

Emerald Health Pharmaceuticals Demonstrates Potential Disease-Modifying Activity of Novel Product Candidate with Multi-Modal Mechanism of Action in Parkinson's Disease

Data published in peer-reviewed journal, *Molecular and Cellular Neuroscience*, show neuroprotective and neurogenic activity of proprietary product candidate, EHP-102

SAN DIEGO, CA, February 9, 2021 – Emerald Health Pharmaceuticals Inc. (EHP or the Company), a clinical-stage biotechnology company developing a new class of medicines to treat neurodegenerative and other diseases with unmet medical needs, has published a scientific article in the peer-reviewed journal, *Molecular and Cellular Neuroscience*, highlighting data supporting the potential of EHP's drug product candidate, EHP-102, to treat Parkinson's disease (PD). EHP-102 employs a multi-modal mechanism of action, which may offer a new path to better treatment outcomes.

The active pharmaceutical ingredient in EHP-102, known as VCE-003.2, is a patented synthetic aminoquinone derivative of cannabigerol (CBG), a non-psychoactive cannabinoid, chemically modified to act as a modulator of peroxisome proliferator activated receptor gamma (PPAR γ) and also induce activation of two important biologic pathways in neuronal stem cells. This multi-modal mechanism of action provides neuroprotection in neuroinflammatory diseases and enhances neurogenesis (the regeneration of nerve cells) in the subventricular zone of the brain, providing the potential to restore the loss of nerve cells associated with serious neurologic diseases such as Parkinson's disease, Huntington's Disease (HD), and others.

The results of the study demonstrated that oral administration of EHP-102 in 6-OH-dopamine-lesioned mice, a validated Parkinson's disease model, reduced inflammation-driven neuronal deterioration, completely attenuated neuronal death and restored the concentrations of dopamine in the striatum, a part of the brain involved in regulating movement. These effects resulted in significant improvements in the motor performance of the diseased mice.

"Neurologic disease therapy has become one of the leading areas of interest for drug development due to the increasing incidence of these types of diseases and the inability of current treatment paradigms to fundamentally address underlying disease processes," said Jim DeMesa, MD, MBA, President and CEO of EHP. "With multiple distinct mechanisms of action facilitated by our second pipeline drug, EHP-102, we see the possibility to notably shift the treatment of critical diseases and we are progressively moving this agent toward clinical trials."

The published scientific paper is titled, "Neuroprotection with the cannabigerol quinone derivative VCE-003.2 and its analogs CBGA-Q and CBGA-Q-Salt in Parkinson's disease using 6-hydroxydopamine-lesioned mice." This research was led by Prof. Javier Fernandez-Ruiz, MD, PhD (University Complutense of Madrid, Spain). The peer-reviewed paper was co-authored by EHP's Chief Scientific Officer, Eduardo Muñoz, MD, PhD and Chief Operating Officer, Alain Rolland, PharmD, PhD, as well as other senior scientists from EHP.

“Patients with Parkinson’s disease suffer from devastating physical and psychological symptoms,” said Professor Muñoz. “There is currently no cure for Parkinson’s disease, so the results of this study and others, which demonstrate the neuroprotective and neurogenic effects of EHP-102, are very encouraging as a potential treatment for these patients.”

The results of this study are consistent with previous studies which demonstrated the potential disease-modifying effects of EHP-102 in both PD and HD. The other cannabinoid derivatives tested in this study were novel quinone derivatives of cannabigerolic acid (CBGA), CBGA-Q. The results confirm the selection of EHP-102 as the lead product candidate for the treatment of PD and HD, with the other novel derivatives from CBGA also showing promising effects.

EHP-102 is also being developed for Huntington’s disease and has shown similar disease-modifying effects in several validated HD models. EHP is currently advancing the formulation and manufacturing of EHP-102 in preparation for nonclinical studies required to advance to clinical development in both PD and HD.

About Parkinson’s Disease, Huntington’s Disease and EHP-102

Parkinson’s disease is currently an incurable neurodegenerative disorder affecting nearly ten million people worldwide. Primarily it is a disease where nerve cells stop producing a substance called dopamine, which helps transmit impulses from the brain to the muscles. It results in tremors, slowness in movement, impaired balance, and muscle stiffness and rigidity (firmness, inflexibility). These symptoms get worse over time. In multiple nonclinical studies in validated models EHP-102 has demonstrated anti-inflammatory and neuroprotective effects, including a reduction in the loss of the nerves which produce dopamine, the main issue with Parkinson’s disease.

Huntington’s disease is a genetic disorder that causes progressive degeneration of nerve cells in the brain. Approximately 30,000 people in the U.S. have symptomatic HD. There is a 50% chance the disease will be passed to an offspring. Symptoms include involuntary movements, difficulty swallowing, slurred speech and choking. Activities of daily living become extremely difficult. Cognitive symptoms include low self-esteem, anxiety, aggression, dementia and psychosis. Death usually results from secondary causes such as choking and infection. Current treatment is mostly directed at symptomatic relief with attempts to suppress the movement disorders. In multiple nonclinical studies in validated models, EHP-102 has demonstrated anti-inflammatory and neuroprotective effects, including the regeneration of nerve cells in HD models.

About Emerald Health Pharmaceuticals Inc.

Emerald Health Pharmaceuticals is developing proprietary product candidates to treat CNS, autoimmune, and other diseases. The Company’s technology platform consists of two families of patented new chemical entities derived from synthetic cannabidiol (CBD) and cannabigerol (CBG), two of the non-psychoactive cannabinoids, chemically modified

through rational drug design to create new molecules that affect validated receptors and pathways in the body which are pertinent to targeted diseases. EHP-101 is in Phase 2 clinical development for the treatment of systemic sclerosis, a severe form of scleroderma, and multiple sclerosis. It has received Orphan Drug designation in the US and EU and Fast Track status in the US for systemic sclerosis. EHP-102 is in preclinical development and focused on treating Parkinson's disease and Huntington's disease. It has received Orphan Drug designation in the US and EU for Huntington's disease. For more information, go to <http://www.emeraldpharma.life> or contact EHP via email at info@emeraldpharma.life.

To the extent statements contained in this news release are not descriptions of historical facts regarding Emerald Health Pharmaceuticals Inc. they should be considered "forward-looking statements," as described in the private securities litigation reform act of 1995, that reflect management's current beliefs and expectations. You can identify forward-looking statements by words such as "anticipate," "believe," "could," "estimate," "expect," "forecast," "goal," "hope," "hypothesis," "intend," "may," "plan," "potential," "predict," "project," "should," "strategy," "will," "would," or the negative of those terms, and similar expressions that convey uncertainty of future events or outcomes. Forward-looking statements contained in this news release include, but are not limited to, statements regarding: (i) the success and timing of our product development activities and clinical trials; (ii) our ability to develop our product candidates; (iii) our plans to research, discover, evaluate and develop additional potential product, technology and business candidates and opportunities; (iv) the anticipated timing of clinical data availability; (v) our ability to meet our milestones; and (vi) our expectations regarding our ability to obtain and maintain intellectual property protection. Forward-looking statements are subject to known and unknown factors, risks and uncertainties that may cause actual results to differ materially from those expressed or implied by such forward-looking statements. Undue reliance should not be placed on forward-looking statements. We undertake no obligation to update any forward-looking statements. Emerald Health Pharmaceuticals' investigational drug products have not been approved or cleared by the FDA.