

22nd Century Group, Inc. (XXII - \$0.77 - Buy)
Estimate Change

COMPANY NOTE

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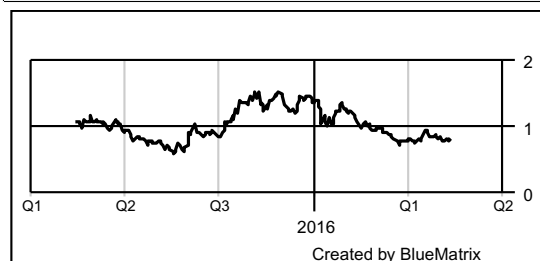
Sales and trading 7 a.m. to 7 p.m. ET, (646) 465-9090
Sales and trading 7 p.m. to 7 a.m. ET, (646) 465-9063

Stock Data	05/13/16
Price	\$0.77
52 Week Range	(\$0.56 - \$1.75)
Price Target	\$4.50
Market Cap (mil)	\$58.53
Shares out (mil)	76.01
3-Mo Avg Vol	403,490
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	2.6A	3.8	–
Jun	2.3	2.7	–	4.1	–
Sep	2.7	2.9	3.2	4.1	–
Dec	2.9	3.4	3.8	6.4	–
YEAR	8.5	12.0	12.3	18.4	–

EPS (\$)					
Yr Dec	2015A	2016E		2017E	
	Actual	Curr	Prev	Curr	Prev
Mar	(0.06)	(0.04)A	(0.03)A	(0.03)	–
Jun	(0.02)	(0.04)	(0.03)	(0.03)	–
Sep	(0.04)	0.04	(0.03)	(0.03)	–
Dec	(0.04)	(0.03)	–	(0.01)	–
YEAR	(0.16)	(0.16)	(0.12)	(0.14)	(0.10)
P/E	(4.81)	(4.81)	–	(5.50)	–

One year price history XXII



Q1 Results. Substantial Value in Cannabinoid Research

Q1 revenue of \$3.0 million was better than expected despite delays in rolling out MAGIC in Europe. The company was able to increase its contract manufacturing revenue and generated \$329 thousand in revenue from the sale of SPECTRUM cigarettes to National Institute on Drug Abuse (NIDA), a department of the National Institutes of Health (NIH).

The company is pursuing multiple ways to unlock the value of its technology. It has an application pending with the FDA for a reduced exposure designation for its Brand A, low-nicotine cigarette. In addition, it continues to work on building sales of REDSUN and MAGIC, increasing contract manufacturing, garnering a partner for X-22 and building its partnership with Anandia for research into developing cannabis plants with low levels of THC for the hemp market and high levels of CBD for the medical marijuana market.

Last week the company announced an initiative 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 \$76.95, not rated), the ability to produce cannabinoids, independent of the cannabis plant, should be very valuable to multiple research partners.

We are also hopeful the FDA will act expeditiously on the company's application with requesting a reduced exposure designation for its VLN (very-low nicotine) cigarettes. The FDA has shown interest in the past encouraging low-nicotine cigarettes and we expect the agency to complete its process by early next year. This could have a significant impact on the value of the company since it would be the first modified risk application approved by the FDA and we believe could result in 22nd Century licensing its technology to large tobacco companies with wider distribution.

We have been disappointed in the BAT relationship since BAT has yet to exercise any its options on the research license with 22nd Century, but 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.

Another major effort of management is attracting a research partner to fund Phase III clinical trials for 22nd Century's 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 will be an important source of revenue and cash flow for the company over the coming quarters and we believe

22nd Century continues to make progress. There are a variety of bids, large and small, in process and this could be a catalyst for the shares in the near term.

Weighing on the shares is the necessity of raising capital in the next couple of quarters. The company believes it has enough cash to fund operations through October.

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. We have not given any value for the company's 25% ownership of Anandia or its exclusive US rights to four genes required for cannabinoid production in the cannabis plant. However, we think this year could be a pivotal year for the cannabis market given the number of potential ballot initiatives to legalize medical and/or recreational marijuana in states such as California, Nevada, New Mexico, Florida, Ohio, and Maine. Marijuana is now legal at the state level in states with 50% of the US population are more are expected to legalize in November. If this occurs, states with a population of two-thirds of the total population will have legalized marijuana and we think this will force action at the federal level. This could include rescheduling cannabis, changing IRS tax regulations, changing banking regulations or some combination of the three. Any of these would have a significantly positive impact on the industry and players like Anandia and the value of 22nd Century's investment and US rights to Anandia's technology.

The company's monthly burn is \$650,000 per month, or \$7.8 million annually, and excluding BAT milestone payments or partnership payments for X-22, the company estimates it has enough cash through October of this year. We believe the company will extend this date by reducing its burn, but absent commercial license payments from BAT or a sharp ramp in contract manufacturing we expect additional capital will be required in 12-18 months.

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.
Actual v. Estimates

Q1 16	Actual	Estimates	
Revenue	\$ 3,019	\$ 2,550	18.4%
Cost Of Goods Sold	2,895	2,355	22.9%
Gross Profit	124	195	-36.6%
R&D	597	500	19.5%
G&A	1,847	1,500	23.1%
Pre. Mfg. Facility Costs	0	0	NM
Sales & marketing	703	350	100.7%
Depreciation & Amort.	205	175	17.4%
Opex	3,352	2,525	32.8%
Operating Income	\$ (3,228)	\$ (2,330)	-38.6%
Interest Expense	(8)	(2)	
Other	(87)	0	
Warrant Charge	71	0	
Pretax Income	(3,252)	(2,332)	
Income Tax Expense	0	0	
Net before Minority Interest	(3,252)	(2,332)	
Minority Interest	0		
Net to Common	\$ (3,252)	\$ (2,332)	
Shares	74,031	75,970	
EPS	\$ (0.04)	\$ (0.03)	

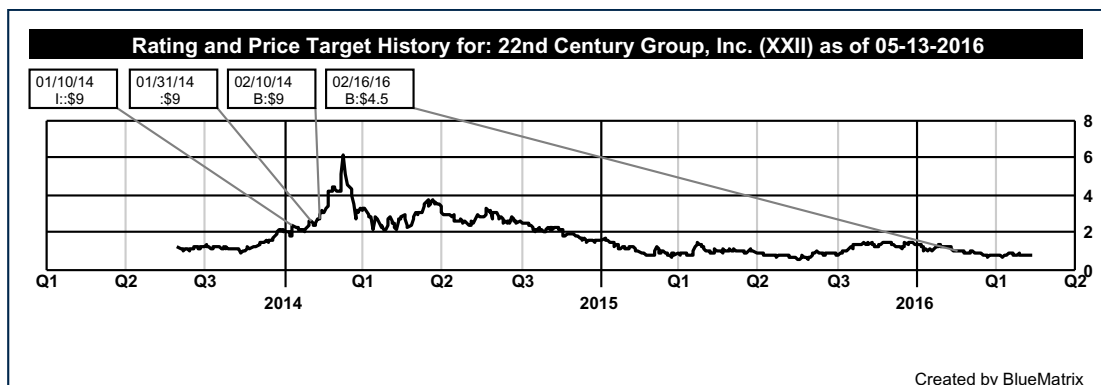
22nd Century Group, Inc
Income Statement \$ in 000s

	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	75,031	80,531	76,031	85,390
EPS	(\$0.60)	(\$0.26)	(\$0.16)	(\$0.04)	(\$0.04)	(\$0.04)	(\$0.03)	(\$0.16)	(\$0.14)

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	193	2,622	2,622	3,725
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	\$ 4,338	\$ 7,356	\$ 7,356	\$ 9,355
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	\$ 15,269	\$ 18,248	\$ 18,248	\$ 20,047
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	11,103	13,730	13,730	14,719
Total Liabilities And Equity	\$ 12,287	\$ 21,954	\$ 18,296	\$ 20,600	\$ 17,896	\$ 15,269	\$ 18,248	\$ 18,248	\$ 20,047
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	50	5,000	10,192	7,650
Other	(9)	7	46	0	0	0	0	0	0
Financing Activities	\$ 5,717	\$ 9,863	\$ 5,130	\$ 5,092	\$ 50	\$ 50	\$ 5,000	\$ 10,192	\$ 7,650
Change in Cash	\$ 5,830	\$ 572	(\$2,642)	\$ 2,291	(\$3,037)	(\$2,821)	\$ 2,429	(\$1,138)	\$ 1,103

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Rating	Count	Percent	IB Serv./Past 12 Mos.	
			Count	Percent
BUY [BUY]	60	73.17	20	33.33
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