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

June 1, 2021

Buy: Monetizing Hemp/Cannabis IP

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Aurora Cannabis (NASDAQ: ACB, \$9.66, Not Rated) announced last week the formation of a Science & Innovation Business Unit to commercialize technology that enables cannabinoid biosynthesis in plants and microorganisms. Aurora and 22nd Century Group share the global intellectual property (IP) rights to certain patents and patent applications relating to genes in the hemp/cannabis plant required for the production of cannabinoids in the cannabis plant. Aurora stated it is working closely with 22nd Century “to enforce their IP against infringing parties, as well as to actively explore commercial development opportunities.”

22nd Century owns a worldwide sublicense from Anandia Laboratories, a plant biotechnology company purchased by Aurora Cannabis in 2018, giving it exclusive rights in the U.S. and co-exclusive rights everywhere else in the world (except Canada) to patents and patent applications of genes in the hemp/cannabis plant required to produce cannabinoids, in the cannabis plant, which includes hemp. The sublicense is scheduled to expire in 2035, coincident with the last-to-expire patent.

Little has been publicly mentioned about Anandia by Aurora since its acquisition in 2018 until the company’s earnings call in May of this year when CEO Miguel Martin said Aurora and 22nd Century were working together to defend IP from infringing parties and exploring commercial development opportunities. Aurora believes the technology can lead to more efficient ways to produce cannabinoids, specifically minor cannabinoids, which can be less than 1% of the plant. Aurora wants to use the cannabinoid molecules, including minor cannabinoids, to create custom products for the U.S. market, which it serves through its Reliva business unit. Currently, Reliva sells CBD isolate to U.S. consumers through 23,000 retail outlets and believes it is the top-ranked CBD brand. (Source: Aurora fiscal Q3 2021 EPS transcript, May 13, 2021). Mr. Martin was CEO of Reliva before Aurora’s acquisition in 2020. Martin has lofty ambitions for Reliva and states he “would not be surprised if the non-THC parts of our portfolio and are ultimately as big as the THC parts of our portfolio, particularly with positive FDA action in the U.S.” (Source Aurora fiscal Q3 2021 EPS transcript, May 13, 2021). Continued on page 2.

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.

Risks to Target: The tobacco industry is highly regulated, and our price target depends on approval of the company’s MRTT 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.

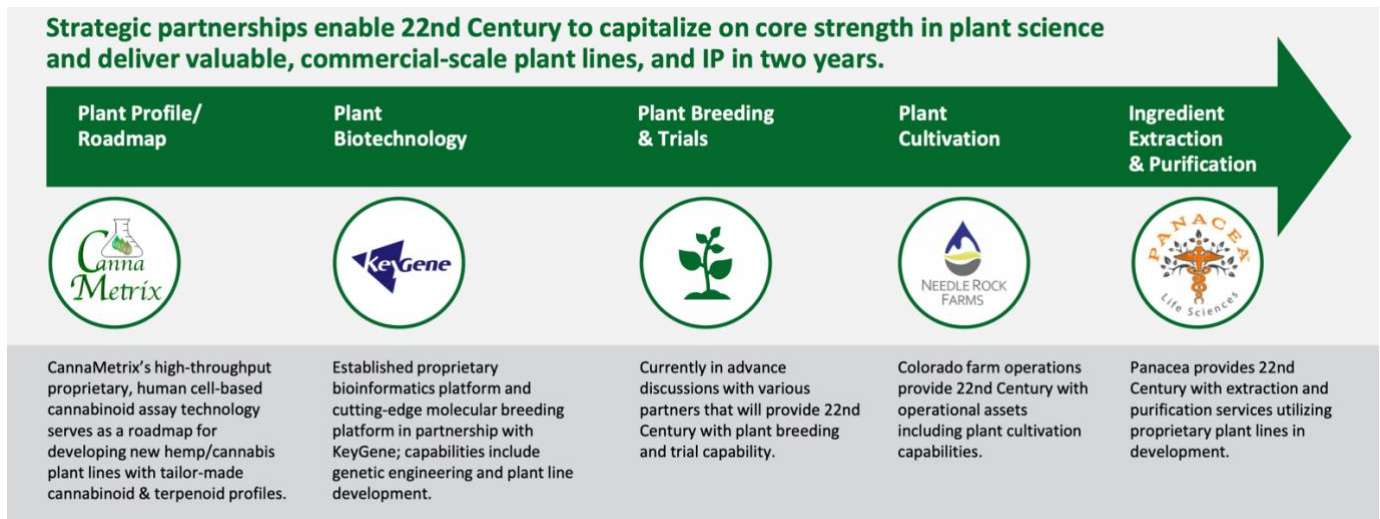
Current Price	\$4.50		
Price Target	\$7.00		
Estimates	F2020A	F2021E	F2022E
Revenues (\$000s)			
1Q March	\$ 7,058	\$ 6,806 A	\$ 9,500
2Q June	\$ 6,435	\$ 7,000 E	\$ 7,500
3Q September	\$ 7,310	\$ 7,000 E	\$ 7,500
4Q December	\$ 7,308	\$ 9,000 E	\$ 7,500
	F2020A	F2021E	F2022E
EPS (diluted)			
1Q March	\$ (0.14)	\$ (0.12)E	\$ (0.12)
2Q June	\$ (0.03)	\$ (0.03)A	\$ (0.02)
3Q September	\$ (0.04)	\$ (0.03)E	\$ (0.03)
4Q December	\$ (0.03)	\$ (0.03)E	\$ (0.03)
	F2020A	F2021E	F2022E
EBITDA (\$Ms)	\$ (16.0)	\$ (15.5)	\$ (15.7)
EV/EBITDA (x)	-41.0x	-42.3x	-41.7x
Stock Data			
52-Week Range	\$0.55	-	\$6.07
Shares Outstanding (mil.)	152.4		
Market Capitalization (mil.)	\$686		
Enterprise Value (mil.)	\$656		
Debt to Capital	1%		
Book Value/Share	\$0.34		
Price/Book	13.1x		
Average Three Months Trading Volume (K)	3,224		
Insider Ownership	2.7%		
Institutional Ownership	30.1%		
Short interest (mil.)	7.5%		
Dividend / Yield	\$0.00/0.0%		



Monetizing Hemp/Cannabis IP

On its latest earnings conference call, 22nd Century CEO Jim Mish stated the company expected monetization of its existing library of IP through an upfront license fee in the \$2 million to \$3 million range. Given Aurora’s recent announcement, it seems reasonable to assume this fee would be the result of its work with Aurora or a license to Aurora since 22nd Century owns the U.S. rights to this technology. We have included \$2 million in license revenue in our Q4 estimates. We believe as the CBD market develops globally, additional license fees and/or royalties could be generated from the company’s IP.

The company’s Anandia sub-license is a piece of a larger portfolio of assets the company has assembled to pursue the hemp and cannabis markets. It 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.

A license fee is the first revenue event expected for the hemp/cannabis franchise this year and we have modeled revenue in 2022 from sale of the harvest of a strain of hemp with elevated levels of CBG and CBD-CBG combination currently under cultivation. The company expects revenue in Q4, but we have assumed it occurs in Q1 next year. The company expects additional crop sales as it develops new strains and garners purchase commitments from producers of CBD isolates and end-user products.

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.

Our price target of \$7 comprises three components: 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, or \$0.74 per share, equals about \$112 million and encompasses its investment in Panacea, the Anandia licenses and the potential from its relationship with KeyGene. We have assumed a long gestation period for the hemp/cannabis business because it is in the early stages. However, the Aurora announcement and the restructuring of the Panacea investment could be catalysts to more rapid development of the market and 22nd Century’s monetization efforts.

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	Q2 21 E	Q3 21 E	Q4 21 E	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	25,527	25,818	26,673	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

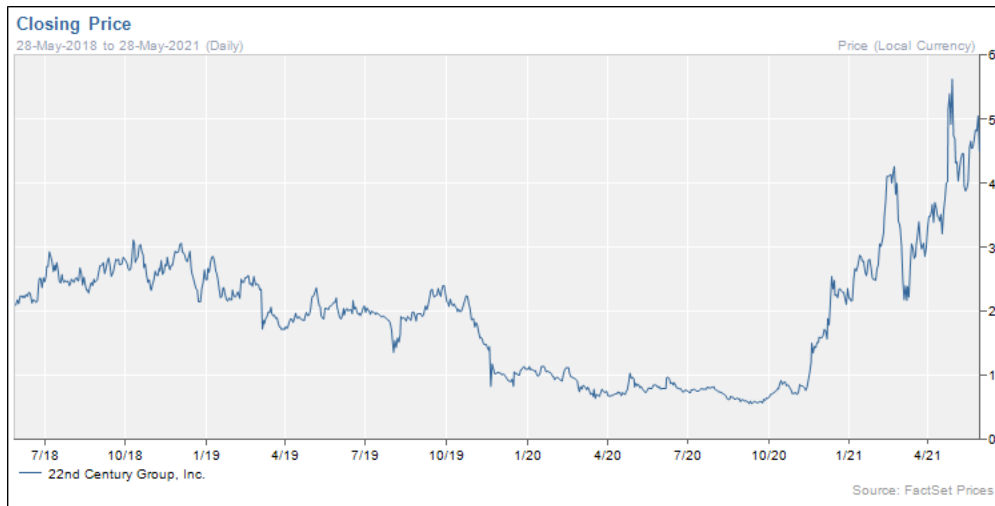
(\$ in 000s)

	2018	2019	2020	2021 E	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	\$ 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	\$ 33,165
	2018	2019	2020	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)	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)	(\$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
- Update – Buy – June 1, 2021 – Price Target \$7.00

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- 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.

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As of: 17-May-21

Ratings Distribution	Company Coverage		Investment Banking	
	# of Companies	% of Total	# of Companies	% of Totals
Market Outperform (Buy)	24	71%	5	21%
Market Perform (Neutral)	10	29%	0	0%
Market Underperform (Sell)	0	0%	0	0%
Total	34	100%	5	15%

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