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Emerald Bioscience Reports its Proprietary Analog of Cannabidiol, Cannabidiol-Valine-Hemisuccinate (CBDVHS), Exhibits Greater Potency and Antifibrotic Activity than Cannabidiol (CBD) in Biomarker Studies in Human Ocular Donor Tissues

CBDVHS Also Displayed Superior Anti-Inflammatory Activity When Compared to CBD Indicating Potential Use in Diseases of the Retina

Unlike CBD, CBDVHS was not Associated with Biomarkers Related to Elevation of Intraocular Pressure (IOP)

LONG BEACH, CA, Dec. 09, 2019 (GLOBE NEWSWIRE) -- via NEWMEDIAWIRE – Emerald Bioscience, Inc. (OTCQB: EMBI), a biopharmaceutical company focused on developing bioengineered cannabinoid-based therapeutics to address global medical indications, announced today that data generated by Glauconix Biosciences, Inc. has shown significant anti-inflammatory and anti-fibrotic activity in ocular tissue with the proprietary analog of CBD (CBDVHS) when compared to cannabidiol (CBD), indicating therapeutic potential as a neuroprotectant, especially in diseases of the retina.

Additionally, CBD was associated with biomarkers related to the elevation of IOP while CBDVHS was not associated with elevating IOP at anti-fibrotic concentrations. CBDVHS is the proprietary analog of CBD licensed by Emerald Bioscience from the University of Mississippi.

Researchers have demonstrated that CBD possesses anti-inflammatory and anti-fibrotic activity in a variety of tissues. Recently, a published report from the University of Indiana cited findings that CBD was associated with a rise in IOP in a murine study assessing cannabinoid activity in the eye. In the mouse model, CBD led to ocular hypertension, a condition sometimes associated with the development of glaucoma, retinal damage, and irreversible vision loss.

The goals of this study were to assess the efficacy of CBDVHS by analyzing the impact on biomarkers of inflammation and fibrosis. Additionally, the study team also assessed biomarkers associated with safety; namely biomarkers associated with an increase in IOP. The data showed that CBDVHS was significantly more potent than CBD in reducing biomarkers associated with both inflammation and fibrosis while not displaying an adverse impact on biomarkers associated with elevating IOP. Conversely, significantly more CBD was needed to exert an antifibrotic/anti-inflammatory effect and that in turn resulted in

elevating biomarkers associated with a rising IOP.

“We have previously used the Glauconix Biosciences’ 3D-HTM™ technology to validate the mechanism of action of NB1111, the THC prodrug being developed for use in glaucoma. Growing our database to include CBD was a natural extension to assess the potential safety and efficacy of administering a CBD analog directly into the eye,” noted Karen Torrejon, Ph.D., Founder and Chief Scientific Officer of Glauconix. “Given the predictive value associated with these biomarkers in the eye, further studies to understand the mechanistic differences between CBD and CBDVHS, as well as advancing CBDVHS into *in vivo* studies, ahead of potential human testing would be beneficial. We plan to submit this data for presentation at an upcoming major ophthalmology meeting.”

“Our company is focused on becoming the premier cannabinoid company in developing precision medicines by leveraging the bioengineered library of compounds we have licensed from the University of Mississippi,” reported Brian Murphy, MD, CEO of Emerald Bioscience. “We believe these molecules provide the ability to better calibrate dose exposure and formulations in the pursuit of enhanced targeting of disease resulting in the optimization of safety and efficacy. Next steps for our CBD analog will be to explore activities in tissue outside of the eye. In parallel, we continue the development of the prodrug of THC, NB1111, for the management and treatment of glaucoma with clinical studies targeted for 2020 in Australia.”

About Glauconix Biosciences

Glauconix Biosciences is a leading developer of ophthalmic ex-vivo dynamic 3D human tissue models for accelerating therapeutic innovation and drug discovery. Their 3D tissue models can de-risk ophthalmic assets and expedite drug development. Glauconix adds value to their clients and partners by expediting early identification and validation of effective compounds or biologics in the preclinical phase and those entering clinical trials. To learn more about Glauconix Biosciences, visit www.glauconix-biosciences.com

About Emerald Bioscience, Inc.

Emerald Bioscience is a biopharmaceutical company headquartered in Long Beach, California, focused on the discovery, development, and commercialization of bioengineered cannabinoid-based therapeutics for significant unmet medical needs in global markets. With proprietary technology licensed from the University of Mississippi, Emerald is developing novel ways to deliver cannabinoid-based drugs for specific indications with the aim of optimizing the clinical effects of such drugs while limiting potential adverse events. Emerald's strategy is to clinically develop a number of proprietary biosynthetic compounds, alone or in combination with corporate partners.

FORWARD LOOKING STATEMENTS

This press release contains forward-looking statements, including statements regarding our product development, business strategy, research plans, and timing of clinical trials. Such statements and other statements in this press release that are not descriptions of historical facts are forward-looking statements that are based on management’s current expectations and assumptions and are subject to risks and uncertainties. If such risks or uncertainties materialize or such assumptions prove incorrect, our business, operating results, financial

condition and stock price could be materially negatively affected. In some cases, forward-looking statements can be identified by terminology including “anticipated,” “contemplates,” “goal,” “focus,” “aims,” “intends,” “believes,” “can,” “could,” “challenge,” “predictable,” “will,” “would,” “may” or the negative of these terms or other comparable terminology. We operate in a rapidly changing environment and new risks emerge from time to time. As a result, it is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements the Emerald may make. Risks and uncertainties that may cause actual results to differ materially include, among others, our capital resources, uncertainty regarding the results of future testing and development efforts and other risks that are described in the Risk Factors section of Emerald’ most recent annual or quarterly report filed with the Securities and Exchange Commission. Except as expressly required by law, Emerald disclaims any intent or obligation to update these forward-looking statements.

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