Emerald Health Pharmaceuticals Presents Preclinical Data for its Lead Drug Candidate, EHP-101, in Both Multiple Sclerosis and Scleroderma

EHP-101 demonstrates potential for remyelination and disease modification in multiple sclerosis models

EHP-101 prevents skin and lung fibrosis in a bleomycin model of scleroderma

SAN DIEGO, CA, July 03, 2018 – Emerald Health Pharmaceuticals Inc. (EHP), a company developing medicines based on cannabinoid science, presented preclinical data for its lead drug product candidate, EHP-101, at the 28th Annual Symposium of the International Cannabinoid Research Society (ICRS). EHP-101 is based on a patented synthetic cannabidiol (CBD)-derived new chemical entity (NCE) that is initially being developed for multiple sclerosis (MS) and scleroderma (SSc).

Novel data were presented about the mechanism of action of EHP-101 in MS and SSc. A dose-dependent signature of EHP-101 was reported in an animal model of MS. In the SSc bleomycin model, novel data showed recovery from vascular damage in fibrotic skin of mice. These results differentiate EHP-101 from other CB_2 agonists in development for the treatment of both diseases. Moreover, an update on preclinical development of EHP-101 was presented, for which EHP plans to initiate a Phase I clinical study in 2018.

"The development of novel treatments aimed at axonal repair and remyelination remains a key objective in the treatment of MS," said Jim DeMesa, M.D., Chief Executive Officer of EHP. "Our scientists have demonstrated EHP-101's potential to address this significant unmet medical need and possibly transform the treatment of MS, in addition to its potential as a disease-modifying treatment for scleroderma."

EHP-101 for the Treatment of Multiple Sclerosis

Preclinical data for MS demonstrated that EHP-101, a product candidate based on the NCE VCE-004.8, can prevent microgliosis, demyelination, and nerve cell damage, as well as potentially enhance remyelination. These findings were presented by Carmen Navarrete, Ph.D., in an oral presentation titled, *"Effect of Oral VCE-004.8, A Cannabidiol Quinol Derivative On Experimental Autoimmune Encephalomyelitis*", at the 28th Annual ICRS Symposium in Leiden, The Netherlands.

The studies evaluated EHP-101, a product containing a novel synthetic CBD derivative acting as a PPARγ/CB_2 dual agonist that improves symptomatology in experimental autoimmune encephalomyelitis (EAE) and Theiler's murine encephalitis virus (TMEV) models of MS. EHP-101 was shown to prevent microgliosis, demyelination, and nerve cell damage, and to potentially enhance remyelination, through the induction of the hypoxia inducible factor (HIF)-dependent neuroprotective pathway. In addition, in the EAE model, EHP-101 showed an excellent dose-dependent efficacy profile. In the spinal cord, a transcriptomic analysis demonstrated that EHP-

101 downregulated the expression of several genes – including chemokines, cytokines, and adhesion molecules – that are closely associated with MS pathophysiology.

EHP-101 for the Treatment of Scleroderma

A poster titled, *"Oral EHP-101 Alleviates Skin and Lung Fibrosis in Bleomycin Model of Scleroderma",* presented by Adela Garcia, Ph.D., expanded upon previously reported research demonstrating that EHP-101 can prevent skin and lung fibrosis in bleomycin-challenged mice with efficacy comparable to ajulemic acid. Oral EHP-101, but not ajulemic acid, also recovered bleomycin-induced vascular damage. These results differentiate EHP-101 from other CB_2 agonists in development for the treatment of SSc.

EHP-101 reduced dermal thickness and prevented the infiltration of inflammatory cells in a dose-dependent manner. Additionally, transcriptomic and qPCR analyses demonstrated that EHP-101 downregulated expression of several key genes and plasmatic biomarkers associated with fibrosis and inflammation. Collectively, these results indicate that EHP-101 represents a novel compound for the management and possible treatment of scleroderma and, potentially, other fibrotic diseases.

About EHP-101

EHP-101 is a drug product candidate based on a proprietary aminoquinone NCE derived from CBD. It has been modified to enhance the therapeutic benefits of CBD by increasing PPARγ and CB_2 agonist activity, and also by affecting the hypoxia inducible factor (HIF) pathway. These receptors have been shown in the scientific literature to be beneficial in preventing neuroinflammation and demyelination in the central nervous system, and fibrogenesis in the periphery. The Company holds patents on EHP-101 and other new chemical entities in this class of synthetic CBD-derived molecules. EHP plans to initiate first-in-human clinical studies with orally-administered EHP-101 later this year.

About Multiple Sclerosis and EHP-101

MS is one of the most common acquired neurological diseases in young adults. The National Multiple Sclerosis Society estimates there are 900,000 patients with MS in the seven major markets. Disease progression is considered the result of two related processes, namely myelin destruction (demyelination) with failure to remyelinate and progressive axonal damage, with little capacity for recovery. Exacerbated innate and adaptive immune responses contribute to the pathophysiology of the disease and the majority of current therapies for MS are directed towards modulation of the immune response. Novel therapies to enable axonal remyelination are urgently needed. Hypoxia inducible factor (HIF)-1α activation may exert anti-inflammatory capabilities and may be also linked to neuroprotection and remyelination. CBD has been shown to have anti-inflammatory, neuroprotective, and anti-oxidant effects that may act on neurodegenerative diseases such as MS, and EHP-101 builds on the effect of this natural cannabinoid. It is an aminoquinone derivative of CBD endowed with dual peroxisome proliferator activated receptor-gamma (PPARγ) and cannabinoid receptor type 2 (CB_2) activity, which are both validated

therapeutic targets for MS. EHP-101 also targets the HIF pathway, expanding the rationale for its development as a novel MS drug.

About Scleroderma

Systemic scleroderma (or systemic sclerosis, SSc) is a rare and chronic autoimmune disease, causing fibrosis of skin and internal organs and can also affect blood vessels, muscles, and joints. The tissues of involved organs become hard and fibrous, causing them to function less efficiently. While the symptoms of SSc vary for each person, it can be life-threatening, depending on which parts of the body are affected and the extent of disease. The disease is more common in adults, with an estimated 180,000 people affected in the US. Currently, there are no approved treatments specific to SSc. Current therapies for scleroderma are limited in efficacy and may contain toxicities. New treatments and early diagnosis will be critical to help reduce the symptoms of systemic scleroderma and prevent further damage to the body.

About Emerald Health Pharmaceuticals Inc.

Emerald Health Pharmaceuticals is developing product candidates derived from cannabinoids for the treatment of CNS, autoimmune, and other diseases. EHP has two families of new chemical entities, EHP-101, based on cannabidiol (CBD), and EHP-102, based on cannabigerol (CBG), that it has modified through rational drug design to affect validated receptors pertinent to targeted diseases. EHP-101 is focused on treating neurodegenerative and autoimmune diseases including multiple sclerosis and scleroderma. The company is advancing preclinical development with the intent to launch a Phase I clinical study of EHP-101 in 2018. EHP-102 is in preclinical development and is currently focused on treating Huntington's disease and Parkinson's disease. For more information, visit www.emeraldpharma.life or contact: 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; and (v) our ability to meet our milestones. 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.