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New Study Again Shows 22nd Century's Reduced Nicotine Content Cigarettes Reduce Cigarette Consumption and Increase Smoking Cessation

- Reduced nicotine cigarettes increase cessation, decrease consumption, decrease dependence, and reduce toxicants
- Study dispels common misconception that reduced nicotine cigarettes worsen general health and mental health problems

BUFFALO, N.Y., Nov. 07, 2022 (GLOBE NEWSWIRE) -- 22nd Century Group, Inc. (Nasdaq: [XXII](#)), a leading agricultural biotechnology company dedicated to improving health with reduced nicotine tobacco, hemp/cannabis, and hops advanced plant technologies, highlighted a recent [study](#) that found switching to 22nd Century's reduced nicotine content (RNC) cigarettes "reduces toxicant exposure and increases smoking cessation without worsening mental health among smokers with mood or anxiety disorders."

The study conclusively dispelled a common misconception that RNC's may exacerbate general health and mental health problems. The study also concluded that a national nicotine reduction policy for cigarettes will likely result in reduced nicotine absorption and likely result in greater smoking cessation from smokers with mood and anxiety disorders.

The study examined adult smokers with a current or lifetime anxiety or unipolar mood disorder. The participants were randomly assigned to smoke conventional cigarettes or 22nd Century's RNC research cigarettes. Adult smokers who were assigned to smoke 22nd Century's RNC cigarettes had significantly lower cigarette consumption, lower cigarette dependence, lower plasma cotinine (metabolite of nicotine), and lower exhaled carbon-monoxide than smokers assigned to the conventional group.

At the end of the study, despite having selected only participants not intending to stop smoking, those randomized to the group using 22nd Century's RNC cigarettes were more likely to have quit smoking.

"Study after study, reduced nicotine cigarettes are shown to be beneficial to adult smokers. The combination of reduced nicotine cigarettes and a proposed nicotine standard have the potential to forever change the trajectory of public health by helping adult smokers smoke less," said James A. Mish, chief executive officer of 22nd Century Group. "Based on last week's comments from FDA's Center for Tobacco Products Director, Dr. Brian King, we are confident the FDA will use its existing authority to advance both a reduced nicotine policy and a menthol ban. These policies and 22nd Century's reduced nicotine cigarettes are expected to save millions of lives and increase the chances that current smokers quit. Our VLN[®] reduced nicotine content cigarettes are backed by clear science and evidence which support FDA's proposed product standards and are the only FDA-authorized combustible product able to meet the stringent reduced nicotine levels determined by the FDA to be 'minimally or non-addictive'."

In related news, a [webinar](#) hosted by Mitchell Hamline School of Law's Public Health Law Center on November 3, 2022, featured FDA's Center for Tobacco Product (CTP) Director Dr. Brian King publicly stating that the [proposed menthol standard](#) remains a key priority for him, the FDA, and CTP. The FDA is currently in the process of reviewing the comments they received as they move forward with the proposed rule. Dr. King also noted that the FDA remains committed to using its regulatory authority to protect public health and intends to finalize a nicotine standard for the maximum level of nicotine allowed in combusted tobacco products. The reduced nicotine rule is of high priority for the FDA as it has profound health benefits in terms of preventing initiation of smoking and promoting cessation for current smokers and a huge potential to have a positive impact on public health.

22nd Century believes that the [menthol cigarette ban](#) could leave VLN[®] Menthol King as the only combustible menthol cigarette on the market, providing a critical off-ramp to help current menthol smokers to smoke less. The

Company expects VLN® Menthol King reduced nicotine cigarettes to be exempted from FDA's menthol ban under procedures detailed in FDA's proposed rule [announced](#) April 28, 2022. 22nd Century's VLN® cigarette products are the only FDA-authorized combustible cigarette able to meet the stringent reduced nicotine content product standard under the FDA's [Comprehensive Plan](#) requiring that all cigarettes be made "minimally or non-addictive."

About 22nd Century Group, Inc.

22nd Century Group, Inc. (Nasdaq: [XXII](#)) is a leading agricultural biotechnology company focused on tobacco harm reduction, reduced nicotine tobacco and improving health and wellness through plant science. With dozens of patents allowing it to control nicotine biosynthesis in the tobacco plant, the Company has developed proprietary reduced nicotine content (RNC) tobacco plants and cigarettes, which have become the cornerstone of the [FDA's Comprehensive Plan](#) to address the widespread death and disease caused by smoking. The Company received the first and only FDA MRTP authorization of a combustible cigarette in December 2021. In tobacco, hemp/cannabis, and hop plants, 22nd Century uses modern plant breeding technologies, including genetic engineering, gene-editing, and molecular breeding to deliver solutions for the life science and consumer products industries by creating new, proprietary plants with optimized alkaloid and flavonoid profiles as well as improved yields and valuable agronomic traits.

Learn more at [xxiicentury.com](#), on [Twitter](#), on [LinkedIn](#), and on [YouTube](#).

Learn more about VLN® at [tryvln.com](#).

Cautionary Note Regarding Forward-Looking Statements

Except for historical information, all of the statements, expectations, and assumptions contained in this press release are forward-looking statements. Forward-looking statements typically contain terms such as "anticipate," "believe," "consider," "continue," "could," "estimate," "expect," "explore," "foresee," "goal," "guidance," "intend," "likely," "may," "plan," "potential," "predict," "preliminary," "probable," "project," "promising," "seek," "should," "will," "would," and similar expressions. Actual results might differ materially from those explicit or implicit in forward-looking statements. Important factors that could cause actual results to differ materially are set forth in "Risk Factors" in the Company's Annual Report on Form 10-K filed on March 1, 2022, and in the Company's Quarterly Report filed on August 9, 2022. All information provided in this release is as of the date hereof, and the Company assumes no obligation to and does not intend to update these forward-looking statements, except as required by law.

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