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22nd Century Group Secures Exclusive Agreement with CannaMetrix to Accelerate Commercialization of New, Disruptive Hemp/Cannabis Plant Lines and Intellectual Property

High-throughput technology will dramatically advance and reduce timeframe for bringing valuable, commercial hemp/cannabis plant lines and intellectual property to market in two years

WILLIAMSVILLE, N.Y., March 03, 2021 (GLOBE NEWSWIRE) -- 22nd Century Group, Inc. (NYSE American: [XXII](#)), a leading plant-based, biotechnology company that is focused on tobacco harm reduction, very low nicotine content tobacco, and hemp/cannabis research, announced today that it has secured an exclusive agreement with [CannaMetrix](#), LLC for the use of their proprietary, human cell-based testing CannaMetrix EC50Array™ technology that will enable 22nd Century to accelerate the commercialization of new, disruptive hemp/cannabis plant lines and intellectual property.

Since reporting third quarter earnings, 22nd Century has refocused its hemp/cannabis strategy to target the upstream segments of the cannabinoid value chain. In particular, the Company seeks to accelerate the delivery of valuable, commercial-scale plant lines and intellectual property for the life science, consumer product, and pharmaceutical end-use markets. With the addition of CannaMetrix, 22nd Century has now secured four out of the five key partnerships needed to maximize each component in the upstream segment of the cannabinoid value chain: plant profiling (CannaMetrix), plant biotechnology ([KeyGene](#)), plant cultivation (Panacea-Needle Rock Farm), and ingredient extraction/purification ([Panacea](#)). The Company is also in final discussions with top-tier, plant breeders that will be announced soon.

“22nd Century is extremely excited to add CannaMetrix into our secured network of value chain partners to increase the speed at which we develop and offer disruptive plant lines and intellectual property for the hemp/cannabis industry. For example, a plant line that would typically take ten years or longer to develop can now be achieved in two years,” said James A. Mish, chief executive officer of 22nd Century Group. “As we monetize our current IP portfolio starting in 2021, our upstream hemp/cannabis partnerships will enable us to rapidly offer additional disruptive, commercially valuable plant lines at large scale and increased, stable yields to very attractive hemp/cannabis end-use markets. We are excited and absolutely confident in the future innovation and value creation that will stem from these coordinated strategic partnerships.”

“We are thrilled to collaborate with 22nd Century Group,” stated Harold Smith, Ph.D. founder, and chief executive officer of CannaMetrix. “They are the ideal partner, bringing decades-long experience in plant biotechnology with unmatched ability in developing valuable, commercial plant lines. We believe that through this exclusive partnership the development of new hemp/cannabis lines for large-scale cultivation and production will advance at a rapid pace and transform the hemp/cannabis industry.”

CannaMetrix’s proprietary CannaMetrix EC50Array™ technology serves as a high-throughput roadmap for developing new hemp/cannabis plant lines with tailor-made cannabinoid and terpenoid profiles for use in the life science, consumer product, and pharmaceutical markets. The human cell-based assay has the ability to measure and validate the potency and efficacy of cannabinoids and/or terpenoids through defined biomarkers and receptor activity, and can rapidly identify optimum plant profiles by measuring the potency and effect on the human cell system.

About CannaMetrix, LLC.

Founded in 2016, CannaMetrix, LLC is a leader in gene and cell engineering. Their method development has focused on rapid, human cell-based testing with their proprietary CannaMetrix EC50Array™ technology. This

technology measures, validates, and quantifies the potency and efficacy of cannabinoids and terpenoids derived from plants or synthetic products in living human cells. CannaMetrix addresses an unmet need in the industry with their rapid test of cannabis product potency based on actual biological responses to products that currently can only be inferred from chemical composition analyses of plant materials. Characterizing products by their chemical content and ability to evoke defined biological effects will be crucial to the development of differentiated products for the consumer end-market. The EC50Array™ technology will help accelerate development and calibrate cannabis lines for specific applications.

About 22nd Century Group, Inc.

22nd Century Group, Inc. (NYSE American: [XXII](#)) is a leading plant biotechnology company focused on technologies that alter the level of nicotine in tobacco plants and the level of cannabinoids in hemp/cannabis plants through genetic engineering, gene-editing, and modern plant breeding. 22nd Century's primary mission in tobacco is to reduce the harm caused by smoking through the Company's proprietary reduced nicotine content tobacco cigarettes – containing 95% less nicotine than conventional cigarettes. The Company's primary mission in hemp/cannabis is to develop and commercialize proprietary hemp/cannabis plants with valuable cannabinoid profiles and desirable agronomic traits.

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

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 11, 2020, and in its subsequently filed Quarterly Report on Form 10-Q. 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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