

INSTITUTIONAL RESEARCH

Emerging GrowthUPDATE REPORT

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Toll-Free: 561-391-5555 • www.DawsonJames.com • 101 North Federal Highway - Suite 600 • Boca Raton, FL 33432

22nd Century Group, Inc. (AMEX: XXII)

May 7, 2021

Buy: Q1 Results

Q1 revenue was lower and costs higher than expected. Our revenue and EBITDA estimates for the year, however, have increased, based on the expectation of high-margin license revenue in Q4. The major potential catalyst for the shares remains FDA approval of the company's MRTP application.

Q1 revenue was \$6.8 million, and the EBITDA loss was \$4.4 million. Revenue was lower than the Q4 2020 level of \$7.3 million and lower than our \$7.2 million estimate. Gross margin of 9.5% was better than forecast and an improvement over Q4, but expenses were higher, mainly driven by higher personnel costs. The EBITDA loss of \$4.4 million was greater than our \$3.5 million estimate but an improvement over the \$5.4 million loss in Q4 2020.

Contract manufacturing revenue should remain the main source of revenue this year and next, but we are now including \$2 million of revenue this year from the licensing of technology developed with Anandia. We have also included, in 2022, \$2 million in revenue from the sale of biomass produced from hemp grown with specific levels of CBG and CBD. We have modeled the biomass sale to occur next year, but there is a reasonable chance some or all of the sale occurs this year instead.

Approval of the MRTP is still the mostly likely near-term catalyst, in our view. The company believes the FDA's pursuit of a ban on menthol cigarettes will not have an impact on its MRTP application that includes very-low-nicotine-menthol cigarettes. This is a reasonable assumption, but other possibilities include partial approval of the company's MRTP or further delays. Since the company's MRTP fits into the FDA's strategy of reducing tobacco consumption, we continue to believe approval of the MRTP will occur.

Cash at quarter-end was \$31 million, or 2 years' worth at the current burn rate. We think this is adequate, barely, given the financial resources of Big Tobacco and the tendency of government decisions to take longer than expected.

Valuation: Our \$7 price target is the sum of the estimated values of the VLN, non-addictive nicotine and hemp franchises. We attribute about \$3.08/share for the VLN asset. The non-addictive nicotine mandate is valued at \$3.18 per share. The remainder of the price target comprises the investment in the hemp business and its relationship with KeyGene.

James McIlree, CFA 561-237-2709 jmcilree@dawsonjames.com

Current Price						\$4.23
Price Target						\$7.00
Estimates	F2	020A	F2	021E	F2	022E
Revenues (\$000s)	\$	28,111		29.806 E		32,000
1Q March	\$	7,058		6,806 A		9,500
2Q June	\$	6,435	\$	7,000 E		7,500
3Q September	\$	7,310	\$	7,000 E	\$	7,500
4Q December	\$	7,308	\$	9,000 E	\$	7,500
	F2	020A	F2	021E	F2	022E
EPS (diluted)	\$	(0.14)	\$	(0.12)E	\$	(0.12)
1Q March	\$	(0.03)	\$	(0.03)A	\$	(0.02)
2Q June	\$	(0.04)	\$	(0.03)E	\$	(0.03)
3Q September	\$	(0.03)	\$	(0.03)E	\$	(0.03)
4Q December	\$	(0.05)	\$	(0.02)E	\$	(0.04)
EBITDA (\$Ms)	\$	(16.0)	\$	(15.5)	\$	(15.7)
EV/EBITDA (x)		-38.4x		-39.6x		-39.1x
Stock Data						
52-Week Range		\$0.55		-		\$6.07
Shares Outstanding (mil.)						152.4
Market Capitalization (mil	.)					\$645
Enterprise Value (mil.)						\$614
Debt to Capital						1%
Book Value/Share						\$0.32
Price/Book						13.3x
Average Three Months Tra	adir	ng Volum	ne (K)		3,034
Insider Ownership				,		2.7%
Institutional Ownership						24.8%
Short interest (mil.)						5.2%
Dividend / Yield					in (00/0.0%
22nd Century Grou	un I	no /VVII	110			70,010,0
30.000 Volume (Thousands)	ıp, ı	iic. (AAii	-00		rice	(USD)
25,000						6
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15,000 -					M	M√ 3
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May Jun Jul Aug Se Volume — 22nd C		ct Nov De ry Group, Ir			//ar	Apr
				Source: F	acts	bet Prices

Risks to Target: The tobacco industry is highly regulated, and our price target depends on approval of the company's MRTP application and a nicotine mandate, which could be delayed or may not be approved. Our price target assumes the company will find a partner for the VLN business and this could take longer than estimated and/or the partner could demand different terms than assumed. The nicotine mandate may take longer to decide, and the transition period could be longer than estimated. There will likely be other paths attempted by the industry to comply or the industry may opt to focus on other nicotine delivery systems as regulation of the combustible cigarette market increases. This could affect our assumptions on the royalty rate and market share.



O1 Results.

Q1 revenue was \$6.8 million, and the EBITDA loss was \$4.4 million. Revenue was lower than the Q4 2020 level of \$7.3 million and lower than our \$7.2 million estimate. Gross margin of 9.5% was better than forecast and an improvement over Q4, but expenses were higher, mainly driven by higher personnel costs. The EBITDA loss of \$4.4 million was greater than our \$3.5 million estimate but an improvement over the \$5.4 million loss in Q4 2020.

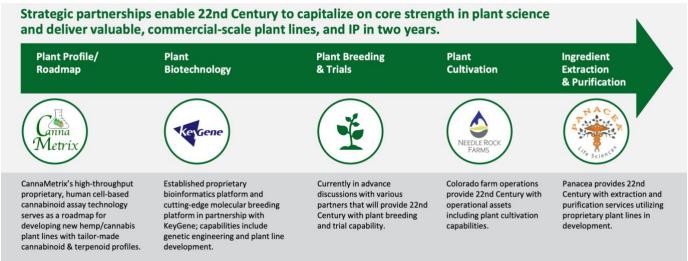
Q1 21 (\$ in 000's)	,	Actual	Es	timates	
Revenue	\$	6,806	\$	7,250	-6.1%
Cost Of Goods Sold		6,159		6,720	-8.3%
Gross Profit		647		530	22.1%
R&D		701		1,250	-43.9%
G&A		4,829		3,298	
Depreciation & Amort.		288		349	
Opex	_			4,897	
Operating Income	\$	(5,1/1)	\$	(4,367)	-18.4%
Other		36		0	
Interest Expense		0		0	
Other		112		223	
Warrant Charge		(7)		(18)	
Pretax Income		(5,030)		(4,162)	
Income Tax Expense		0		0	
Net to Common	\$	(5,030)	\$	(4,162)	
Shares (000)	1	144,258	1	45,730	
EPS	\$	(0.03)	\$	(0.03)	
D&A		288		348	
Stock Comp		507		492	
EBITDA	\$		\$	(3,527)	

Source: 22nd Century Group, Inc. and Dawson James Securities estimates.

Hemp/Cannabis

The company has made substantial progress building out its hemp/cannabis franchise by targeting the upstream segments of the cannabinoid value chain. Its goal is to deliver commercial-scale plant lines and intellectual property for the life science, consumer product, and pharmaceutical end-use markets. Partnerships with CannaMetrix, KeyGene, and Panacea address creation of plant profiles, seeds with specific genetic characteristics, plant cultivation and extraction. The company is working to consummate agreements with plant breeders to complete the capabilities it believes are necessary to have a full-service suite for the market.





Source: 22nd Century Group, Inc.

22nd Century's investment and business relationship with Panacea is being restructured, and this will give the company greater control over plant cultivation and extraction and purification technology. 22nd Century and Panacea have entered into a non-binding agreement to transfer \$7.2 million of assets from Panacea in exchange for cancellation of a \$7 million convertible note receivable, and removal of any future investment rights and obligations of 22nd Century to invest in Panacea. The agreement will also cancel 22nd Century's warrant to purchase additional Series B preferred stock of Panacea. The assets received by 22nd Century, assuming completion of the agreement under their current terms, include an agricultural facility and various extraction and distillation equipment.

Low-nicotine mandate

The third element of our valuation is the value of a low-nicotine mandate. We think it is likely, based on the FDA's long-standing goal of reducing cigarette consumption, that the FDA will reintroduce a low-nicotine mandate, although the timing is uncertain. We believe it is reasonable to assume a new mandate would broadly follow the 2018 ANPRM since none of the studies supporting the efficacy of a low-nicotine mandate have been invalidated and, in our opinion, technical achievability of a mandate has been demonstrated by 22^{nd} Century.

The ANPRM was published in March 2018 and the comment period closed in July 2018. An argument can be made that a similar comment period would be allowed if a Notice of Proposed Rulemaking (NPRM) were issued, but since a lot of the ground has already been covered in the ANPRM, it is also reasonable to believe that there would be a shorter comment period. "A Guide to the Rulemaking Process" has been published in the Federal Register and it indicates comment periods generally range from 30 to 60 days, but more complex rules can have comment periods of 180 days or more. Our guess is a rule of this import would require a three- to four-month comment period, similar to the 2018 ANPRM.

After that, there isn't a required time mentioned in "A Guide to the Rulemaking Process" for a federal agency to consider the comments and issue a final rule, if a final rule is to be issued at all. Based on our knowledge of variety of federal agencies, a normal period to consider the comments and issue a final rule can be three to six months. The more complex the rule, or the more impactful, the longer this period will likely be.

The ANPRM asked about transition times if a mandate were issued, and this could be critical for 22nd Century. In our view, a shorter transition period would be more positive for the company since it would allow less time for alternatives to be explored, developed, and deployed by competitors.

Outlook

Our revenue, EPS and EBITDA estimates have changed modestly. For this year, we have increased our revenue estimate, with a lesser amount from contract manufacturing and a \$2 million contribution from license revenue resulting in higher margins and improved EPS and EBITDA. Our contract manufacturing revenue for 2022 is unchanged, but we have included \$2 million from the sale of biomass. The impact on EPS and EBITDA is positive, but small.



	202	1E	2022E						
	Old		New		Old		New		
Revenue (\$M)	\$ 29.0	\$	29.8	\$	30.0	\$	32.0		
EPS	\$ (0.12)	\$	(0.12)	\$	(0.12)	\$	(0.12)		
EBITDA (\$M)	\$ (16.2)	\$	(15.5)	\$	(16.3)	\$	(15.7)		

Source: Dawson James Securities estimates.

Price Target. Our \$7 price target is the sum of the estimated values of the VLN, non-addictive nicotine and hemp franchises. We attribute about \$3.08/share for the VLN asset. The non-addictive nicotine mandate is valued at \$3.18 per share. The remainder of the price target comprises the investment in the hemp business and the relationship with KeyGene.

Risk Analysis

The tobacco industry is highly regulated, and our price target depends on approval of the company's MRTP application and a nicotine mandate, which could be delayed or may not be approved. Our price target assumes the company will find a partner for the VLN business and this could take longer than estimated and/or the partner could demand different terms than assumed. The nicotine mandate may take longer to decide, and the transition period could be longer than estimated. There will likely be other paths attempted by the industry to comply or the industry may opt to focus on other nicotine delivery systems as regulation of the combustible cigarette market increases. This could affect our assumptions on the royalty rate as well as market share.



Exhibit 1. Income Statement

(\$ in 000s, except per-share data)

		2018	2019	2020	(Q1 21 A	C	Q2 21 E	(Q3 21 E	(Q4 21 E	1	2021 E	2022 E
Revenue	\$	26,426	\$ 25,833	\$ 28,111	\$	6,806	\$	7,000	\$	7,000	\$	9,000	\$	29,806	\$ 32,000
Cost Of Goods Sold	1/8	25,527	25,818	 26,673	7.6	6,159		6,159		6,159		6,159		24,636	26,000
Gross Profit		899	14	1,438		647		841		841		2,841		5,170	6,000
				5.1%		9.5%									**
R&D		14,990	8,057	4,128		701		701		701		701		2,804	2,944
G&A		7,658	12,956	14,971		4,829		4,829		4,829		5,418		19,905	20,900
Impairment Charge		0	1,142	176		0		0		0		0		0	0
Sales & marketing		927	0	0		0		0		0		0		0	0
Depreciation & Amort.		1,342	1,425	1,346		288		288		288		288		1,152	1,152
Opex		24,918	23,581	20,621		5,818		5,818		5,818		6,407		23,861	24,996
Operating Income	\$	(24,019)	\$ (23,566)	\$ (19,183)	\$	(5,171)	\$	(4,977)	\$	(4,977)	\$	(3,566)	\$	(18,691)	\$ (18,996)
Other		14,945	(4,002)	(428)		36		36		36		36		144	144
Impairment Charge		49	0	(1,741)		0		0		0		0		0	0
Interest Income		1,069	1,066	1,751		112		309		270		231		923	636
Interest Expense		(11)	(56)	(72)		(7)		(7)		(7)		(7)		(28)	(28)
Pretax Income		(7,967)	(26,559)	(19,673)		(5,030)		(4,639)		(4,678)		(3,306)		(17,652)	(18,245)
Income Tax Expense		0	0	38		0		0		0		0		0	0
Net to Common	\$	(7,967)	\$ (26,559)	\$ (19,711)	\$	(5,030)	\$	(4,639)	\$	(4,678)	\$	(3,306)	\$	(17,652)	\$ (18,245)
Shares (000)		124,299	125,883	138,813		144,258		152,421		152,694		153,194		150,642	154,007
EPS		(\$0.06)	(\$0.21)	(\$0.14)		(\$0.03)		(\$0.03)		(\$0.03)		(\$0.02)		(\$0.12)	(\$0.12)
D&A		1,200	1,425	1,346		288		288		288		288		1,152	1,152
Stock Comp		3,187	3,540	1,654		507		507		507		507		2,028	2,129
Other		0	1,142	176		0		0		0		0		0	0
EBITDA	\$	(19,632)	\$ (17,459)	\$ (16,007)	\$	(4,376)	\$	(4,182)	\$	(4,182)	\$	(2,771)	\$	(15,511)	\$ (15,715)

Source: 22nd Century Group, Inc. and Dawson James Securities estimates



Exhibit 2. Balance Sheet and Cash Flow Statement (\$ in 000s)

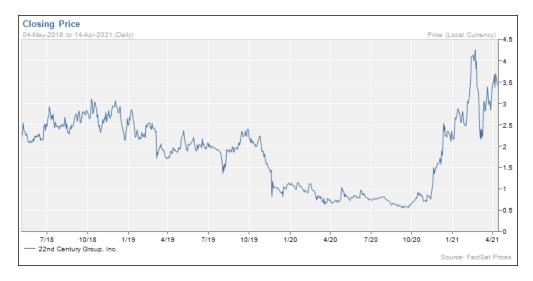
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		2018		2019		2020	2	2021 E	1	2022 E
Cash		605		485		1,029		1,272		1,272
Short-Term Investments		55,749		38,477		21,313		19,284		4,121
A/R		871		867		2,159		2,023		2,023
Inventory		3,044		2,266		2,034		2,137		2,137
Prepaid Exp.		928		648		1,806		1,280		1,280
Total Current Assets	\$	61,198	\$	42,743	\$	28,341	\$	25,996	\$	10,833
PP&E		3,261		3,120		2,483		2,148		1,696
Operating Lease		0		602		247		182		182
Patent, Trademark, other intangibles		9,752		8,494		8,211		8,035		7,935
Equity Investment		3,092		8,403		6,536		6,643		6,643
Convertible Note Receivable		0		5,589		5,876		5,876		5,876
Total Assets	9	77,302	\$	68,951	\$	51,694	\$	48,880	\$	33,165
Bank Loans and N/P		689		581		539		295		295
Operating Lease		0		220		247		182		182
A/P		2,575		1,998		1,116		1,572		1,572
Accrued Expenses		1,826		2,619		4,830		4,681		4,681
Accrued Severance		0		359		339		274		274
Deferred Income		83		5		272	_	0		0
Total Current Liabilities	\$	5,174	\$	5,780	\$	7,343	\$	7,004	\$	7,004
Long-Term Debt		848		292		0		0		0
Operating Lease		0		382		0		0		0
Accrued Severance		0		446		241		187		187
Shareholders' Equity		71,280		62,051		44,110		41,689		25,974
Total Liabilities And Equity	\$	77,302	\$	68,951	\$	51,694	\$	48,880	9	33,165
		2018		2019		2020	2	2021 E		2022 E
Net Income		(7,967)		(26,559)		(19,711)		(17,652)		(18,245)
Depreciation & Amort.		1,200		1,425		1,345		1,152		1,152
Stock Comp		3,187		3,540		1,654		2,028		2,129
Other		(14,618)		7,249		2,722		(10)		0
Working Capital		354		(242)		(1,631)		334	-	0
Operating Cash Flow	\$	(17,844)	\$	(14,587)	\$	(15,621)	\$	(14,148)	\$	(14,963)
Acquisition of Patents and trademarks		(657)		(515)		(468)		(395)		(500)
CapEx		(449)		(527)		(54)		(175)		(100)
Other		16,251		5,595		16,991		(8,415)	1,000	0
Investing Activities	\$	15,145	\$	4,552	\$	16,469	\$	(8,985)	\$	(600)
Debt		(800)		(700)		(354)		(246)		0
Equity		445		10,616		50		13,235		400
Other		0		0		0		0		0
Financing Activities	\$	(355)	\$	9,916	\$	(304)	\$	12,989	\$	400
Change in Cash		(\$3,055)		(\$120)		\$ 544		(\$10,144)	1	(\$15,163)

Source: 22nd Century Group, Inc. and Dawson James Securities estimates



Important Disclosures:

Price Chart:



Price target and ratings changes over the past three years:

Initiated – Buy – April 13, 2021 – Price Target \$7.00

Update - Buy - April 15, 2021 - Price Target \$7.00

Update - Buy - April 19, 2021 - Price Target \$7.00

Update – Buy – May 7, 2021 – Price Target \$7.00

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Ratings Definitions:

- 1) **Buy**: The analyst believes the price of the stock will appreciate and produce a total return of at least 20% over the next 12-18 months.
- 2) **Neutral**: The analyst believes the price of the stock is fairly valued for the next 12-18 months.
- 3) **Sell**: The analyst believes the price of the stock will decline by at least 20% over the next 12-18 months and should be sold.

The following chart reflects the range of current research report ratings for all companies, followed by the analysts of the Firm. The chart also reflects the research report ratings relating to those companies for which the Firm has performed investment banking services.

As of: 5-May-21

	Company Co	verage	Investment	Banking
Ratings Distribution	# of Companies	% of Total	# of Companies	% of Totals
Market Outperform (Buy)	23	70%	5	22%
Market Perform (Neutral)	10	30%	0	0%
Market Underperform (Sell)	0	0%	0	0%
Total	33	100%	5	15%

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