

**22nd Century Group, Inc. (XXII - \$1.40 - Buy)**

**FLASH NOTE**

**JAMES McILREE, CFA**, Senior Research Analyst, +1-646-465-9034  
jmcilree@chardan.com

**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	04/28/17
52 Week Range	(\$0.73 - \$1.71)
Price Target	\$3.50
Market Cap (mil)	\$126.98
Shares out (mil)	90.70



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**FDA Authorized Brand B Clinical Study**

22nd Century announced the FDA has authorized the company to conduct a clinical trial studying a low tar-to-nicotine ratio cigarette's impact on smoker's consumption. The trial will be designed to confirm smokers adjust to the higher nicotine level by smoking less, reducing the amount consumed of the harmful elements in cigarettes. We expect the trial to occur in the next few months, with results shortly thereafter. This is the first step in a Modified Risk Tobacco Product (MRTP) application to the FDA for the company's Brand B low tar-to-nicotine ratio cigarette.

We believe this is a very positive event for the company. 22nd Century is now working on two MRTP applications, a low-nicotine cigarette, Brand A, and the low tar-to-nicotine Brand B. There are no other MRTP applications for combustible products in front of the FDA indicating the company has staked out a unique offering for the 44 million Americans that currently smoke. Other MRTP applications focus on new delivery methods or snus, and are less likely to be successful, in our view, since they require a much greater change in consumption behavior. Progress with Brand A, Brand B and X-22, we think, will bring to the fore the value of the company's technology.

In addition to the Brand A and Brand B MRTP upcoming applications, 22nd Century is working on designing a trial for X-22 as a smoking cessation prescription product. The company is meeting with the FDA in the coming months to discuss trial objectives and requirements. There are a number of paths for X-22 including a Phase III trial sponsored by a partner, self-funding a trial or best case using existing trials, specifically, an FDA/NIH recently completed trial that used the company's SPECTRUM cigarettes to determine the efficacy of very low nicotine cigarettes versus stepping down nicotine levels. This could be a significant catalyst for the shares.

The smoking cessation market is a billion dollar market but the smoking market is multiples larger and 22nd Century is now positioning itself to serve both with a variety of products. Few things move quickly with the FDA but we believe as the company makes progress with X-22, Brand A, and Brand B, the value of the company's technology will become more evident and result in a higher valuation for the shares.

Cash at the end of the year was \$13.5 million and the company believes, at current cash usage rates, it has cash to operate until May of 2018. Since we believe contact manufacturing revenues this year will be substantially higher and the contribution margin positive, this time should be extended beyond the middle of next year.

The key for the shares remains monetization of the company's technology to control nicotine levels in tobacco. This can be used for smoking cessation products and 22nd Century is pursuing multiple paths here including applications with the FDA for a reduced exposure designation. We also believe the technology is suitable for

heat-not-burn products that industry leaders like Philip Morris International are pursuing.

We value X-22/Modified risk at \$2.50 per share and the combined value of the potential BAT royalty stream and commercial products at \$1.00 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. 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.

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**Valuation:**

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**Risks to achievement of target price:**

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.

**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.

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			Count	Percent
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SELL [SELL]	4	4.40	0	0.00
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