

# **Nemus Bioscience Confirms NB1111 Mechanism of Action and Reports Positive Results from Glaucoma Biomarker Studies in Human Donor Tissues**

**Prodrug of THC Improves Fluid Outflow Across Trabecular Meshwork and Positively Impacts Disease Markers Associated with Glaucoma-Related Fibrosis and Inflammation**

**Changes in Neovascularization Markers Indicate Potential Utility of NB1111 in Diabetic Retinopathy and Macular Degeneration**

LONG BEACH, CA, March 12, 2019 (GLOBE NEWSWIRE) -- via NEWMEDIWIRE – Nemus Bioscience, Inc. (OTCQB: NMUS), 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 validated the mechanism of action of NB1111, Nemus' proprietary prodrug of tetrahydrocannabinol (THC-valine-hemisuccinate, or THCVHS), in lowering intraocular pressure (IOP), a defining symptom of hypertensive glaucoma.

The analyses involved a laboratory model using human donor cells that contained the ocular tissue responsible for helping to regulate intraocular pressure, the trabecular meshwork. The studies included a comparison of the activity of tetrahydrocannabinol (THC), the biologically active part of NB1111, in facilitating fluid drainage resulting in lower IOP as well as lowering levels of biomarker molecules associated with inflammation and fibrosis, two processes associated with tissues that are damaged in a disease setting – including glaucoma and other ocular disorders

Researchers have previously demonstrated that ocular tissues possess a high degree of cannabinoid receptors, especially on organs that help regulate IOP. Given that THC binds both types of cannabinoid receptors, these data point to a unique mechanism of action whereby the ability of THC to bind to cannabinoid receptors results in a beneficial decline in IOP due to enhanced fluid drainage. When IOP is left unchecked, there is often damage to the optic nerve, leading to irreversible vision loss.

Additionally, biomarkers associated with inflammation and fibrosis in tissues affected by glaucoma were significantly decreased, pointing to anti-inflammatory and anti-fibrotic activities that are often associated with the cannabinoid class of molecules in other disease-states.

The studies also demonstrated that two biomarkers associated with neovascularization, a process of new blood vessel formation that can lead to vision loss or retinal detachment, were significantly lowered by exposure to THC. Neovascularization is often associated with

diabetic retinopathy and macular degeneration, two leading causes of blindness, especially in older adults.

“The Glauconix Biosciences’ 3D-HTM™ technology was designed to help accelerate drug development by using bioengineered human donor 3D tissue models for target identification and validation, high throughput screening, and drug efficacy with physiological endpoints, such as fluid outflow,” commented Karen Torrejon, Ph.D., Founder and Chief Scientific Officer of Glauconix. “Historically, our technology has exhibited significant predictive value in assessing a drug candidate’s utility and likelihood of clinical success. Nemus’ data helps to provide a rationale for cannabinoid activity in lowering IOP and indicates a potential for the advancement of NB1111 into clinical testing.”

“These studies were significant across a spectrum of findings and we plan on submitting the data to an upcoming major ophthalmology meeting. Micro-quantities of cannabinoid delivered directly into the eye could have the dual benefit of a therapeutic effect while mitigating risk of systemic adverse events through direct tissue targeting, an advantage associated with using bioengineered molecules,” remarked Brian Murphy, MD, CEO and Chief Medical Officer of Nemus. “The impact on markers of ocular neovascularization also reinforces our commitment to test our cannabinoid-based ocular platform of NB1111, the prodrug of THC, and NB2222, the analog of cannabidiol (CBD), in ocular indications beyond glaucoma.”

### **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](http://www.glauconix-biosciences.com)

### **About Nemus Bioscience, Inc.**

The Company 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, Nemus 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. Nemus' strategy is to explore the use of proprietary biosynthetic compounds, alone or in combination with corporate partners.

Nemus is part of the [Emerald Health group](#), which comprises multiple companies focused on developing pharmaceutical, botanical, and nutraceutical products providing wellness and medical benefits by interacting with the human body’s endocannabinoid system.

For more information, visit [www.nemusbioscience.com](http://www.nemusbioscience.com).

### **FORWARD LOOKING STATEMENTS**

This press release contains forward-looking statements, including statements regarding our product development, business strategy, product milestones, EHS commitment to purchase shares in the open market, timing of clinical trials and commercialization of cannabinoid-

based therapeutics. 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 Nemus 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 Nemus' most recent annual or quarterly report filed with the Securities and Exchange Commission. Except as expressly required by law, Nemus disclaims any intent or obligation to update these forward-looking statements.

This news release shall not constitute an offer to sell, or the solicitation of an offer to buy, any securities, nor shall there be any sales of securities in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such jurisdiction. Any securities that may be offered in the United States will be offered only to accredited investors pursuant to Regulation D of the Securities Act.

#### CONTACT

Nemus Investor Relations  
PCG Advisory Group  
Adam Holdsworth  
Email: [adamh@pcgadvisory.com](mailto:adamh@pcgadvisory.com)  
Phone: 646-862-4607

Doug Cesario  
Chief Financial Officer  
Email: [doug@nemusbio.com](mailto:doug@nemusbio.com)  
Phone: 949-336-3437



Source: Nemus Bioscience, Inc.