USE OF THE PREMISES OR COMPLIANCE OF THE PROPERTY WITH ANY OR ALL PAST, PRESENT OR FUTURE FEDERAL, STATE OR LOCAL ORDINANCES, RULES, REGULATIONS OR LAWS, BUILDING, FIRE OR ZONING ORDINANCES, CODES OR OTHER SIMILAR LAWS, (14) THE EXISTENCE OR NON-EXISTENCE OF UNDERGROUND STORAGE TANKS, SURFACE IMPOUNDMENTS, OR LANDFILLS, (15) ANY OTHER MATTER AFFECTING THE STABILITY AND INTEGRITY OF THE PREMISES, (16) THE POTENTIAL FOR FURTHER DEVELOPMENT OF THE PREMISES, OR ANY PORTION THEREOF, (17) THE MERCHANTABILITY OF THE PREMISES OR FITNESS OF THE PREMISES FOR ANY PARTICULAR PURPOSE, (18) THE TRUTH, ACCURACY OR COMPLETENESS OF THE PROPERTY DOCUMENTS, (19) REAL ESTATE TAXES, ASSESSMENTS OR OTHER MATTERS OF TAXATION OR FINANCING WITH RESPECT TO THE PREMISES, OR ANY PORTION THEREOF, (20) THE QUIET TITLE ACTION OR (21) ANY OTHER MATTER OR THING WITH RESPECT

TO THE PREMISES. EXCEPT WITH RESPECT TO THE EXPRESS REPRESENTATIONS, BUYER ACKNOWLEDGES AND AGREES THAT UPON THE CONSUMMATION OF THE CLOSING, BUYER SHALL HAVE UNCONDITIONALLY ACCEPTED THE CONDITION OF THE PREMISES IN ITS " **AS-IS, WHERE-IS, WITH ALL FAULTS AND DEFECTS**" CONDITION. BUYER REPRESENTS THAT IT IS A KNOWLEDGEABLE, EXPERIENCED AND SOPHISTICATED PURCHASER AND FINANCER OF REAL ESTATE AND THAT IT IS RELYING SOLELY ON ITS OWN EXPERTISE AND THAT OF BUYER'S CONSULTANTS IN PURCHASING THE FARM PARCEL AND TAKING A DEED OF TRUST ON THE GOLDEN PARCEL PROPERTY AND HAS MADE AN INDEPENDENT VERIFICATION OF THE ACCURACY OF ANY DOCUMENTS AND INFORMATION PROVIDED BY SELLER AND/OR BORROWER.

15. **Post-Closing Agreements.** Following the Closing, the parties covenant to complete the following transactions, at all times using continuous diligent, good faith efforts:

(a) Obtain municipal approval for the subdivision from the Farm Parcel of a new parcel containing approximately, but no more than, 10 acres (the **"10 Acre Parcel"**, with the obligations under this subsection (a) being the "**10-Acre Parcel Conveyance Obligations**") in the approximate location set forth on **Exhibit E** attached hereto. No later than 30 days after such subdivision approval has been obtained, (1) Holdings will convey the 10 Acre Parcel to Seller by limited warranty deed, which will otherwise be in similar form and content as the Deed and (2) Holdings and Seller will enter into any necessary cross-easement agreement to facilitate commercially reasonable ingress, egress and access to and from each of the 10 Acre Parcel and remainder of the Farm Parcel. From and after the Closing Date until the conveyance of the 10 Acre Parcel to Seller, Holdings will maintain the 10 Acre Parcel in substantially similar condition as existing as of the Closing Date, and otherwise will not transfer, lease, license, pledge and/or otherwise encumber such 10 Acre Parcel. Holdings' conveyance of the 10 Acre Parcel will include all right, title and interest of Holdings (solely as the owner of the 10 Acre Parcel), if any, in and to those items and interests described in Section 1.2 (excepting 1.2.2). Seller and Holdings will equally share the costs and expenses associated with obtaining such subdivision approval and effecting such subsequent conveyance, with any such subdivision to be reasonably approved and acceptable to Seller and Holdings.

(b) 22CG and Seller shall enter into a supply agreement commencing for the [*] growing season under which 22CG will supply hemp biomass to Seller on a [*] for a term of [*] (the "**Supply Agreement**"). The Supply Agreement will also provide for 22CG's supply of hemp biomass for the [*]. The pounds of hemp delivered shall be [*]. For example, [*]. If the [*] In addition to the foregoing, 22CG and Seller will, as part of the Supply Agreement, mutually agree upon a common trade name/branding of, and reference to, the Farm Parcel and the farming and harvesting operations thereof, such as "[*]", or such other commercially reasonable tradename.

Notwithstanding the foregoing, the agreements contained in this Section 15 do not constitute consideration, conditions or contingencies for the parties' other obligations set forth in this Agreement and the failure of parties to complete the items identified in this Section 15 shall in no way void or invalidate the Deed, New Note, Deed of Trust, or other transactions consummated at the Closing. In the event a party fails to comply with any of its obligations under this Section 15, however, the non-defaulting party will have the right to exercise any and all rights and remedies available to such non-defaulting party at law and/or in equity (including, without limitation, an action for specific performance and/or injunctive relief).

16. **Right of First Refusal**.

(i) In the event that, at any time prior to the Termination Date, Holdings decides to sell all or any portion of the Farm Parcel (such then applicable all or portion of the Farm Parcel being the "**ROFR Parcel**"), Seller will have the right of first refusal ("**ROFR**") to acquire such ROFR Parcel in accordance with the terms and conditions of this Section 16. In the event that Holdings receives an offer from an offeree ("**Offeree**") (which, for purposes of this ROFR, such offer must be in the form of purchase and sale agreement duly executed by said Offeree) to purchase the ROFR Parcel that Holdings, but for the ROFR, would otherwise accept without modification or amendment thereto ("**Offer**"), Holdings shall not accept such Offer or otherwise consummate the purchase and sale under such Offer unless Holdings first delivers to Seller a written notice ("**ROFR Notice**"), which ROFR Notice must set forth and otherwise contain (a) a certification by Holdings that Holdings is ready, willing and able to, and otherwise, but for the ROFR, would, accept the Offer, all without modification or amendment thereto and (b) a true, correct and complete copy of the Offer.

(ii) Seller will, for a thirty (30) day period commencing upon receipt of the ROFR Notice (the "**ROFR Review Period**"), have the sole and exclusive right to purchase the ROFR Parcel on the terms and conditions set forth in the Offer. In the event Seller desires to accept the Offer, Seller will deliver written notice to Holdings, prior to expiration of the ROFR Review Period, of its election to exercise the Offer, whereupon (a) Holdings will be bound to sell the ROFR Parcel to Seller, and Seller will be bound to buy the ROFR Parcel from Holdings, all in accordance with and subject to the terms and conditions of the Offer and (b) within five (5) business days after Seller's delivery of the ROFR Acceptance Notice, Seller and Holdings will each duly execute and deliver the same purchase and sale agreement of which the Offer was based on, as modified for the sole purpose of reflecting Seller as the "Holdings" under such Offer.

(iii) In the event that Seller, upon receipt of an ROFR Notice, either (a) delivers written notice to Holdings during the ROFR Review Period of its rejection of the Offer, or (b) fails to deliver written notice to Holdings during the ROFR Review Period of its acceptance of the Offer (the earlier of the events described in subsections (a) and (b) herein being the "**ROFR Rejection Date**"), Seller's ROFR shall conclusively be deemed waived, but only with respect to the purchase and sale of the ROFR Parcel as disclosed in the Offer that was the basis for the then applicable ROFR Notice, and Holdings shall be free,

for a period of one hundred eighty (180) days from the ROFR Rejection Date, to complete the sale to the Offeree in accordance with such Offer, and the Offeree, upon consummation of the closing of the purchase and sale of the ROFR Parcel in accordance with such Offer, shall acquire the ROFR Parcel free and clear of the Seller's ROFR set forth in this Section 16 (which ROFR shall be extinguished, null, void, and of no further force or effect upon consummation of the closing of the purchase and sale of the ROFR Parcel in accordance with such Offer, but only as to such ROFR Parcel which was the basis of such Offer). If, however, either (A) Holdings does not complete the purchase and sale of the ROFR Parcel to Offeree in accordance with such Offer within one hundred eighty (180) days from the ROFR Rejection Date, or (B) Holdings agrees to any amendment or modification to such Offer resulting in terms and conditions being more favorable to Offeree, then the ROFR provided for in this Section 16 shall once again apply, and Holdings will not complete the purchase and sale of the ROFR Parcel to Offeree without first giving a new ROFR Notice to Seller in compliance with the terms of this Section 16. Furthermore, and notwithstanding anything contained in this Section 16 to the contrary, in the event that any Offer is only for a portion of the ROFR Parcel, this ROFR shall continue to apply to all other portions of the Farm Parcel that was not part of such Offer.

(iv) The ROFR, and all rights of the Seller set forth in this Section 16, shall automatically terminate and be of no further force or effect upon the first to occur of (i) Seller, following the date it becomes the owner of the 10 Acre Parcel as described above, thereafter no longer owning the 10 Acre Parcel (whether by voluntary conveyance, foreclosure or otherwise); or (2) thirty (30) years after the Effective Date.

(iv) The parties acknowledge and agree that, for the purpose of providing record notice of the 10-Acre Parcel Conveyance Obligations and ROFR, at Closing, the parties will duly execute, in proper form for recording, and record a memorandum in a form reasonably acceptable to the parties.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the day and date first above written.

BUYER:

22ND CENTURY GROUP INC.

By: /s/ James Mish
Name: James Mish
Title: CEO

22ND CENTURY HOLDINGS, LLC

By: /s/ James Mish
Name: James Mish
Title: CEO

SELLER:

PANACEA LIFE SCIENCES INC.

By: /s/ Leslie Buttorff
Name: Leslie Buttorff
Title: CEO

BORROWER:

J & N REAL ESTATE COMPANY, L.L.C.

By: /s/ Leslie Buttorff
Name: Leslie Buttorff
Title: CEO

List of Exhibits

Exhibit A
Description of Farm Parcel

Exhibit B
Description of Golden Parcel

Exhibit C
New Note

Exhibit D
Deed of Trust

Exhibit E
10 Acre Parcel

Exhibit 10.3

SECURITIES EXCHANGE AGREEMENT

This SECURITIES EXCHANGE AGREEMENT (this "Agreement"), dated as of June 30, 2021, is entered into by and among Exactus, Inc., a Nevada corporation (the "Parent"), Panacea Life Sciences, Inc., a Colorado corporation (the "Company"), and the shareholders of the Company who executed this Agreement (each a "Shareholder" and collectively the "Shareholders"). Each of the parties to this Agreement is individually referred to herein as a "Party" and collectively as the "Parties."

BACKGROUND

The Parent has 650,000,000 shares of Common Stock, par value $0.0001 per share (the "Parent Common Stock") and 50,000,000 shares of Preferred Stock, par value $0.0001 per share (the "Preferred Stock") authorized of which 450,000 shares are designated as Series A Preferred Stock (the "Series A Preferred"), 32,000,000 shares are designated as Series B-1 Preferred Stock (the "Series B-1 Preferred") and 10,000,000 shares are designated as Series B-2 Preferred Stock (the "Series B-2 Preferred"). As of the date of this Agreement, 142,694,521 shares of Parent Common Stock, 1,500,000 shares of Series A Preferred and 1,500,000 shares of Series B-1 Preferred and 6,000,000 shares of Series B-2 Preferred are issued and outstanding. 9,000,000 shares of Parent Common Stock may be issued upon conversion of Series A Preferred, 187,000 shares of Parent Common Stock may be issued upon conversion of Series B-1 Preferred, 750,000 shares of Parent Common Stock may be issued upon conversion of Series B-2 Preferred.

The Shareholders have agreed to transfer to Parent the shares of capital stock of the Company owned by them as reflected on each Shareholder's signature page to this Agreement. In exchange for the capital stock owned by the Shareholders, as of the closing the Parent will issue an aggregate of: (A) 1,000,000 shares of newly issued shares of Series C Convertible Preferred Stock, par value $0.0001 per share (the "Parent C Stock") issuable to Quintel-MC, Incorporated, a Colorado corporation ("Quintel") (stated value of $6,046,000) convertible into 64,098,172 shares of Common Stock; (B) 10,000 shares of newly issued shares of Series C-1 Convertible Preferred Stock, par value $0.0001 per share (stated value of $2,812,500) (the "Parent C-1 Stock") issuable to Quintel convertible into 29,817,418 shares of Parent Common Stock, (C) 10,000 shares of newly issued shares of Series D Convertible Preferred Stock, par value $0.0001 per share (stated value of $4,300,000) (the "Parent D Stock") issuable to J&N Real Estate Company, a Colorado limited liability company convertible into 45,587,519 shares of Parent Common Stock and (D) 473,639,756 shares of newly issued Parent Common Stock (consisting of 298,174,177 shares issuable to Quintel, 20,143,322 shares issuable to Leslie Buttroff, 91,016,026 shares issuable to 22nd Century Group, Inc. and 64,306,231 shares issuable to Company employees) which together shall equal an aggregate of approximately 70.3% (the "Stated Percentage") of the issued and outstanding shares of Parent Common Stock, on a fully diluted basis, (exclusive of 113,383,460 shares of Parent Common Stock reserved for issuance under the Parent's 2021 Equity Incentive Plan but inclusive of shares issuable at Closing to various employees, directors, advisors and consultants). Such Parent Common Stock, Parent C Stock and Parent C-1 Stock and Parent D Stock, the "Parent Exchange Stock". The Shareholders hold all issued and outstanding shares of capital stock in the Company.

The Parent C Stock shall have such terms and rights as set forth in the Certificate of Designation of Rights, Powers, Preferences, Privileges and Restrictions of Series C Convertible Preferred Stock, which shall include: (A) the right to vote on all matters submitted to a vote of shareholders of Parent on an as converted basis; and (B) for the Parent C Stock, the right to elect to receive and be paid contingent liquidating and participation payments in the amount of the Stated Value upon receipt of certain recoveries set forth in the Certificate of Designation of Preferences, Rights and Limitations of Series C Convertible Preferred Stock in the form attached hereto as Exhibit A (the "Series C Certificate of Designations"). The Parent C-1 Stock shall have such terms and rights as set forth in the Certificate of Designation of Rights, Powers, Preferences, Privileges and Restrictions of Series C-1 Convertible Preferred Stock in the form attached hereto as Exhibit A-1 (the "Series C-1 Certificate of Designations"). The Parent D Stock shall have such terms and rights as set forth in the Certificate of Designation of Rights, Powers, Preferences, Privileges and Restrictions of Series D Convertible Preferred Stock in the form attached hereto as Exhibit A-2 (the "Series D Certificate of Designations" and together with the Series C and C-1 Certificate of Designations, the "Certificates of Designations").

The exchange of Company capital stock for Parent Exchange Stock is intended to constitute a reorganization within the meaning of the Internal Revenue Code of 1986, as amended (the "Code"), or such other tax free reorganization or restructuring provisions as may be available under the Code.

The Board of Directors of each of the Parent and has determined, and upon Closing, as defined, the Board of Directors of the Company will have determined, that it is desirable to affect this plan of reorganization and securities exchange.

AGREEMENT

NOW THEREFORE, for good and valuable consideration the receipt and sufficiency is hereby acknowledged, the Parties hereto intending to be legally bound hereby agree as follows:

ARTICLE I
Exchange of Shares

SECTION 1.01. Exchange by the Shareholders. At the Closing (as defined in Section 1.02), each Shareholder shall sell, transfer, convey, assign and deliver to the Parent all of the capital stock of the Company owned by such Shareholder (the "Company Shares") as reflected on such Shareholder's signature page to this Agreement, free and clear of all Liens, as defined below, in exchange for Parent Common Stock and Parent C Stock, Parent C-1 Stock and Parent Series D Stock, as set forth on Exhibit B, attached hereto. In the event that the number of shares of Parent Common Stock outstanding on a fully diluted basis exceeds 142,694,521, the Shareholders shall be issued additional shares of Parent Common Stock and, if the Shareholders are employees holding stock options of the Company, stock options so that the Shareholders own the Stated Percentage on a fully diluted basis immediately following the Closing (exclusive of 113,383,460 shares of Parent Common Stock reserved for issuance under the Parent's 2021 Equity Incentive Plan).

SECTION 1.02. Closing. The closing (the "Closing") of the transactions contemplated by this Agreement (the "Transactions") shall take place at such location to be determined by the Company, Leslie Buttorff ("the Principal Shareholder") and the Parent, commencing upon the satisfaction or waiver of all conditions and obligations of the Parties to consummate the Transactions contemplated hereby (other than conditions and obligations with respect to the actions that the respective Parties will take at Closing) or such other date and time as the Parties may mutually determine (the "Closing Date").

ARTICLE II
Representations and Warranties of the Shareholders

Each Shareholder, individually and not jointly, and Quintel solely in the case of Section 2.10. hereby represents and warrants to the Parent, as follows:

SECTION 2.01. Good Title. The Shareholder is the record and beneficial owner, and has good and marketable title to its Company Shares, with the right and authority to sell and deliver such Company Shares to the Parent as provided herein. The Parent will receive good title to such Company Shares, free and clear of all liens, security interests, pledges, equities and claims of any kind, voting trusts, shareholder agreements and other encumbrances other than restrictions imposed by applicable securities laws (collectively, "Liens").

SECTION 2.02. Power and Authority. All acts required to be taken by the Shareholder to enter into this Agreement and to carry out the Transactions have been properly taken. This Agreement constitutes a legal, valid and binding obligation of the Shareholder, enforceable against such Shareholder in accordance with the terms hereof, except as such enforceability may be limited by bankruptcy, insolvency, moratorium, and other similar laws of general applicability and by general principles of equity.

SECTION 2.03. No Conflicts. The execution and delivery of this Agreement by the Shareholder and the performance by the Shareholder of his, her or its obligations hereunder in accordance with the terms hereof: (i) will not require the consent of any third party or any federal, state, local or foreign government or any court of competent jurisdiction, administrative agency or commission or other governmental authority or instrumentality, domestic or foreign ("Governmental Entity") under any statutes, laws, ordinances, rules, regulations, orders, writs, injunctions, judgments, or decrees (collectively, "Laws"); (ii) will not violate any Laws applicable to such Shareholder; and (iii) will not violate or breach any contractual obligation to which such Shareholder is a party.

SECTION 2.04. No Finder's Fee. The Shareholder has not created any obligation for any finder's, investment banker's or broker's fee in connection with the Transactions that the Company or the Parent will be responsible for.

SECTION 2.05. Purchase Entirely for Own Account. The Parent Exchange Stock proposed to be acquired by the Shareholder hereunder will be acquired for investment for such Shareholder's own account, and not with a view to the resale or distribution of any part thereof, and the Shareholder has no present intention of selling or otherwise distributing the Parent

Exchange Stock or shares of Parent Common Stock issuable upon conversion thereof (the "Parent Conversion Shares"), except in compliance with applicable securities laws.

SECTION 2.06. Available Information. The Shareholder has such knowledge and experience in financial and business matters that it is capable of evaluating the merits and risks of an investment in the Parent. The Shareholder acknowledges that it has had the opportunity to review the Parent's filings with the SEC which are available here: https://www.sec.gov/edgar/browse/?CIK=1552189.

SECTION 2.07. Non-Registration. The Shareholder understands that the Parent Exchange Stock and the Parent Conversion Shares have not been registered under the Securities Act of 1933, as amended (the "Securities Act") and, if issued in accordance with the provisions of this Agreement, will be issued by reason of a specific exemption from the registration provisions of the Securities Act which depends upon, among other things, the bona fide nature of the investment intent and the accuracy of the Shareholder's representations as expressed herein.

SECTION 2.08. Restricted Securities. The Shareholder understands that the Parent Exchange Stock and the Parent Conversion Shares are deemed "restricted securities" under the Securities Act inasmuch as this Agreement contemplates that, if acquired by the Shareholder pursuant hereto, the Parent Exchange Stock and the Parent Conversion Shares would be acquired in a transaction not involving a public offering. The Shareholder further acknowledges that if the Parent Exchange Stock and the Parent Conversion Shares are issued to the Shareholder in accordance with the provisions of this Agreement and the Certificates of Designations, such Parent Exchange Stock and Parent Conversion Shares may not be resold without registration under the Securities Act or the existence of an exemption therefrom. The Shareholder represents that it is familiar with Rule 144 promulgated under the Securities Act, as presently in effect, and understands the resale limitations imposed thereby and by the Securities Act.

SECTION 2.09. Legends. It is understood that the Parent Exchange Stock and the Parent Conversion Shares will bear the following legend or another legend that is similar to the following:

> NEITHER THE SHARES REPRESENTED BY THIS CERTIFICATE NOR THE SECURITIES INTO WHICH SUCH SHARES ARE CONVERTIBLE HAVE BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR APPLICABLE STATE SECURITIES LAWS. THE SHARES REPRESENTED BY THIS CERTIFICATE AND THE SECURITIES INTO WHICH SUCH SHARES ARE CONVERTIBLE HAVE BEEN ACQUIRED FOR INVESTMENT AND MAY NOT BE OFFERED FOR SALE, SOLD, TRANSFERRED OR ASSIGNED IN THE ABSENCE OF AN EFFECTIVE REGISTRATION STATEMENT FOR THE SECURITIES UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR APPLICABLE STATE SECURITIES LAWS, OR AN OPINION OF COUNSEL, IN A FORM ACCEPTABLE TO THE COMPANY, THAT REGISTRATION IS NOT REQUIRED UNDER SAID ACT OR APPLICABLE STATE SECURITIES LAWS OR UNLESS SOLD PURSUANT TO RULE 144 UNDER SAID ACT.

and any legend required by the "blue sky" laws of any state to the extent such laws are applicable to the securities represented by the certificate so legended.

SECTION 2.10 Shareholder Acknowledgment. Quintel acknowledges that it has read the representations and warranties of the Company set forth in Article III herein and such representations and warranties are, to the best of its knowledge, true and correct as of the date hereof.

ARTICLE III
Representations and Warranties of the Company

The Company represents and warrants to the Parent, except as set forth in the disclosure schedules provided in connection herewith, as follows:

SECTION 3.01. Organization, Standing and Power. The Company is duly incorporated or organized, validly existing and in good standing under the laws of the State of Colorado and has the corporate power and authority and possesses all governmental franchises, licenses, permits, authorizations and approvals necessary to enable it to own, lease or otherwise hold its properties and assets and to conduct its businesses as presently conducted, other than such franchises, licenses, permits, authorizations and approvals the lack of which, individually or in the aggregate, has not had and would not reasonably be expected to have a material adverse effect on the Company, its business, results of operations, prospects, condition (financial or otherwise) or assets or on the ability of the Company to perform its obligations under this Agreement or to consummate the Transactions (a "Company Material Adverse Effect"). The Company is duly qualified to do business in each jurisdiction where the nature of its business or its ownership or leasing of its properties make such qualification necessary, except where the failure to so qualify would not have a Company Material Adverse Effect. The Company has delivered to the Parent true and complete copies of the articles of incorporation and bylaws of the Company, each as amended to the date of this Agreement (as so amended, the "Company Charter Documents"). The Company has no direct or indirect subsidiaries.

SECTION 3.02. Capital Structure. The authorized share capital of the Company is as set forth on Schedule 3.02 annexed hereto. Other than set forth on Schedule 3.02, no shares or other securities of the Company are issued, reserved for issuance or outstanding. Except as set forth on Schedule 3.02, all outstanding Company Shares are duly authorized, validly issued, fully paid and non-assessable and not subject to or issued in violation of any purchase option, call option, right of first refusal, preemptive right, subscription right or any similar right under any provision of the applicable corporate laws of its state of incorporation, the Company Charter Documents or any Contract (as defined in Section 3.04) to which the Company is a party or otherwise bound. There are no bonds, debentures, notes or other indebtedness of the Company having the right to vote (or convertible into, or exchangeable for, securities having the right to vote) on any matters on which holders of Company Shares may vote ("Voting Company Debt"). As of the date of this Agreement, except as set forth on Schedule 3.02, there are no options, warrants, rights, convertible or exchangeable securities, "phantom" stock rights, stock appreciation rights, stock-based performance units, commitments, Contracts, arrangements or undertakings of any kind to which the Company is a party or by which the Company is bound (i) obligating the Company to issue, deliver or sell, or cause to be issued, delivered or sold, additional shares or other equity interests

in, or any security convertible or exercisable for or exchangeable into any shares or capital stock or other equity interest in, the Company or any Voting Company Debt, (ii) obligating the Company to issue, grant, extend or enter into any such option, warrant, call, right, security, commitment, Contract, arrangement or undertaking or (iii) that give any person the right to receive any economic benefit or right similar to or derived from the economic benefits and rights occurring to holders of the shares or capital stock of the Company.

Schedule 3.02 includes a true and complete copy of the unaudited balance sheet of the Company (and subsidiaries) as of December 31, 2020 and 2019, and the unaudited consolidated profit and loss statement, statement of cash flow and statement of changes in shareholders' equity of the Company (and subsidiaries) for the period ending on such dates, certified by such Company's chief executive officer or chief financial officer (collectively, the "Financial Statements"). The Financial Statements: (a) have been prepared in accordance with the books of account and records of the Company (and subsidiaries); (b) fairly present, and are true, correct and complete statements in all material respects of the consolidated financial condition of the Company (and subsidiaries) and the results of its operations at the dates and for the periods specified in those statements; and (c) have been prepared in accordance with GAAP consistently applied with prior periods, except that the Financial Statements are not accompanied by notes and have not been reviewed or compiled by an independent accountant. The Financial Statements will (a) be prepared in accordance with the books of account and records of the Company (and subsidiaries) and delivered on an estimated basis in accordance with GAAP and (b) will be true, correct and complete statements in all material respects of the consolidated financial condition of the Company (and subsidiaries) as of the Closing Date.

SECTION 3.03. Authority; Execution and Delivery; Enforceability. The Company has all requisite corporate power and authority to execute and deliver this Agreement and to consummate the Transactions. The execution and delivery by the Company of this Agreement and the consummation by the Company of the Transactions have been duly authorized and approved by a majority of the Board of Directors of the Company. No corporate proceedings on the part of the Company that have not already been taken are necessary to authorize this Agreement and the Transactions. When executed and delivered by the Parent and each Shareholder, this Agreement will be enforceable against the Company in accordance with its terms, subject to bankruptcy, insolvency and similar laws of general applicability as to which the Company is subject and subject to general principles of equity.

SECTION 3.04. No Conflicts; Consents.

(a) The execution and delivery by the Company of this Agreement does not, and the consummation of the Transactions and compliance with the terms hereof and thereof will not, conflict with, or result in any violation of or default (with or without notice or lapse of time, or both) under, or give rise to a right of termination, cancellation or acceleration of any obligation or to loss of a material benefit under, or result in the creation of any Lien upon any of the properties or assets of the Company under any provision of (i) the Company Charter Documents, except as disclosed on Schedule 3.04, (ii) any material contract, lease, license, indenture, note, bond, agreement, permit, concession, franchise or other instrument (a "Contract") to which the Company is a party or by which any of their respective properties or assets is bound, except as disclosed on Schedule 3.04, or (iii) subject to the filings and other matters referred to in Section 3.04(b), any

material judgment, order or decree ("Judgment") or material Law applicable to the Company or its properties or assets, other than, in the case of clauses (ii) and (iii) above, any such items that, individually or in the aggregate, have not had and would not have a Company Material Adverse Effect.

(b) Except for required filings with the Securities and Exchange Commission (the "SEC") and applicable "Blue Sky" or state securities commissions, no material consent, approval, license, permit, order or authorization ("Consent") of, or registration, declaration or filing with, or permit from, any Governmental Entity is required to be obtained or made by or with respect to the Company in connection with the execution, delivery and performance of this Agreement or the consummation of the Transactions.

SECTION 3.05. Taxes.

(a) The Company has timely filed, or has caused to be timely filed on its behalf, all Tax Returns required to be filed by it, and all such Tax Returns are true, complete and accurate, except to the extent any failure to file or any inaccuracies in any filed Tax Returns, individually or in the aggregate, have not had and would not have a Company Material Adverse Effect. All Taxes shown to be due on such Tax Returns, or otherwise owed, have been timely paid, except to the extent that any failure to pay, individually or in the aggregate, has not had and would not have a Company Material Adverse Effect. There are no unpaid taxes in any material amount claimed to be due by the taxing authority of any jurisdiction, and the officers of the Company know of no basis for any such claim.

(b) If applicable, the Company has established an adequate reserve reflected on its financial statements for all Taxes payable by the Company (in addition to any reserve for deferred Taxes to reflect timing differences between book and Tax items) for all Taxable periods and portions thereof through the date of such financial statements. No deficiency with respect to any Taxes has been proposed, asserted or assessed against the Company, and no requests for waivers of the time to assess any such Taxes are pending, except to the extent any such deficiency or request for waiver, individually or in the aggregate, has not had and would not have a Company Material Adverse Effect.

(c) For purposes of this Agreement:

"Taxes" includes all forms of taxation, whenever created or imposed, and whether of the United States or elsewhere, and whether imposed by a local, municipal, governmental, state, foreign, federal or other Governmental Entity, or in connection with any agreement with respect to Taxes, including all interest, penalties and additions imposed with respect to such amounts.

"Tax Return" means all federal, state, local, provincial and foreign Tax returns, declarations, statements, reports, schedules, forms and information returns and any amended Tax return relating to Taxes.

SECTION 3.06. Benefit Plans. Except as set forth on Schedule 3.06, the Company does not have or maintain any collective bargaining agreement or any bonus, pension, profit sharing, deferred compensation, incentive compensation, share ownership, share purchase, share option, phantom stock, retirement, vacation, severance, disability, death benefit, hospitalization,

medical or other plan, arrangement or understanding (whether or not legally binding) providing benefits to any current or former employee, officer or director of the Company (collectively, "Company Benefit Plans"). Except as set forth on Schedule 3.06, as of the date of this Agreement there are no severance or termination agreements or arrangements between the Company and any current or former employee, officer or director of the Company, nor does the Company have any general severance plan or policy.

SECTION 3.07. Litigation. Except as set forth on Schedule 3.07, there is no action, suit, inquiry, notice of violation, proceeding (including any partial proceeding such as a deposition) or investigation pending or to the Company's knowledge, threatened in writing against or affecting the Company, or any of its properties before or by any court, arbitrator, governmental or administrative agency, regulatory authority (federal, state, county, local or foreign), stock market, stock exchange or trading facility ("Action") which (i) adversely affects or challenges the legality, validity or enforceability of any of this Agreement or the Parent Exchange Stock or (ii) would, if there were an unfavorable decision, individually or in the aggregate, be reasonably expected to have or result in a Company Material Adverse Effect. Neither the Company nor any director or officer thereof (in his or her capacity as such), is or has been, since January 1, 2019, the subject of any Action involving a claim or violation of or liability under federal or state securities laws or a claim of breach of fiduciary duty.

SECTION 3.08. Compliance with Applicable Laws. The Company is in compliance with all applicable Laws, including those relating to occupational health and safety and the environment, except for instances of noncompliance that, individually and in the aggregate, have not had and would not have a Company Material Adverse Effect. This Section 3.08 does not relate to matters with respect to Taxes, which are the subject of Section 3.05.

SECTION 3.09. Brokers; Schedule of Fees and Expenses. Except for those brokers as to which the Parent shall be solely responsible, no broker, investment banker, financial advisor or other person is entitled to any broker's, finder's, financial advisor's or other similar fee or commission in connection with the Transactions based upon arrangements made by or on behalf of the Company. The Parent shall issue at Closing 500,000 shares of restricted Common Stock of Parent to Paradox Capital Partners, LLC.

SECTION 3.10. Contracts. Except as disclosed in Schedule 3.10, there are no Contracts that are material to the business, properties, assets, condition (financial or otherwise), results of operations or prospects of the Company and its subsidiaries taken as a whole. The Company is not in violation of or in default under (nor does there exist any condition which upon the passage of time or the giving of notice would cause such a violation of or default under) any Contract to which it is a party or by which it or any of its properties or assets is bound, except for violations or defaults that would not, individually or in the aggregate, result in a Company Material Adverse Effect.

SECTION 3.11. Title to Properties. Except as set forth on Schedule 3.11, the Company does not own any real property. The Company has sufficient title to, or valid leasehold interests in, all of its material properties and assets used in the conduct of its businesses. All such assets and properties, other than assets and properties in which the Company has leasehold interests, are free and clear of all Liens other than those Liens that, in the aggregate, do not and

will not materially interfere with the ability of the Company to conduct business as currently conducted or as set forth on Schedule 3.11.

SECTION 3.12. Labor Relations. No labor dispute exists or, to the knowledge of the Company, is threatened with respect to any of the employees of the Company, which would be reasonably expected to result in a Company Material Adverse Effect. None of the Company's or its subsidiaries' employees is a member of a union that relates to such employee's relationship with the Company or such subsidiary, and neither the Company nor any of its subsidiaries is a party to a collective bargaining agreement, and the Company and its subsidiaries believe that their relationships with their employees are good. To the knowledge of the Company, no executive officer of the Company or any subsidiary, is, or is now expected to be, in violation of any material term of any employment contract, confidentiality, disclosure or proprietary information agreement or non-competition agreement, or any other contract or agreement or any restrictive covenant in favor of any third party, and the continued employment of each such executive officer does not subject the Company or any of its subsidiaries to any liability with respect to any of the foregoing matters. The Company and its subsidiaries are in compliance with all U.S. federal, state, local and foreign laws and regulations relating to employment and employment practices, terms and conditions of employment and wages and hours, except where the failure to be in compliance would not, individually or in the aggregate, be reasonably expected to have a Company Material Adverse Effect.

SECTION 3.13. Insurance. The Company holds the insurance policies set forth on Schedule 3.13.

SECTION 3.14. Transactions With Affiliates and Employees. Except as set forth on Schedule 3.14, none of the officers or directors of the Company and, to the knowledge of the Company, none of the employees of the Company is presently a party to any transaction with the Company (other than for services as employees, officers and directors), including any contract, agreement or other arrangement providing for the furnishing of services to or by, providing for rental of real or personal property to or from, or otherwise requiring payments to or from any officer, director or such employee or, to the knowledge of the Company, any entity in which any officer, director, or any such employee has a substantial interest or is an officer, director, trustee or partner.

SECTION 3.15. Application of Takeover Protections. The Company has taken all necessary action, if any, in order to render inapplicable any control share acquisition, business combination, poison pill (including any distribution under a rights agreement) or other similar anti-takeover provision under the Company Charter Documents or the laws of its state of incorporation that is or could become applicable to the Shareholders as a result of the Shareholders and the Company fulfilling their obligations or exercising their rights under this Agreement, including, without limitation, the issuance of the Parent Exchange Stock and the Shareholders' ownership of the Parent Exchange Stock.

SECTION 3.16. No Additional Agreements. The Company does not have any agreement or understanding with any Shareholder with respect to the Transactions other than as specified in this Agreement or as reflected on Schedule 3.16.

SECTION 3.17. Investment Company. The Company is not, and is not an affiliate of, and immediately following the Closing will not have become, an "investment company" within the meaning of the Investment Company Act of 1940, as amended.

SECTION 3.18. Disclosure. The Company confirms that, except as set forth in this Agreement including the disclosure schedules, neither it nor any person acting on its behalf has provided the Parent or its respective agents or counsel with any information that the Company believes constitutes material, non-public information, except insofar as the existence and terms of the Transactions may constitute such information. All disclosure provided to the Parent regarding the Company, its business and the Transactions, furnished by or on behalf of the Company (including the Company's representations and warranties set forth in this Agreement) are true and correct in all material respects and do not contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements made therein, in light of the circumstances under which they were made, not misleading.

SECTION 3.19. Absence of Certain Changes or Events. Except in connection with the Transactions and as disclosed in the Company disclosure schedules, since January 1, 2021, the Company has conducted its business only in the ordinary course, and during such period there has not been:

(a) any change in the assets, liabilities, financial condition or operating results of the Company, except changes in the ordinary course of business that have not caused, in the aggregate, a Company Material Adverse Effect, except as disclosed on Schedule 3.19;

(b) any damage, destruction or loss, whether or not covered by insurance, that would have a Company Material Adverse Effect;

(c) any waiver or compromise by the Company of a valuable right or of a material debt owed to it;

(d) any satisfaction or discharge of any Lien or payment of any obligation by the Company, except in the ordinary course of business and the satisfaction or discharge of which would not have a Company Material Adverse Effect;

(e) any material change to a material Contract by which the Company or any of its assets is bound or subject;

(f) any mortgage, pledge, transfer of a security interest in, or Lien, created by the Company, with respect to any of its material properties or assets, except Liens for taxes not yet due or payable and Liens that arise in the ordinary course of business and does not materially impair the Company's ownership or use of such property or assets;

(g) any loans or guarantees made by the Company to or for the benefit of its employees, officers or directors, or any members of their immediate families, other than travel advances and other advances made in the ordinary course of its business;

(h) any alteration of the Company's method of accounting or the identity of its auditors;

(i) any declaration or payment of dividend or distribution of cash or other property to the Shareholders or any purchase, redemption or agreements to purchase or redeem any Company Shares;

(j) any issuance of equity securities to any officer, director or affiliate; or

(k) any arrangement or commitment by the Company to do any of the things described in this Section, except as disclosed on Schedule 3.19.

SECTION 3.20. Foreign Corrupt Practices. Neither the Company, nor, to the Company's knowledge, any director, officer, agent, employee or other person acting on behalf of the Company has, in the course of its actions for, or on behalf of, the Company (i) used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expenses relating to political activity; (ii) made any direct or indirect unlawful payment to any foreign or domestic government official or employee from corporate funds; (iii) violated or is in violation of any provision of the U.S. Foreign Corrupt Practices Act of 1977, as amended; or (iv) made any unlawful bribe, rebate, payoff, influence payment, kickback or other unlawful payment to any foreign or domestic government official or employee.

SECTION 3.21 Compliance. Except as set forth on Schedule 3.21, neither the Company nor any subsidiary: (i) is in default under or in violation of (and no event has occurred that has not been waived that, with notice or lapse of time or both, would result in a default by the Company or any subsidiary under), nor has the Company or any subsidiary received written notice of a claim that it is in default under or that it is in violation of, any indenture, loan or credit agreement or any other agreement or instrument to which it is a party or by which it or any of its properties is bound (whether or not such default or violation has been waived), (ii) is in violation of any judgment, decree or order of any court, arbitrator or other governmental authority or (iii) is or has been in violation of any statute, rule, ordinance or regulation of any governmental authority, including without limitation all foreign, federal, state and local laws relating to taxes, environmental protection, occupational health and safety, product quality and safety and employment and labor matters, except in each case of clauses (i), (ii) or (iii) as would not be reasonably expected to result in a Company Material Adverse Effect.

SECTION 3.22 Regulatory Permits. The Company and its subsidiaries possess all certificates, authorizations and permits issued by the appropriate federal, state, local or foreign regulatory authorities necessary to conduct their respective businesses as described on the Company Disclosure Schedule, except where the failure to possess such permits would not be reasonably expected to result in a Company Material Adverse Effect ("Material Permits"), and neither the Company nor any subsidiary has received any written notice of proceedings relating to the revocation or modification of any Material Permit.

SECTION 3.23 Intellectual Property. The Company has, or has rights to use, all patents, patent applications, trademarks, trademark applications, service marks, trade names, trade secrets, inventions, copyrights, licenses and other intellectual property rights and similar rights necessary or required for use in connection with their respective businesses and which the failure to so have would reasonably be expected to have a Company Material Adverse Effect (collectively, the "Intellectual Property Rights"). All Intellectual Property Rights are set forth on Schedule 3.23.

None of, and neither the Company nor any subsidiary has received a written notice that any of, the Intellectual Property Rights has expired, terminated or been abandoned, or is expected to expire or terminate or be abandoned, within two (2) years from the date of this Agreement. Neither the Company nor any subsidiary has received a written notice of a claim or otherwise has any knowledge that the Intellectual Property Rights violate or infringe upon the rights of any person, except as would not be reasonably expected to have a Company Material Adverse Effect. All such Intellectual Property Rights are enforceable and there is no existing infringement by another person of any of the Intellectual Property Rights. The Company and its subsidiaries have taken reasonable security measures to protect the secrecy, confidentiality and value of all of their intellectual properties, except where failure to do so would not, individually or in the aggregate, be reasonably expected to have a Company Material Adverse Effect.

SECTION 3.24 Office of Foreign Assets Control. Neither the Company nor any of its subsidiaries nor, to the Company's knowledge, any director, officer, agent, employee or affiliate of the Company is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department ("OFAC").

SECTION 3.25 U.S. Real Property Holding Corporation. The Company is not and has never been a U.S. real property holding corporation within the meaning of Section 897 of the Internal Revenue Code of 1986, as amended.

Section 3.26 Bank Holding Company Act. Neither the Company nor any of its subsidiaries or affiliates is subject to the Bank Holding Company Act of 1956, as amended (the "BHCA") and to regulation by the Board of Governors of the Federal Reserve System (the "Federal Reserve"). Neither the Company nor any of its subsidiaries or affiliates owns or controls, directly or indirectly, five percent (5%) or more of the outstanding shares of any class of voting securities or twenty-five percent or more of the total equity of a bank or any entity that is subject to the BHCA and to regulation by the Federal Reserve. Neither the Company nor any of its subsidiaries or affiliates exercises a controlling influence over the management or policies of a bank or any entity that is subject to the BHCA and to regulation by the Federal Reserve.

SECTION 3.27 Money Laundering. The operations of the Company and its subsidiaries are and have been conducted at all times in compliance with applicable financial record-keeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, applicable money laundering statutes and applicable rules and regulations thereunder (collectively, the "Money Laundering Laws"), and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any subsidiary with respect to the Money Laundering Laws is pending or, to the knowledge of the Company or any subsidiary, threatened

ARTICLE IV
Representations and Warranties of the Parent

The Parent represents and warrants to the Shareholders and the Company, that, except as set forth on a disclosure schedule or as described in the reports, schedules, forms, statements and other documents filed by the Parent with the SEC in 2021 (the "Parent SEC Documents") which shall be deemed included in any schedule hereto (the "Parent Disclosure Schedules") as follows:

SECTION 4.01. Organization, Standing and Power. The Parent is duly organized, validly existing and in good standing under the laws of the State of Nevada and has full corporate power and authority and possesses all governmental franchises, licenses, permits, authorizations and approvals necessary to enable it to own, lease or otherwise hold its properties and assets and to conduct its businesses as presently conducted, other than such franchises, licenses, permits, authorizations and approvals the lack of which, individually or in the aggregate, has not had and would not reasonably be expected to have a material adverse effect on the Parent, its business, results of operations, prospects, condition (financial or otherwise) or assets or on the ability of the Parent to perform its obligations under this Agreement or to consummate the Transactions (a "Parent Material Adverse Effect"). The Parent is duly qualified to do business in each jurisdiction where the nature of its business or their ownership or leasing of its properties make such qualification necessary and where the failure to so qualify would have a Parent Material Adverse Effect. The Parent has delivered to the Company true and complete copies of the articles of incorporation of the Parent, as amended to the date of this Agreement (as so amended, the "Parent Charter"), and the Bylaws of the Parent, as amended to the date of this Agreement (as so amended, the "Parent Bylaws").

SECTION 4.02. Subsidiaries; Equity Interests. Except as set forth on Schedule 4.02, the Parent does not own, directly or indirectly, any capital stock, membership interest, partnership interest, joint venture interest or other equity interest in any person.

SECTION 4.03. Capital Structure. The authorized capital stock of the Parent consists of Six Hundred and Fifty Million (650,000,000) shares of Parent Common Stock, par value $0.0001 per share, and Fifty Million (50,000,000) shares of preferred stock, par value $0.0001 per share, of which (i) 56,356,431 shares of Parent Common Stock are issued and outstanding as of December 31, 2020 and 111,859,759 shares are issued and outstanding as of the date of this Agreement, and (ii) the following shares of preferred stock of the Parent are issued and outstanding as of the date of this Agreement: (A) 450 shares of Series A Preferred Stock, which are convertible to 9,000,000 shares of Parent Common Stock; (B) 1,500,000 shares of Series B-1 Preferred Stock, which are convertible into 187,000 shares of Parent Common Stock; (C) 6,000,000 shares of Series B-2 Preferred Stock, which are convertible to 750,000 shares of Parent Common Stock. Except as set forth on Schedule 4.03, no other shares of capital stock or other securities of the Parent were issued, reserved for issuance or outstanding. All outstanding shares of the capital stock of the Parent are, duly authorized, validly issued, fully paid and non-assessable and not subject to or issued in violation of any purchase option, call option, right of first refusal, preemptive right, subscription right or any similar right under any provision of the Nevada Revised Statutes, the Parent Charter, the Parent Bylaws or any Contract to which the Parent is a party or otherwise bound. Except as set forth on Schedule 4.03, there are no bonds, debentures, notes or other indebtedness of the Parent having the right to vote (or convertible into, or exchangeable for, securities having the right to vote) on any matters on which holders of capital stock of the Parent may vote ("Voting Parent Debt"). The Company has no outstanding indebtedness except as disclosed on Schedule 4.03. Except in connection with the Transactions as of the date of this Agreement, there are no options, warrants, rights, convertible or exchangeable securities, "phantom" stock rights, stock appreciation rights, stock-based performance units, commitments, Contracts, arrangements or undertakings of any kind to which the Parent is a party or by which it is bound (i) obligating the Parent to issue, deliver or sell, or cause to be issued, delivered or sold, additional shares of capital stock or other equity interests in, or any security convertible or

exercisable for or exchangeable into any capital stock of or other equity interest in, the Parent or any Voting Parent Debt or indebtedness, (ii) obligating the Parent to issue, grant, extend or enter into any such option, warrant, call, right, security, commitment, Contract, arrangement or undertaking or (iii) that give any person the right to receive any economic benefit or right similar to or derived from the economic benefits and rights occurring to holders of the capital stock of the Parent. As of the date of this Agreement, there are no outstanding contractual obligations of the Parent to repurchase, redeem or otherwise acquire any shares of capital stock of the Parent. Other than as set forth on Schedule 4.03, the Parent is not a party to any agreement granting any security holder of the Parent the right to cause the Parent to register shares of the capital stock or other securities of the Parent held by such security holder under the Securities Act. The stockholder list provided to the Company is a current stockholder list generated by its stock transfer agent, and such list accurately reflects all of the issued and outstanding shares of the capital stock of the Parent as at the Closing.

SECTION 4.04. Authority; Execution and Delivery; Enforceability. The execution and delivery by the Parent of this Agreement and the consummation by the Parent of the Transactions have been duly authorized and approved by the Board of Directors of the Parent and no other corporate proceedings on the part of the Parent are necessary to authorize this Agreement and the Transactions. This Agreement constitutes a legal, valid and binding obligation of the Parent, enforceable against the Parent in accordance with the terms hereof.

SECTION 4.05. No Conflicts; Consents.

(a) The execution and delivery by the Parent of this Agreement, does not, and the consummation of Transactions and compliance with the terms hereof and thereof will not, conflict with, or result in any violation of or default (with or without notice or lapse of time, or both) under, or give rise to a right of termination, cancellation or acceleration of any obligation or to loss of a material benefit under, or to increased, additional, accelerated or guaranteed rights or entitlements of any person under, or result in the creation of any Lien upon any of the properties or assets of the Parent under, any provision of (i) the Parent Charter or Parent Bylaws, (ii) any material Contract to which the Parent is a party or by which any of its properties or assets is bound or (iii) subject to the filings and other matters referred to in Section 4.05(b), any material Judgment or material Law applicable to the Parent or its properties or assets, other than, in the case of clauses (ii) and (iii) above, any such items that, individually or in the aggregate, have not had and would not have a Parent Material Adverse Effect.

(b) No Consent of, or registration, declaration or filing with, or permit from, any Governmental Entity is required to be obtained or made by or with respect to the Parent in connection with the execution, delivery and performance of this Agreement or the consummation of the Transactions, other than the (A) filing with the SEC of a Current Report on Form 8-K disclosing the Transactions contemplated hereby, including all required exhibits thereto; (B) filing with the SEC of a notice of an exempt offering of securities on Form D; and (C) filings under state “blue sky” laws, as each may be required in connection with this Agreement and the Transactions.

SECTION 4.06. SEC Documents; Undisclosed Liabilities.

(a) The Parent has timely filed all Parent SEC Documents for the prior two fiscal years and the current year, pursuant to Sections 13 and 15 of the Exchange Act, as applicable.

(b) As of its respective filing date, each Parent SEC Document complied in all material respects with the requirements of the Exchange Act and the rules and regulations of the SEC promulgated thereunder and the Sarbanes-Oxley Act of 2002 and the rules and regulations promulgated thereunder, in each case applicable to such Parent SEC Document, and did not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading. Except to the extent that information contained in any Parent SEC Document has been revised or superseded by a later filed Parent SEC Document, none of the Parent SEC Documents contains any untrue statement of a material fact or omits to state any material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading. The financial statements of the Parent included in the Parent SEC Documents comply as to form in all material respects with applicable accounting requirements and the published rules and regulations of the SEC with respect thereto, have been prepared in accordance with the U.S. generally accepted accounting principles ("GAAP") (except, in the case of unaudited statements, as permitted by the rules and regulations of the SEC) applied on a consistent basis during the periods involved (except as may be indicated in the notes thereto) and fairly present the financial position of Parent as of the dates thereof and the results of its operations and cash flows for the periods shown (subject, in the case of unaudited statements, to normal year-end audit adjustments). To the Parent's knowledge, none of its filings with the SEC is the subject of an ongoing SEC review, inquiry or investigation, and there are no outstanding or unresolved SEC comments related to such filings.

(c) Except as set forth in the Parent SEC Documents or on Schedule 4.06, the Parent has no liabilities or obligations of any nature (whether accrued, absolute, contingent or otherwise) required by GAAP to be set forth on a balance sheet of the Parent or in the notes thereto. The Parent SEC Documents, as modified by Schedule 4.06 sets forth all financial and contractual obligations and liabilities (including any obligations to issue capital stock or other securities of the Parent) due after the date hereof.

SECTION 4.07. Information Supplied. None of the information supplied or to be supplied by the Parent for inclusion or incorporation by reference in any Parent SEC Document or report contains any untrue statement of a material fact or omits to state any material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they are made, not misleading.

SECTION 4.08. Absence of Certain Changes or Events. Except as disclosed in the Parent Disclosure Schedules, from the date of the most recent audited financial statements included in the filed Parent SEC Documents to the date of this Agreement, the Parent has conducted its business only in the ordinary course, and during such period there has not been:

(a) any change in the assets, liabilities, financial condition or operating results of the Parent from that reflected in the Parent SEC Documents, except changes in the ordinary course of business that have not caused, in the aggregate, a Parent Material Adverse Effect;

(b) any damage, destruction or loss, whether or not covered by insurance, that would have a Parent Material Adverse Effect;

(c) any waiver or compromise by the Parent of a valuable right or of a material debt owed to it;

(d) any satisfaction or discharge of any Lien or payment of any obligation by the Parent, except in the ordinary course of business and the satisfaction or discharge of which would not have a Parent Material Adverse Effect;

(e) any material change to a material Contract by which the Parent or any of its assets is bound or subject;

(f) any material change in any compensation arrangement or agreement with any employee, officer, director or stockholder;

(g) any resignation or termination of employment of any officer of the Parent;

(h) any mortgage, pledge, transfer of a security interest in, or Lien, created by the Parent, with respect to any of its material properties or assets, except Liens for taxes not yet due or payable and Liens that arise in the ordinary course of business and do not materially impair the Parent's ownership or use of such property or assets;

(i) any loans or guarantees made by the Parent to or for the benefit of its employees, officers or directors, or any members of their immediate families, other than travel advances and other advances made in the ordinary course of its business;

(j) any declaration, setting aside or payment or other distribution in respect of any of the Parent's capital stock, or any direct or indirect redemption, purchase, or other acquisition of any of such stock by the Parent;

(k) any alteration of the Parent's method of accounting or the identity of its auditors;

(l) any issuance of equity securities to any officer, director or affiliate, except pursuant to existing Parent stock option plans; or

(m) any arrangement or commitment by the Parent to do any of the things described in this Section 4.08.

SECTION 4.09. Taxes.

(a) The Parent has timely filed, or has caused to be timely filed on its behalf, all Tax Returns required to be filed by it, and all such Tax Returns are true, complete and accurate, except to the extent any failure to file, any delinquency in filing or any inaccuracies in any filed Tax Returns, individually or in the aggregate, have not had and would not reasonably be expected to have a Parent Material Adverse Effect. All Taxes shown to be due on such Tax Returns, or

otherwise owed, has been timely paid, except to the extent that any failure to pay, individually or in the aggregate, has not had and would not have a Parent Material Adverse Effect.

(b) The most recent financial statements contained in the Parent SEC Documents reflect an adequate reserve for all Taxes payable by the Parent (in addition to any reserve for deferred Taxes to reflect timing differences between book and Tax items) for all Taxable periods and portions thereof through the date of such financial statements. No deficiency with respect to any Taxes has been proposed, asserted or assessed against the Parent, and no requests for waivers of the time to assess any such Taxes are pending, except to the extent any such deficiency or request for waiver, individually or in the aggregate, has not had and would not have a Parent Material Adverse Effect.

(c) There are no Liens for Taxes (other than for current Taxes not yet due and payable) on the assets of the Parent. The Parent is not bound by any agreement with respect to Taxes.

SECTION 4.10. Absence of Changes in Benefit Plans. From the date of the most recent audited financial statements included in the Parent SEC Documents to the date of this Agreement, there has not been any adoption or amendment in any material respect by Parent of any collective bargaining agreement or any bonus, pension, profit sharing, deferred compensation, incentive compensation, stock ownership, stock purchase, stock option, phantom stock, retirement, vacation, severance, disability, death benefit, hospitalization, medical or other plan, arrangement or understanding (whether or not legally binding) providing benefits to any current or former employee, officer or director of Parent (collectively, "Parent Benefit Plans"). Except as set forth in the Parent SEC Documents, as of the date of this Agreement there are not any employment, consulting, indemnification, severance or termination agreements or arrangements between the Parent and any current or former employee, officer or director of the Parent, nor does the Parent have any general severance plan or policy.

SECTION 4.11. ERISA Compliance; Excess Parachute Payments. The Parent does not, and since its inception never has, maintained, or contributed to any "employee pension benefit plans" (as defined in Section 3(2) of ERISA), "employee welfare benefit plans" (as defined in Section 3(1) of ERISA) or any other Parent Benefit Plan for the benefit of any current or former employees, consultants, officers or directors of Parent.

SECTION 4.12. Litigation. Except as disclosed on Schedule 4.12, there is no Action which (i) adversely affects or challenges the legality, validity or enforceability of any of this Agreement or the Parent Exchange Stock or (ii) would, if there were an unfavorable decision, individually or in the aggregate, be reasonably expected to have or result in a Parent Material Adverse Effect. Neither the Parent nor any director or officer thereof (in his or her capacity as such), is or has been the subject of any Action involving a claim or violation of or liability under federal or state securities laws or a claim of breach of fiduciary duty.

SECTION 4.13. Compliance with Applicable Laws. Except as disclosed on Schedule 4.13, the Parent is in compliance with all applicable Laws, including those relating to occupational health and safety, the environment, export controls, trade sanctions and embargoes, except for instances of noncompliance that, individually and in the aggregate, have not had and

would not have a Parent Material Adverse Effect. Except as set forth in the Parent SEC Documents, the Parent has not received any written communication during the past two years from a Governmental Entity that alleges that the Parent is not in compliance in any material respect with any applicable Law. The Parent is in compliance with all effective requirements of the Sarbanes-Oxley Act of 2002, as amended, and the rules and regulations thereunder, that are applicable to it, except where such noncompliance would not be reasonably expected to have or result in a Parent Material Adverse Effect.

SECTION 4.14. Contracts. Except as disclosed on Schedule 4.14, , there are no Contracts that are material to the business, properties, assets, condition (financial or otherwise), results of operations or prospects of the Parent taken as a whole. The Parent is not in violation of or in default under (nor does there exist any condition which upon the passage of time or the giving of notice would cause such a violation of or default under) any Contract to which it is a party or by which it or any of its properties or assets is bound, except for violations or defaults that would not, individually or in the aggregate, result in a Parent Material Adverse Effect.

SECTION 4.15. Title to Properties. The Parent has good title to, or valid leasehold interests in, all of its properties and assets used in the conduct of its businesses. All such assets and properties, other than assets and properties in which the Parent has leasehold interests, are free and clear of all Liens and except for Liens that, in the aggregate, do not and will not materially interfere with the ability of the Parent to conduct business as currently conducted. The Parent has complied in all material respects with the terms of all material leases to which it is a party and under which it is in occupancy, and all such leases are in full force and effect. The Parent enjoys peaceful and undisturbed possession under all such material leases.

SECTION 4.16. Intellectual Property. The Parent owns, or is validly licensed or otherwise has the right to use, all Intellectual Property Rights which are material to the conduct of the business of the Parent taken as a whole. No claims are pending or, to the knowledge of the Parent, threatened that the Parent is infringing or otherwise adversely affecting the rights of any person with regard to any Intellectual Property Right. To the knowledge of the Parent, no person is infringing the rights of the Parent with respect to any Intellectual Property Right.

SECTION 4.17. Labor Matters. There are no collective bargaining or other labor union agreements to which the Parent is a party or by which it is bound. No material labor dispute exists or, to the knowledge of the Parent, is imminent with respect to any of the employees of the Parent. To the Parent's knowledge:

(a) no allegations of sexual harassment, sexual misconduct or discrimination, whether such discrimination arises from race, ethnic background, sex, gender status, age or otherwise ("Misconduct") have been made involving any current or former director, officer, or independent contractor of the Parent or any of its subsidiaries,

(b) neither the Parent nor any of its subsidiaries have entered into any settlement agreements related to allegations of Misconduct by any current or former director, officer, employee, or independent contractor of the Parent or any of its subsidiaries.

SECTION 4.18. Transactions With Affiliates and Employees. Except as set forth on Schedule 4.18, none of the officers or directors of the Parent and, to the knowledge of the Parent, none of the employees of the Parent is presently a party to any transaction with the Parent or any subsidiary (other than for services as employees, officers and directors), including any contract, agreement or other arrangement providing for the furnishing of services to or by, providing for rental of real or personal property to or from, or otherwise requiring payments to or from any officer, director or such employee or, to the knowledge of the Parent, any entity in which any officer, director, or any such employee has a substantial interest or is an officer, director, trustee or partner.

SECTION 4.19. Application of Takeover Protections. The Parent has taken all necessary action, if any, in order to render inapplicable any control share acquisition, business combination, poison pill (including any distribution under a rights agreement) or other similar anti-takeover provision under the Parent Charter, Parent Bylaws or the Laws of its state of incorporation that is or could become applicable to the Shareholders as a result of the Shareholders and the Parent fulfilling their obligations or exercising their rights under this Agreement, including, without limitation, the issuance of the Parent Exchange Stock and the Shareholders' ownership of the Parent Exchange Stock.

SECTION 4.20. No Additional Agreements. The Parent does not have any agreement or understanding with the Shareholders with respect to the Transactions other than as specified in this Agreement.

SECTION 4.21. Investment Company. The Parent is not, and is not an affiliate of, and immediately following the Closing will not have become, an "investment company" within the meaning of the Investment Company Act of 1940, as amended.

SECTION 4.22. Disclosure. The Parent confirms that neither it nor any person acting on its behalf has provided any Shareholder or its respective agents or counsel with any information that the Parent believes constitutes material, non-public information except insofar as the existence and terms of the proposed transactions hereunder may constitute such information and except for information that will be disclosed by the Parent under a current report on Form 8-K filed after the Closing. All disclosure provided to the Shareholders regarding the Parent, its business and the transactions contemplated hereby, furnished by or on behalf of the Parent (including the Parent's representations and warranties set forth in this Agreement) are true and correct and do not contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements made therein, in light of the circumstances under which they were made, not misleading.

SECTION 4.23. Accounts Payable. As of the date of this Agreement, the accounts payable of the Parent including any subsidiaries are listed on Schedule 4.23.

SECTION 4.24. Listing and Maintenance Requirements. The Parent is, and has no reason to believe that it will not in the foreseeable future continue to be, in compliance with the listing and maintenance requirements for continued listing of the Parent Conversion Shares on the trading market on which the shares of Parent Common Stock are currently listed or quoted (the OTCQB).

SECTION 4.25. Parent Exchange Stock. Upon issuance to the Shareholders, the Parent Exchange Stock will be duly and validly issued, fully paid and non-assessable shares of Parent Common Stock and the preferred stock in the capital of the Parent with such rights in case of the preferred stock as are set forth in the Certificates of Designations therefor, copies of which are attached as Exhibit A and Exhibit A-1.

SECTION 4.26. Brokers; Fees and Expenses. No broker, investment banker, financial advisor or other person is entitled to any broker's, finder's, financial advisor's or other similar fee or commission in connection with the Transactions based upon arrangements made by or on behalf of the Parent.

ARTICLE V
Deliveries

SECTION 5.01. Deliveries of the Shareholders.

(a) Concurrently herewith the Shareholders are delivering to the Parent this Agreement executed by the Shareholders.

(b) At or prior to the Closing, unless waived by Parent, each Shareholder shall deliver to the Parent:

(i) This Agreement, executed by the Shareholder; and

(ii) this Agreement which shall constitute a duly executed share transfer power for transfer by the Shareholder of Company Shares to the Parent (which Agreement shall constitute a limited power of attorney in the Parent or any officer thereof to effectuate any share transfers as may be required under applicable law, including, without limitation, recording such transfer in the share registry maintained by the Company for such purpose).

SECTION 5.02. Deliveries of the Parent.

(a) Concurrently herewith, the Parent is delivering to each Shareholder and to the Company, a copy of this Agreement executed by the Parent.

(b) At or prior to the Closing, the Parent shall deliver to the Company:

(i) A stamped copy of the Certificate of Designations for each of the Parent C Stock and the Parent C-1 Stock, each as filed with the Secretary of State of the State of Nevada; and

(ii) a good standing certificate from the State of Nevada.

(c) Certificates for the Parent C Stock, Parent C-1 Stock and Parent Common Stock shall be delivered to each Shareholder (which delivery may be an acknowledgement of issuance in book entry format) as set forth on Exhibit B.

SECTION 5.03. Deliveries of the Company.

(a) Concurrently herewith, the Company is delivering to the Parent this Agreement executed by the Company.

(b) At or prior to the Closing, the Company shall deliver to the Parent

(i) a certificate from the Company, signed by its Secretary or Assistant Secretary certifying that the attached copies of the Company's Charter Documents and resolutions of the Board of Directors of the Company approving this Agreement and the Transactions, are all true, complete and correct and remain in full force and effect; and

(ii) A shareholder list, certified by the Company's Chief Executive Officer or Chief Financial Officer.

ARTICLE VI
Conditions to Closing

SECTION 6.01. Shareholders and Company Conditions Precedent. The obligations of each Shareholder and the Company to enter into and complete the Closing is subject to the fulfillment on or prior to the Closing Date of the following conditions.

(a) Representations and Covenants. The representations and warranties of the Parent contained in this Agreement shall be true in all material respects (except for representations and warranties qualified by materiality or Material Adverse Effect which must be true in all respects) on and as of the Closing Date with the same force and effect as though made on and as of the Closing Date. The Parent shall have performed and complied in all material respects with all covenants and agreements required by this Agreement to be performed or complied with by the Parent on or prior to the Closing Date. The Parent shall have delivered to the Shareholder and the Company, a certificate, dated the Closing Date, to the foregoing effect.

(b) Litigation. No action, suit or proceeding shall have been instituted before any court or governmental or regulatory body or instituted or threatened by any governmental or regulatory body to restrain, modify or prevent the carrying out of the Transactions or to seek damages or a discovery order in connection with such Transactions, or which has or may have, in the reasonable opinion of the Company or any Shareholder, a Parent Material Adverse Effect.

(c) No Material Adverse Effect. There shall not have been any occurrence, event, incident, action, failure to act, or transaction since December 31, 2020 which has had a Parent Material Adverse Effect.

(d) Post-Closing Capitalization. At, and immediately after, the Closing, the authorized capitalization, and the number of issued and outstanding shares of capital stock of the Parent, on a fully-diluted basis, shall be as described in this Agreement.

(e) SEC Reports. The Parent shall have filed all reports and other documents required to be filed by the Parent under the U.S. federal securities laws through the Closing Date.

(f) Nasdaq Listing. The Parent shall have maintained its status as a company whose common stock is listed on the OTCQB and promptly following the Closing Date shall pursue listing on The Nasdaq Capital Market under its pending or a new listing application and the Parent shall not have received any notice that any reason shall exist as to why such status shall not continue immediately following the Closing.

(g) Deliveries. The deliveries specified in Section 5.02 shall have been made by the Parent.

(h) No Suspensions of Trading in Parent Common Stock; Listing. Trading in the Parent Common Stock shall not have been suspended by the SEC or any trading market (except for any suspensions of trading of not more than one trading day solely to permit dissemination of material information regarding the Parent) at any time since the date of execution of this Agreement, and the Parent Common Stock shall have been at all times since such date listed for trading on a trading market.

(i) Satisfactory Completion of Due Diligence. The Company and each Shareholder shall have completed their legal, accounting and business due diligence of the Parent and the results thereof shall be satisfactory to the Company and each Shareholder in their sole and absolute discretion.

(j) Employment. Leslie Buttorff, the Chief Executive Officer of the Company, shall be subject to an agreement with Parent in form and substance satisfactory to Parent providing for her services as Chief Executive Officer, for protection from disclosure of confidential information, protection of intellectual property and trade secrets, compliance with law, and non-competition and non-raid substantially on the terms applicable to Seller herein, during the term of employment and for a period of 12 months thereafter.

(k) Board of Directors/Officers. Each of the officers and directors of the Parent (except for Mr. Larry Wert) shall have resigned from all positions with the Parent and any subsidiaries. On the Closing Date the Board of Directors of Parent shall consist of two persons, consisting of Leslie Buttorff and Lawrence Wert. Leslie Buttorff shall be appointed Chief Executive Officer and each other officer of the Parent shall be appointed by the Board effective as of the Closing Date.

(l) Litigation. All litigation involving the Parent or its subsidiaries shall have been settled, which litigation is set forth on Schedule 6.01.

(m) Right of First Refusal. The Company and the Shareholders shall have terminated or waived all right of first refusal under that certain Right of First Refusal and Co-Sale Agreement, dated December 3, 2019, by and among the Company, the investors named therein

and certain key holders named therein and the Founder Stock Purchase Agreement between the Company and Quintel-MC, Incorporated dated October 20, 2017.

(n) Holders of the Company's existing stock options shall have executed documents canceling each such holder's stock options.

(o) The Parent shall have granted stock options to each holder referred to in Section 6.01(n) and such holders have executed Stock Option Agreements with the Parent.

(p) Each Shareholder of the Company has executed this Agreement unless waived by the Principal Shareholder.

(q) The Board of Directors of the Parent shall have reserved for issuance such number of shares of Parent Common Stock as is necessary for complete conversion of the Parent Preferred Stock to be issued to the Shareholders subject to the 650 million limit contained in the Company's Articles of Incorporation.

(r) Omitted.

(s) All Company indebtedness shall have been converted to Company capital stock except as reflected on Schedule 6.02(u).

SECTION 6.02. Parent Conditions Precedent. The obligations of the Parent to enter into and complete the Closing are subject, at the option of the Parent, to the fulfillment on or prior to the Closing Date of the following conditions, any one or more of which may be waived by the Parent in writing.

(a) Representations and Covenants. The representations and warranties of each Shareholder and the Company contained in this Agreement shall be true in all material respects (except for representations and warranties qualified by materiality or Material Adverse Effect which must be true in all respects) on and as of the Closing Date with the same force and effect as though made on and as of the Closing Date. Such Shareholder and the Company shall have performed and complied in all material respects with all covenants and agreements required by this Agreement to be performed or complied with by such Shareholder and the Company on or prior to the Closing Date. The Company shall have delivered to the Parent a certificate, dated the Closing Date, to the foregoing effect.

(b) Litigation. No action, suit or proceeding shall have been instituted before any court or governmental or regulatory body or instituted or threatened by any governmental or regulatory body to restrain, modify or prevent the carrying out of the Transactions or to seek damages or a discovery order in connection with such Transactions, or which has or may have, in the reasonable opinion of the Parent, a materially adverse effect on the assets, properties, business, operations or condition (financial or otherwise) of the Company.

(c) No Material Adverse Change. There shall not have been any occurrence, event, incident, action, failure to act, or transaction since the date hereof which has had a Company Material Adverse Effect.

(d) Deliveries. The deliveries specified in Section 5.01 and Section 5.03 shall have been made by each Shareholder and the Company, respectively.

(e) Post-Closing Capitalization. At, and immediately after, the Closing, the authorized capitalization, and the number of issued and outstanding shares of the Company, on a fully-diluted basis, shall be described on Exhibit B.

(f) Employment. The Principal Shareholder shall be subject to an agreement with Parent in form and substance satisfactory to the Parent providing for the continued services of the Chief Executive Officer, for protection from disclosure of confidential information, protection of intellectual property and trade secrets, compliance with law, and non-competition and non-raid substantially during the term of her employment and for a period of 12 months thereafter.

(g) Note Repayment. Except as provided on Schedule 6.02(i), all indebtedness payable to the Principal Shareholder or any affiliates including Quintel-MC, Incorporated and its respective affiliates shall have been converted to Company capital stock.

ARTICLE VII
Covenants

SECTION 7.01. Public Announcements. The Parent and the Company will consult with each other before issuing, and provide each other the opportunity to review and comment upon, any press releases or other public statements with respect to the Agreement and the Transactions and shall not issue any such press release or make any such public statement prior to such consultation, except as may be required by applicable Law, court process or by obligations pursuant to any listing agreement with any national securities exchanges.

SECTION 7.02. Fees and Expenses. All fees and expenses incurred in connection with this Agreement shall be paid by the Party incurring such fees or expenses, whether or not this Agreement is consummated.

SECTION 7.03. Continued Efforts. Each Party shall use commercially reasonable efforts to (a) take all action reasonably necessary to consummate the Transactions, and (b) take such steps and do such acts as may be necessary to keep all of its representations and warranties true and correct as of the Closing Date with the same effect as if the same had been made, and this Agreement had been dated, as of the Closing Date.

SECTION 7.04. Exclusivity. Each of the Parent and the Company shall not (and shall not cause or permit any of their affiliates to) engage in any discussions or negotiations with any person or take any action that would be inconsistent with the Transactions and that has the effect of avoiding the Closing contemplated hereby. Each of the Parent and the Company shall notify each other immediately if any person makes any proposal, offer, inquiry, or contact with respect to any of the foregoing.

SECTION 7.05. Filing of 8-K and Press Release. The Parent shall file, no later than four (4) business days following execution of this Agreement and of the Closing Date, a current

report on Form 8-K with the SEC disclosing the terms of this Agreement and other requisite disclosure regarding the Transactions.

SECTION 7.06. Access. Each Party shall permit representatives of any other Party to have full access to all premises, properties, personnel, books, records (including Tax records), contracts, and documents of or pertaining to such Party.

SECTION 7.07. Preservation of Business. From the date of this Agreement until the Closing Date, the Company shall operate only in the ordinary and usual course of business consistent with their respective past practices, and shall use reasonable commercial efforts to (a) preserve intact their respective business organizations, (b) preserve the good will and advantageous relationships with customers, suppliers, independent contractors, employees and other persons material to the operation of their respective businesses, and (c) not permit any action or omission that would cause any of their respective representations or warranties contained herein to become inaccurate or any of their respective covenants to be breached in any material respect.

SECTION 7.08. Company Financial Statements. Within seventy-one (71) days following the execution of this Agreement, the Principal Shareholder shall cause the Company to prepare and deliver to the Parent US GAAP audited financial statements prepared by a PCAOB (Public Company Accounting Oversight Board) firm in such form and for such periods as is required to be filed in a Current Report on Form 8-K/A by the Parent to be filed with the SEC following Closing (2 years) (the "Audited Financial Statements").

SECTION 7.09. Officers and Directors. Following the Closing, the Parent shall promptly prepare an Information Statement, file the Information Statement with the SEC and comply with Rule 14f-1 under the Securities Exchange Act of 1934 to expand its Board of Directors to five people including three new directors designated by the Principal Shareholder.

SECTION 7.10. The Shareholders shall authorize the amendment to the Articles of Incorporation of Parent to and change the name of Parent (and trading symbol) to Panacea Life Sciences Holdings, Inc. or such name as is determined by the Principal Shareholder and agree to discontinue within three months all use of any name similar to Exactus.

SECTION 7.11. Brokers/Finders. Parent shall enter into one or more advisory agreements for consulting/advisory services to be rendered by Paradox Capital Partners, LLC or affiliates which provide for aggregate compensation for future services as set forth in Section 3.09 hereof.

ARTICLE VIII
Miscellaneous

SECTION 8.01. Notices. All notices, requests, claims, demands and other communications under this Agreement shall be in writing and shall be deemed given upon receipt by the Parties at the following addresses (or at such other address for a Party as shall be specified by like notice):

If to the Parent, to:

Exactus, Inc.
80 NE 4th Avenue, Suite 28
Delray Beach, FL 33483
Attn:

With a copy to (which shall not constitute notice):
Crone Law Group
1 East Liberty, Suite 600,
Reno, NV 89501
Cell (702) 525-6012
Office (775) 234-5221
Attn:

If to the Company, to:

Panacea Life Sciences, Inc.
1619 W. 45th Drive
Golden, CO 80403
(303) 434-0215
Attn:

With a copy to (which shall not constitute notice):

Nason, Yeager, Gerson, Harris & Fumero, P.A.
3001 PGA Boulevard
Suite 305
Palm Beach Gardens, FL 33410
Attn:

If to the Shareholders at the addresses set forth in Exhibit B hereto.

SECTION 8.02. Amendments; Waivers; No Additional Consideration . No provision of this Agreement may be waived or amended except in a written instrument signed by the Company, Parent and the Shareholders. No waiver of any default with respect to any provision, condition or requirement of this Agreement shall be deemed to be a continuing waiver in the future or a waiver of any subsequent default or a waiver of any other provision, condition or requirement hereof, nor shall any delay or omission of any Party to exercise any right hereunder in any manner impair the exercise of any such right.

SECTION 8.03. Replacement of Securities. If any certificate or instrument evidencing any Parent Exchange Stock is mutilated, lost, stolen or destroyed, the Parent shall issue or cause to be issued in exchange and substitution for and upon cancellation thereof, or in lieu of and substitution therefore, a new certificate or instrument, but only upon receipt of evidence reasonably satisfactory to the Parent of such loss, theft or destruction and customary and reasonable indemnity, if requested. The applicants for a new certificate or instrument under such

circumstances shall also pay any reasonable third-party costs associated with the issuance of such replacement Parent Exchange Stock. If a replacement certificate or instrument evidencing any Parent Exchange Stock is requested due to a mutilation thereof, the Parent may require delivery of such mutilated certificate or instrument as a condition precedent to any issuance of a replacement.

SECTION 8.04. Remedies. In addition to being entitled to exercise all rights provided herein or granted by law, including recovery of damages, the Shareholders, Parent and the Company will be entitled to specific performance under this Agreement. The Parties agree that monetary damages may not be adequate compensation for any loss incurred by reason of any breach of obligations described in the foregoing sentence and hereby agrees to waive in any action for specific performance of any such obligation the defense that a remedy at law would be adequate.

SECTION 8.05. Limitation of Liability. Notwithstanding anything herein to the contrary, each of the Parent and the Company acknowledge and agree that the liability of any Shareholder arising directly or indirectly, under any transaction document of any and every nature whatsoever shall be satisfied solely out of the assets of that Shareholder, and that no trustee, officer, other investment vehicle or any other affiliate of the Shareholder or any investor, shareholder or holder of shares of beneficial interest of the Shareholder shall be personally liable for any liabilities of any other Shareholder.

SECTION 8.06. Interpretation. When a reference is made in this Agreement to a Section, such reference shall be to a Section of this Agreement unless otherwise indicated. Whenever the words “include,” “includes” or “including” are used in this Agreement, they shall be deemed to be followed by the words “without limitation.”

SECTION 8.07. Severability. If any term or other provision of this Agreement is invalid, illegal or incapable of being enforced by any rule or Law, or public policy, all other conditions and provisions of this Agreement shall nevertheless remain in full force and effect so long as the economic or legal substance of the Transactions contemplated hereby is not affected in any manner materially adverse to any Party. Upon such determination that any term or other provision is invalid, illegal or incapable of being enforced, the Parties shall negotiate in good faith to modify this Agreement so as to effect the original intent of the Parties as closely as possible in an acceptable manner to the end that Transactions contemplated hereby are fulfilled to the extent possible.

SECTION 8.08. Counterparts; Facsimile Execution. This Agreement may be executed in one or more counterparts, all of which shall be considered one and the same agreement and shall become effective when one or more counterparts have been signed by each of the Parties and delivered to the other Parties. Facsimile execution and delivery of this Agreement is legal, valid and binding for all purposes.

SECTION 8.09. Entire Agreement; No Third Party Beneficiaries. This Agreement, taken together with the Disclosure Schedules, (a) constitutes the entire agreement, and supersede all prior agreements and understandings, both written and oral, among the Parties with respect to the Transactions and (b) are not intended to confer upon any person other than the Parties any rights or remedies.

SECTION 8.10. Governing Law. This Agreement, the legal relations between the parties and any Action, whether contractual or non-contractual, instituted by any party with respect to any matter arising between the parties, including but not limited to matters arising under or in connection with this Agreement, such as the negotiation, execution, interpretation, coverage, scope, performance, breach, termination, validity, or enforceability of this Agreement, shall be governed by and construed in accordance with the internal laws of the State of Nevada without reference to principles of conflicts of laws. The parties hereto hereby irrevocably submit to the exclusive jurisdiction of the courts of the State of Nevada and the Federal Courts of the United States of America located within the Clark County, Nevada with respect to any matter arising between the parties, and hereby waive, and agree not to assert, as a defense in any action, suit or proceeding for the interpretation or enforcement hereof or thereof, that it is not subject thereto or that such action, suit or proceeding may not be brought or is not maintainable in said courts or that the venue thereof may not be appropriate or that this Agreement or any such document may not be enforced in or by such courts, and the parties hereto irrevocably agree that all claims with respect to such action or proceeding shall be heard and determined in such a Nevada State or Federal court. The parties hereby consent to and grant any such court jurisdiction over the person of such parties and over the subject matter of such dispute and agree that mailing of process or other papers in connection with any such action or proceeding in any manner as may be permitted by applicable Law, shall be valid and sufficient service thereof. With respect to any particular action, suit or proceeding arising between the parties, including but not limited to matters arising under or in connection with this Agreement, venue shall lie solely in Denver, Colorado or any Federal Court of the United States of America sitting in the District of Colorado.

SECTION 8.11. Assignment. Neither this Agreement nor any of the rights, interests or obligations under this Agreement shall be assigned, in whole or in part, by operation of law or otherwise by any of the Parties without the prior written consent of the other Parties. Any purported assignment without such consent shall be void. Subject to the preceding sentences, this Agreement will be binding upon, inure to the benefit of, and be enforceable by, the Parties and their respective successors and assigns.

IN WITNESS WHEREOF, the parties hereto have executed and delivered this Securities Exchange Agreement as of the date first above written.

The Parent:

EXACTUS, INC.

By: /s/ Larry West
Name: Larry Wert
Title: Executive Chairman

The Company:

PANACEA LIFE SCIENCES, INC.

By: /s/ Leslie Buttorff
Name: Leslie Buttorff
Title: CEO

[*Signature Page to Securities Exchange Agreement*]

The Shareholders:

QUINTEL-MC, INCORPORATED

By: /s/ Leslie Buttorff
Name: Leslie Buttorff
Title: CEO

J&N REAL ESTATE COMPANY

By: /s/ Leslie Buttorff
Name: Leslie Buttorff
Title: Managing Member

22ND CENTURY GROUP, INC.

By: /s/ James Mish
Name: James Mish
Title: CEO

[*Signature Page to Securities Exchange Agreement*]

List of Schedules

PLS Schedules
3.02 Capital Structure
3.04 Conflicts; Consents
3.06 Benefit Plans
3.07 Litigation
3.10 Material Contracts
3.11 Real Property
3.13 Insurance
3.14 Transactions with Affiliates
3.16 No Additional Agreements
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Exactus Schedules
3.02 Capital Structure
3.06 Separation Agreements
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List of Exhibits

EXHIBIT A
Form of Series C Certificate of Designations

EXHIBIT A-1
Form of Series C-1 Certificate of Designations

EXHIBIT A-2
Form of Series D Certificate of Designations

EXHIBIT B
Transaction Capitalization

Exhibit 31.1

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 Rules13a-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 5, 2021

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

Exhibit 31.2

CERTIFICATIONS

I, John Franzino, 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 Rules13a-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 5, 2021

/s/ John Franzino
John Franzino
Chief Financial Officer
(Principal Accounting and Financial Officer)

Exhibit 32.1

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, 2021 (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 5, 2021

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

Date: August 5, 2021

/s/ John Franzino
John Franzino
Chief Financial Officer