PharmaTher Initiates Phase 2 Clinical Trial of Ketamine for the Treatment of Parkinson's Disease

"KET-LID" trial to evaluate ketamine's safety and efficacy in the treatment of levodopa-induced dyskinesia in patients with Parkinson's disease

TORONTO, Oct. 06, 2021 (GLOBE NEWSWIRE) -- PharmaTher Holdings Ltd. (the "Company" or "PharmaTher") (OTCQB: PHRRF) (CSE: PHRM), a clinical-stage psychedelics biotech company, announced today that it has initiated its Phase 2 KET-LID clinical trial of **Ket**amine for the treatment of **L**evodopa-**I**nduced **D**yskinesia in Subjects with Parkinson's Disease. Patient screening and enrollment is expected to begin in October 2021 with data anticipated in late-Q4 2021.

The Phase 2 KET-LID clinical trial is a randomized, double-blind, active placebo-controlled study evaluating the safety, efficacy and pharmacokinetics of ketamine in the treatment of levodopa-induced dyskinesia in patients with Parkinson's disease. The primary and secondary endpoints are the changes in the following: i) total score of the Unified Dyskinesia Rating Scale (UDysRS), ii) total objective score (III, IV) of the UDysRS, iii) total daily OFF times as assessed by subject- completed 24-hour diaries, and iv) Unified Parkinson's Disease Rating Scale (UPDRS) total score of part III (motor) and sum score of Questions 4.1 and 4.2 (dyskinesia) in part IV.

As previously announced on May 17, 2021, an IND for the trial has been approved by the FDA. The Company has completed its clinical trial start-up activities and selection of essential vendors including project management, central laboratory, clinical supply kits and logistics, data management and biostatistics, and clinical site management and monitoring. Clinical trial drug product (ketamine) and active placebo (midazolam) have also been obtained.

For further detail about the KET-LID trial (ClinicalTrials.gov Identifier: NCT04912115), titled "A Multi-Center, Phase II, Randomized, Double-Blind, Prospective, Active Placebo-Controlled Trial of Sub-Anesthetic Intravenous Infusion of Ketamine to Treat Levodopa-Induced Dyskinesia in Subjects with Parkinson's Disease," please visit https://clinicaltrials.gov/ct2/show/NCT04912115?term=PharmaTher&draw=2&rank=1.

If the Phase 2 clinical study is positive, the Company will request a meeting with the FDA to discuss its plan and obtain an agreement to move to a Phase 3 clinical study under the 505(b)2 regulatory pathway in the first half of 2022.

"Initiation of the Phase 2 clinical trial of ketamine to treat Parkinson's disease, or the KET-LID trial, is a significant milestone for PharmaTher and we are excited about the opportunity to advance a potential new therapeutic solution for Parkinson's disease patients," said Fabio Chianelli, CEO of PharmaTher.
There can be no assurance that the FDA will support any potential request for an expedited path to approval or further development for ketamine in the treatment of Parkinson's disease.

Ketamine's Potential In Parkinson's Disease

Ketamine is an FDA-approved N-methyl-D-aspartate (NMDA) receptor-modulating drug that is widely used as an anesthetic agent either alone or in combination with other anesthetic agents [Smith et al, 1987; Pacheco et al, 2014]. The possible therapeutic effect of low-dose ketamine on levodopa-induced dyskinesia (LID) was noted in a retrospective analysis of Parkinson's disease patients who received ketamine for pain relief. During this analysis, it was observed that the patients experienced an improvement in LID lasting several weeks beyond treatment [Sherman et al, 2016]. These results were corroborated in a test of low-dose ketamine in a rodent LID model, and this possible effect has also been examined in a controlled study [Bartlett et al, 2016]. Ketamine may also have additional benefits in the treatment of pain [Niesters et al, 2014] and depression [Diamond et al, 2014; Murrough et al, 2013], which are frequent comorbidities of Parkinson's disease.

Parkinson's disease is a debilitating disorder that affects over 1 million people in the U.S. and more than 7 million people worldwide. There is currently no cure for Parkinson's disease, although some drug combinations are used to treat the disease symptoms. The global Parkinson's disease market is expected to grow from USD $5 billion in 2019 to USD $7.5 billion by the end of 2025 [360iResearch 2020] and it is estimated that the potential market opportunity for LID Parkinson's disease to be over USD $3 billion in the U.S. alone.

About Parkinson's Disease

There is currently no cure for Parkinson's disease. Although the etiology of Parkinson's disease is not fully understood, it is thought to result from loss of pigmented dopaminergic neurons in the Substantia nigra and their striatal projections, leading to dopamine deficiency in the striatum [Schapira and Jenner, 2011]. This ultimately affects the cortico-striatal system that controls movement. As a progressive neurogenerative disorder of the central nervous system that primarily affects the motor nerve system, symptoms of Parkinson's disease may emerge slowly and include tremors, rigidity, bradykinesia, and postural instability [Paulson and Stern, 2004]. Also, patients may experience non-motor symptoms such as autonomic dysfunction (orthostatic hypotension, constipation, bladder dysfunction), psychiatric (depression), cognitive and sensory symptoms (pain)

[Olanow, et al, 2009]. These non-motor symptoms become more common as the disease progresses. Treatments, including levodopa and dopamine agonists, which restore the dopamine deficits in the brain, have been employed for almost 50 years. However, with continued treatment using levodopa, dose-limiting motor side-effects often emerge. This includes the emergence of abnormal involuntary movements termed Levodopa Induced Dyskinesias, which can be identified in about 50% of patients within five years after initiation of levodopa treatment and in almost all patients within ten years post-treatment initiation. These side effects often limit further dose increases in dopaminergic therapy.

About PharmaTher Holdings Ltd.

PharmaTher Holdings Ltd. (OTCQB: PHRRF) (CSE: PHRM) is a clinical-stage psychedelics biotech company focused on the research, development and commercialization of novel uses, formulations and delivery methods of psychedelics, such as ketamine, to treat mental health, neurological and pain disorders. PharmaTher is currently initiating an FDA approved phase 2 clinical study with ketamine to treat Parkinson's disease and is developing a novel microneedle patch for the intradermal delivery of psychedelics.

Learn more at: **PharmaTher.com** and follow us on **Twitter** and **LinkedIn**.

For more information about PharmaTher, please contact:

Fabio Chianelli
Chief Executive Officer
PharmaTher Holdings Ltd.
Tel: 1-888-846-3171
Email: info@pharmather.com
Website: www.pharmather.com

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