

22nd Century Group, Inc. (XXII - \$0.80 - Buy)

COMPANY NOTE

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Sales and trading 7 a.m. to 7 p.m. ET, (646) 465-9090

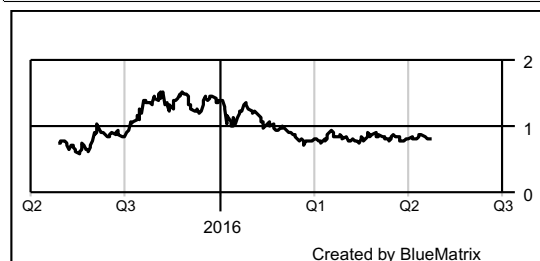
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Stock Data		07/25/16
Price		\$0.80
52 Week Range		(\$0.56 - \$1.75)
Price Target		\$4.50
Market Cap (mil)		\$65.60
Shares out (mil)		82.00
3-Mo Avg Vol		420,085
Cash per share		\$0.08
Total Debt (mil)		\$0.62

Revenues (\$ millions)						
Yr Dec	2015A		2016E		2017E	
	Actual		Curr	Prev	Curr	Prev
Mar	0.6		3.0A	–	3.8	–
Jun	2.3		2.7	–	4.1	–
Sep	2.7		2.9	–	4.1	–
Dec	2.9		3.4	–	6.4	–
YEAR	8.5		12.0	–	18.4	–

EPS (\$)						
Yr Dec	2015A		2016E		2017E	
	Actual		Curr	Prev	Curr	Prev
Mar	(0.06)		(0.04)A	–	(0.03)	–
Jun	(0.02)		(0.04)	–	(0.03)	–
Sep	(0.04)		0.04	–	(0.03)	–
Dec	(0.04)		(0.03)	–	(0.01)	–
YEAR	(0.16)		(0.16)	–	(0.14)	–
P/E	(5.00)		(5.00)	–	(5.71)	–

One year price history XXII



\$5 Million Capital Raise Eliminates Financing Overhang

22nd Century eliminated the near term financing risk it faced by raising \$5 million in an at-market common stock and warrant deal. The company will issue 6.2 million shares as well as 1.5 million warrants with a \$1 strike price. Also, about 5.5 million higher priced warrants, with a strike prices of \$1.21 and \$1.25 per share, were repriced to a strike price of \$1.00. This should give the company ample runway to capitalize on the numerous opportunities it has to monetize its broad intellectual property portfolio.

One of the most promising paths for 22nd Century is the pending application with the FDA for a reduced exposure designation for its Brand A, low-nicotine cigarette. This has now been before the FDA since the beginning of the year and a 12-month evaluation by the agency is expected. However, one must remember that government agencies move at their own pace and delays are common. That said, this application, if successful, would be ground breaking and would highlight the unique and valuable technology 22nd Century possesses and could result in the company licensing its technology to large tobacco companies with wider distribution.

Another major effort of management is attracting a research partner to fund Phase III clinical trials for the X-22 smoking cessation product. The company is casting a wide net for partners and using all aspect of its technology to interest potential partners. For instance, funding of X-22 could give a partner preferred access to the modified risk product. This would be valuable to multiple players in the space.

Contract manufacturing has been the main source of revenue for the company in the past few quarters and will be an important source of revenue and cash flow going forward. There are a variety of bids, large and small, in process and this could be a catalyst for the shares in the near term.

International sales continue to be pursued aggressively. In May the company received a purchase order from an Australian distributor, and based on testimony in recent litigation, the company is pursuing bulk sales of tobacco in India as well.

While we have been disappointed in the BAT relationship since BAT has yet to exercise any its options on the research license with 22nd Century, if it does, payments could total \$7 million over a couple of years. If BAT does not exercise its options, the agreement lapses in October of 2017.

The company has the opportunity to pursue research efforts to produce cannabinoids in plants other than cannabis, including tobacco plants. Given the increased interest in the use of cannabinoids by researchers like GW Pharma (GWPH \$93.20, not rated), the ability to produce cannabinoids, independent of the

cannabis plant, should be very valuable to multiple research partners.

Recently, in testimony for litigation which is underway, the company stated that its patents are worth more than \$200 million, or greater than \$2.50 per share. We value X-22/Modified risk at \$3 per share and the combined value of the potential BAT royalty stream and commercial products at \$1.50 per share to reflect a modest tempo in the roll-out of commercial products as well as a less steep ramp for the BAT royalties. Risks to achieving our price target include delays in the FDA process, ability to find partners for X-22, challenges in attracting contract manufacturing and selling product overseas and possibility of requiring additional capital.

Valuation:

We value X-22/Modified risk at \$3 per share and the combined value of the potential BAT royalty stream and commercial products at \$1.50 per share. We have not included a value for the company's investment in Anandia.

Risks to achievement of target price:

Risks to achieving our price target: The industry is subject to significant regulatory constraints, litigation, societal views on smoking and changing legislation. Any one of these could have a deleterious impact on our assumptions. We assume the company is able to monetize its technology in multiple ways, but these are subject to regulatory risk, funding risk and could take longer and cost more than we expect.

Company description:

22nd Century owns or exclusively controls over 200 issued patents, 50 pending patent applications. The company's proprietary technology enables the control of nicotine levels in tobacco plants by controlling the genes responsible for nicotine production in tobacco plants.

22nd Century Group, Inc
Income Statement \$ in 000s

	2013	2014	2015	Q1 16	Q2 16 E	Q3 16 E	Q4 16 E	2016 E	2017 E
Revenue	\$ 7,278	\$ 529	\$ 8,522	\$ 3,019	\$ 2,700	\$ 2,875	\$ 3,425	\$ 12,019	\$ 18,363
Cost Of Goods Sold	462	498	9,103	2,895	2,650	2,738	3,133	11,415	15,146
Gross Profit	6,817	31	(581)	124	50	138	293	604	3,217
R&D	744	1,249	1,669	597	600	600	600	2,397	2,757
G&A	4,107	8,793	7,760	1,847	1,847	1,650	1,500	6,843	7,528
Pre-Mfg. Facility Costs	0	1,177	0	0	0	0	0	0	0
Sales & marketing	9	86	1,358	703	703	703	703	2,810	4,216
Depreciation & Amort.	144	463	676	205	205	205	205	822	904
Opex	5,004	11,768	11,463	3,352	3,355	3,158	3,008	12,873	15,404
Operating Income	\$ 1,812	\$ (11,737)	\$ (12,044)	\$ (3,228)	\$ (3,305)	\$ (3,021)	\$ (2,716)	\$ (12,269)	\$ (12,187)
Interest Expense	(749)	(7)	(22)	(8)	(8)	(8)	(8)	(32)	(8)
Other	122	(30)	889	(87)	0	0	0	(87)	0
Warrant Charge	(27,339)	(3,821)	145	71	0	0	0	71	0
Pretax Income	(26,153)	(15,595)	(11,032)	(3,252)	(3,313)	(3,028)	(2,723)	(12,317)	(12,195)
Income Tax Expense	0	0	0	0	0	0	0	0	0
Net before Minority Interest	(26,153)	(15,595)	(11,032)	(3,252)	(3,313)	(3,028)	(2,723)	(12,317)	(12,195)
Minority Interest	0	0	0	0	0	0	0	0	0
Net to Common	\$ (26,153)	\$ (15,595)	\$ (11,032)	\$ (3,252)	\$ (3,313)	\$ (3,028)	\$ (2,723)	\$ (12,317)	\$ (12,195)
Shares	43,635	59,993	68,143	74,031	74,531	78,531	80,531	76,906	91,563
EPS	(\$0.60)	(\$0.26)	(\$0.16)	(\$0.04)	(\$0.04)	(\$0.04)	(\$0.03)	(\$0.16)	(\$0.13)

22nd Century Group, Inc
Balance Sheet and Cash Flow Statement \$ in 000s

	2013	2014	2015	Q1 16	Q2 16 E	Q3 16 E	Q4 16 E	2016 E	2017 E
Cash	5,831	6,403	3,760	6,052	3,014	4,843	2,322	2,322	3,425
Due from related party and officers	50	46	0	0	0	0	0	0	0
A/R	0	0	51	103	164	308	514	514	528
Settlement proceeds receivable	0	0	0	0	0	0	0	0	0
Inventory	1,406	2,065	2,706	2,921	3,177	3,248	3,573	3,573	4,319
Prepaid Consulting Fees	0	1,979	0	0	0	0	0	0	0
Prepaid Exp.	458	214	636	529	576	589	647	647	783
Total Current Assets	\$ 7,744	\$ 10,707	\$ 7,154	\$ 9,605	\$ 6,931	\$ 8,988	\$ 7,056	\$ 7,056	\$ 9,055
Patent and Trademark costs	1,545	7,078	7,364	7,383	7,322	7,261	7,199	7,199	6,954
PP&E	2,998	2,851	2,556	2,477	2,508	2,535	2,557	2,557	2,602
Equity Investment	0	1,318	1,223	1,135	1,135	1,135	1,135	1,135	1,135
Total Assets	\$ 12,287	\$ 21,954	\$ 18,296	\$ 20,600	\$ 17,896	\$ 19,919	\$ 17,948	\$ 17,948	\$ 19,747
Bank Loans and N/P	175	495	309	315	315	315	315	315	315
A/P	55	884	1,283	1,729	1,881	1,923	2,115	2,115	2,557
Accrued Expenses	576	1,294	1,570	1,442	1,568	1,603	1,763	1,763	2,132
Deferred Revenue	179	0	0	0	0	0	0	0	0
Total Current Liabilities	\$ 984	\$ 2,673	\$ 3,162	\$ 3,485	\$ 3,763	\$ 3,841	\$ 4,193	\$ 4,193	\$ 5,003
Long-Term Debt	0	605	308	308	308	308	308	308	308
Accrued Severance	0	412	200	145	76	0	0	0	0
Warrant Liability & Other	3,780	3,043	2,898	17	17	17	17	17	17
Shareholder's Equity	7,523	15,220	11,729	16,644	13,732	15,753	13,430	13,430	14,419
Total Liabilities And Equity	\$ 12,287	\$ 21,954	\$ 18,296	\$ 20,600	\$ 17,896	\$ 19,919	\$ 17,948	\$ 17,948	\$ 19,747
Net Income	(26,153)	(15,595)	(11,032)	(3,252)	(3,313)	(3,028)	(2,723)	(12,317)	(8,061)
Depreciation & Amort.	144	463	774	181	155	159	164	659	700
Stock Comp	980	2,293	1,326	260	350	350	350	1,310	1,400
Other	29,386	6,740	2,341	74	(69)	(76)	0	(71)	(0)
Working Capital	(501)	(483)	(731)	(62)	(86)	(151)	(237)	(535)	(85)
Operating Cash Flow	\$ 3,856	\$ (6,583)	\$ (7,322)	\$ (2,799)	\$ (2,962)	\$ (2,746)	\$ (2,446)	\$ (10,954)	\$ (6,047)
Acquisition of Patents and trademarks	(290)	(727)	(413)	0	0	0	0	0	0
Capx	(3,452)	(212)	(37)	(2)	(125)	(125)	(125)	(377)	(500)
Other	0	(1,769)	0	0	0	0	0	0	0
Investing Activities	\$ (3,743)	\$ (2,708)	\$ (451)	\$ (2)	\$ (125)	\$ (125)	\$ (125)	\$ (377)	\$ (500)
Debt	(1,810)	(4)	(508)	0	0	0	0	0	0
Equity	7,536	9,859	5,592	5,092	50	4,700	50	9,892	7,650
Other	(9)	7	46	0	0	0	0	0	0
Financing Activities	\$ 5,717	\$ 9,863	\$ 5,130	\$ 5,092	\$ 50	\$ 4,700	\$ 50	\$ 9,892	\$ 7,650
Change in Cash	\$ 5,830	\$ 572	(\$2,642)	\$ 2,291	(\$3,037)	\$ 1,829	(\$2,521)	(\$1,438)	\$ 1,103

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Chardan Capital Markets

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			Count	Percent
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Sell: Returns expected to be materially below sector average over 12 months and indicates total price decline of at least 10% over the next 12 months.

22nd Century Group, Inc. (XXII - \$0.80 - Buy)

Price Target \$4.50

VALUATION:

We value X-22/Modified risk at \$3 per share and the combined value of the potential BAT royalty stream and commercial products at \$1.50 per share. We have not included a value for the company's investment in Anandia.

RISKS TO ACHIEVEMENT OF TARGET PRICE:

Risks to achieving our price target: The industry is subject to significant regulatory constraints, litigation, societal views on smoking and changing legislation. Any one of these could have a deleterious impact on our assumptions. We assume the company is able to monetize its technology in multiple ways, but these are subject to regulatory risk, funding risk and could take longer and cost more than we expect.

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