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Grossly Misleading “Short and Distort” Article Wrongfully Attempts to Dupe 22nd Century Group Shareholders

22nd Century exposes short seller as a promotor of incorrect and self-serving “fake news”

WILLIAMSVILLE, N.Y.--(BUSINESS WIRE)-- 22nd Century Group, Inc. (NYSE American: [XXII](#)), a plant biotechnology company that is a world leader in tobacco harm reduction, Very Low Nicotine Content tobacco, and hemp/cannabis research, today commented on a grossly misleading article published yesterday by an anonymous self-professed short seller of the Company’s stock. Publishing under the pen name “Fuzzy Panda,” the author – who will not even identify who he is – continued his baseless smear campaign against the Company in an effort to depress the share price of 22nd Century stock and to make a personal profit by duping shareholders into selling their shares.

Although 22nd Century does not normally respond to “short and distort” articles or to “hit pieces,” the Company believes the grossly misleading mischaracterizations and wrongful innuendo contained in the subject article warranted a Company response. Accordingly, 22nd Century states the following facts:

1. The short seller incorrectly suggests that all 22nd Century patents protecting the gene known as QPT have expired. The true facts as stated in the Company’s most recent Annual Report on SEC Form 10-K for the year ended December 31, 2018, are that *only a portion* of the Company’s QPT patents have expired. As further stated in the Company’s 2018 SEC Form 10-K, any attempt by a third-party to try to create Very Low Nicotine Content (VLNC) tobacco cannot be achieved by the use of the QPT gene alone, but will require the use of the other intellectual property for which the Company continues to have patent protections and, thus, the Company is still able to block any competitor from developing VLNC tobacco. Big Tobacco companies have publicly agreed with this point as further described below. The unidentified “short and distort” writer also fails to state that the Company’s Vector 21-41 VLNC tobacco is protected by another form of intellectual property known as *plant variety protection*, which restricts third-party access through the year 2023.
2. The short seller falsely states that Big Tobacco companies can supposedly create a VLNC tobacco plant with alleged “low nicotine patents” and that Big Tobacco companies can supposedly meet the upcoming low nicotine rule being created by the U.S. Food and Drug Administration (FDA). However, Big Tobacco companies have publicly admitted that (i) it will take them between 12 to 20 years to *potentially* develop a VLNC tobacco plant, (ii) 22nd Century controls the intellectual property (IP) necessary to develop VLNC tobacco plants, and (iii) the Big Tobacco companies are opposing the FDA’s planned nicotine reduction rule because the Big Tobacco companies claim it is not feasible for them to comply.

In comments submitted to the FDA on June 13 2018, RAI Services (which is part of Reynolds American, a wholly owned subsidiary of British American Tobacco ([BATS.L](#))) explained:

- “If FDA adopts a standard of 0.3, 0.4, or 0.5 milligrams of nicotine per gram of tobacco filler... **the process could easily take more than 20 years**” [emphasis added]
- “RAI [Services] **believes that the industry is at least 20 years away from producing tobacco at a commercial scale that would meet the range of low-level nicotine discussed in the [FDA’s] ANPRM**” [emphasis added]
- “Commercialization of such products [tobaccos with very low levels of nicotine] is also made difficult by: (1) the fact that genome editing technology (CRISPR-cas9) currently does not appear to be available to tobacco companies; and (2) the various patent restrictions on **the use of certain genetic-engineering techniques (the patents on nicotine synthesis pathway genes, for example, are held almost exclusively by 22nd Century Group)**” [emphasis added]
- “Although some success was achieved in lowering nicotine levels by suppressing QPT, use of this

technology does not achieve the ultra-low levels discussed in the [FDA's Advanced Notice of Proposed Rulemaking]"

Furthermore, on July 16, 2018, Joe Murillo of Altria Client Services ([NYSE: MO](#)) reported to the FDA that “At least 12 years is the absolute minimum amount of time necessary to attempt to address the many issues that must be resolved before VLNC tobaccos could be commercially produced at necessary volumes and cigarettes using those tobaccos could be designed and manufactured to replace currently marketed cigarettes.”

In contrast, 22nd Century's **proprietary** VLNC tobacco plant varieties are *already* commercially viable, genetically stable plants with acceptable yields and proven nicotine concentrations. This is evidenced by the fact that 22nd Century has been and continues to be the only company in the world that has provided VLNC tobacco since the year 2011. Used in more than 100 independent clinical studies that were funded by more than \$125 million from U.S. federal government agencies, 22nd Century's proprietary VLNC cigarettes have important potential public health benefits that have been detailed in dozens of peer-reviewed articles (such as the *New England Journal of Medicine*, the *Journal of the American Medical Association*, and many others). Indeed, research conducted with the Company's VLNC cigarettes is the scientific foundation of the proposed rule by the FDA to require that all cigarettes sold in the United States contain only minimally or non-addictive levels of nicotine.

As 22nd Century clearly stated in its public response to the FDA's Advanced Notice of Proposed Rulemaking (ANPRM), 22nd Century has been the sole source since the year 2011 for the production and delivery of more than 24 million (now 28 million) VLNC cigarettes for use in the above-referenced clinical studies, which shows that the FDA's planned nicotine reduction rule is immediately feasible by 22nd Century. In contrast, and contradicting the short seller's article, the Big Tobacco companies continue to oppose the FDA's planned nicotine reduction rule because the Big Tobacco companies have publicly admitted that they are not able to comply with such new rule because 22nd Century holds all the necessary IP; **22nd Century is the only company in the world to have produced very low nicotine tobacco with 95% less nicotine than conventional tobacco.**

22nd Century has also advanced further ahead of the Big Tobacco companies by already successfully developing the next generation **non-GMO** very low nicotine tobacco varieties. 22nd Century has publicly stated that it has successfully developed flue cured (bright) and burley varieties of **non-GMO** very low nicotine tobacco varieties. The Company is also in the process of developing an oriental variety of **non-GMO** very low nicotine tobacco. These new VLNC tobacco varieties have superior agronomic and sensory characteristics and are expected to form the foundation of new VLNC tobacco products to be introduced by the Company in the near future. Considering 22nd Century's achievements, as well as Big Tobacco's own public statements, it is clear that the rest of the world is playing a long game of catch-up to 22nd Century's very low nicotine tobacco technology.

The near-term application for 22nd Century's VLNC tobacco technology is making possible the Company's Modified Risk Tobacco Product (MRTP) application to the FDA for VLN™ cigarettes. Upon approval by the FDA, 22nd Century will be the first and only company to have an authorized MRTP claim (e.g., “95% Less Nicotine”) for a combustible tobacco product.

3. The “short and distort” article also incorrectly states that British American Tobacco (BAT) supposedly terminated its prior research agreement with 22nd Century because of the expiration of a portion of the QPT gene patents that are supposedly essential for the Company's Vector 21-41 VLNC tobacco. **The true facts are that the QPT gene and the Company's Vector 21-41 VLNC tobacco were never part of the BAT research agreement.** That said, only a portion of the QPT patents expired in 2018 and, as admitted by the Big Tobacco companies (see above) and as detailed in 22nd Century's 2018 SEC Form 10-K, **the QPT patents, by themselves, are not sufficient to create VLNC tobacco.** What's more, as stated previously, the Company's proprietary Vector 21-41 VLNC tobacco also continues to enjoy *plant variety protection* through the year 2023. In reality, BAT was trying to create a non-GMO VLNC tobacco plant under its prior research agreement with 22nd Century because GMO plants are not able to be commercialized in the European Union market. BAT was not successful in its research. Subsequently, however, 22nd Century succeeded where BAT failed; 22nd Century publicly announced last year that 22nd Century has developed proprietary non-GMO very low nicotine tobacco plants in both the flue-cured (bright) and burley tobacco varieties. Thus, once again, 22nd Century has been able to achieve what Big Tobacco companies have not been able to achieve in the unique world of VLNC tobacco.

4. The short seller's “hit piece” article also falsely and wrongfully accuses 22nd Century and its CEO, Henry Sicignano, of supposedly “stealing” the IP rights of Global Tobacco. The true facts are that Global Tobacco and 22nd Century previously had a business disagreement that was resolved with a settlement rather than wasting resources litigating the issue, after which Global Tobacco separately proposed that 22nd Century contract manufacture Global's little cigar tobacco products. Thus, Global Tobacco is now a customer of 22nd Century's NASCO manufacturing facility. It is completely false for the “short and distort” article to allege that the manufacturing contract between Global Tobacco and 22nd Century is somehow not an arms' length contract. All

of 22nd Century's business dealings, whether in contract manufacturing or otherwise, are done on an arms' length basis, including but not limited to the Global Tobacco contract.

5. The "short and distort" article also states that 22nd Century has paid authors to write stock promotion articles; subsequently, this allegation has been used to file class action and derivative lawsuits. 22nd Century has previously publicly stated and continues to assert that the claims made in the on-going class action and shareholder derivative cases related to such matters are frivolous, meritless and that 22nd Century and the individual defendants have substantial legal and factual defenses to such claims.

6. Finally the self-serving "hit piece" article falsely alleges that 22nd Century is supposedly under SEC investigation. As 22nd Century has publicly stated on several occasions, 22nd Century has not received any notice of, and the Company has no knowledge of, any enforcement proceeding against 22nd Century by the SEC or any other regulator.

In summary, the true facts are that (i) 22nd Century remains the ONLY source in the world for VLNC tobacco plants that meet the FDA's planned nicotine reduction rule; (ii) a vibrant and *growing* IP portfolio protects 22nd Century's technology and proprietary VLNC tobacco; (iii) 22nd Century has developed non-GMO flue cured (bright) and burley VLNC tobacco plants when Big Tobacco companies have failed to do so; (iv) Big Tobacco companies have publicly recognized 22nd Century's IP and VLNC tobacco as being dominant in this field; (v) upon approval by the FDA, 22nd Century will be the first and only company to have an authorized MRTP claim (e.g., "95% Less Nicotine") for a combustible tobacco product; and (vi) 22nd Century continues to operate the Company in compliance with all applicable laws, rules and regulations.

"By publishing such a grossly misleading 'hit piece,' the anonymous short seller attempts to personally profit by creating a self-fulfilling prophecy – of a declining share price of a target company," explained Henry Sicignano III, President and Chief Executive Officer of 22nd Century Group. "We are done tolerating this sort of anonymous and self-serving stock manipulation and are now considering taking legal action against those responsible for writing and disseminating the fake news articles penned by 'Fuzzy Panda.'"

Mr. Sicignano concluded, "**22nd Century's proprietary technology portfolio, financial resources, regulatory prospects, and commercial opportunities have never been stronger.** We trust that anyone interested in 22nd Century will ignore the grossly misleading articles published by anonymous self-professed short sellers of the Company's stock and will instead reference the large volume of public information – from credible, independent sources – that is available on www.xxiicentury.com. We are confident that investors who conduct their own due diligence will indeed conclude that 22nd Century is a truly remarkable company... well on its way to disrupting the entire tobacco industry."

About 22nd Century Group, Inc.

22nd Century is a plant biotechnology company focused on technology which allows it to increase or decrease the level of nicotine in tobacco plants and the level of cannabinoids in hemp/cannabis plants through genetic engineering and plant breeding. The Company's primary mission in tobacco is to reduce the harm caused by smoking. The Company's primary mission in hemp/cannabis is to develop proprietary hemp/cannabis strains for important new medicines and agricultural crops. Visit www.xxiicentury.com for more information.

Cautionary Note Regarding Forward-Looking Statements: This press release contains forward-looking information, including all statements that are not statements of historical fact regarding the intent, belief or current expectations of 22nd Century Group, Inc., its directors or its officers with respect to the contents of this press release, including but not limited to our future revenue expectations. The words "may," "would," "will," "expect," "estimate," "anticipate," "believe," "intend" and similar expressions and variations thereof are intended to identify forward-looking statements. We cannot guarantee future results, levels of activity or performance. You should not place undue reliance on these forward-looking statements, which speak only as of the date that they were made. These cautionary statements should be considered with any written or oral forward-looking statements that we may issue in the future. Except as required by applicable law, including the securities laws of the United States, we do not intend to update any of the forward-looking statements to conform these statements to reflect actual results, later events or circumstances, or to reflect the occurrence of unanticipated events. You should carefully review and consider the various disclosures made by us in our annual report on Form 10-K for the fiscal year ended December 31, 2018, filed on March 6, 2019, including the section entitled "Risk Factors," and our other reports filed with the U.S. Securities and Exchange Commission which attempt to advise interested parties of the risks and factors that may affect our business, financial condition, results of operation and cash flows. If one or more of these risks or uncertainties materialize, or if the underlying assumptions prove incorrect, our actual results may vary materially from those expected or projected.

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