Intra-Cellular Therapies Announces Favorable Safety Profile for ITI-214 in a Phase 1/2 Clinical Trial in Patients with Parkinson's Disease

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Results show ITI-214 is associated with clinical signs consistent with improvements in motor symptoms and dyskinesias

NEW YORK, Oct. 23, 2018 (GLOBE NEWSWIRE) -- Intra-Cellular Therapies, Inc. (NASDAQ:ITCI) today announced topline results from the Company's Phase 1/2 clinical study evaluating ITI-214, its potent and selective phosphodiesterase 1 (PDE1) inhibitor, in patients with mild-to-moderate Parkinson's disease (PD) maintained on stable (concomitant) PD medication (e.g., dopamine replacement therapies). The results were presented at the 2018 American Neurological Association Annual Meeting being held in Atlanta, Georgia.

The primary objective of this Phase 1/2, randomized, double-blind, placebo-controlled, multiple ascending dose cohort study was to evaluate the safety and tolerability of ITI-214 and to explore the potential for ITI-214 to treat both motor and non-motor symptoms associated with PD. Topline results demonstrate ITI-214 was generally well-tolerated with a favorable safety profile and clinical signs consistent with improvements in motor symptoms and dyskinesias. The trial was conducted at the Atlanta Center for Medical Research and the Duke Early Phase Research Unit.

"In this trial, once-daily ITI-214 for 7 days was shown to be safe and generally well tolerated across a broad range of doses from 1 mg to 90 mg in subjects currently maintained on dopamine replacement therapy," commented Dr. Daniel Todd Laskowitz, Professor of Neurology and Vice-Chair of the Department of Neurology at Duke University School of Medicine.

"Improvement in motor symptoms and reduction in motor complications (e.g., reduced dyskinesias) were noted with ITI-214 treatment," said Dr. Robert A. Riesenberg, principal investigator at the Atlanta Center for Medical Research, where the trial was conducted. "Several subjects with profound motor impairments improved dramatically while taking ITI-214, only to have these symptoms re-emerge after cessation of ITI-214 treatment."

"ITI-214 is a potent and selective phosphodiesterase 1 (PDE1) inhibitor and represents a novel approach with the potential to address unmet needs in the treatment of Parkinson's disease for improved motor control and potential disease modification. Following the safety and tolerability results in healthy volunteers in our Phase 1 program, we are pleased to announce the favorable safety profile of ITI-214 in patients with Parkinson's disease," said Dr. Sharon Mates, Chairman and CEO of Intra-Cellular Therapies. "We are encouraged by the favorable safety profile and clinical signals in this trial which translate from our pre-clinical studies and support the advancement of the ITI-214 development program in Parkinson's disease."

About the ITI-214-105 Phase 1/2 Clinical Trial

This was a Phase 1/2 randomized, double-blind, placebo-controlled, multiple ascending dose cohort study of ITI-214 in 40 patients with idiopathic PD. Patients with mild to moderate PD (Hoehn and Yahr staging score of 1-3 assessed in the "On" state) who were maintained on stable PD therapy were randomly assigned to placebo or ITI-214 1, 3, 10, 30, and 90 mg administered orally once daily for 7 days. The primary objective was to evaluate the safety and tolerability of ITI-214 in this patient population. All randomized subjects completed the study. No serious adverse events were reported in the trial, and no clinically significant effects of ITI-214 compared to placebo were observed on vital signs, and cardiovascular or laboratory parameters.

The efficacy of ITI-214 in improving motor and non-motor symptoms of PD was measured using multiple scales, providing input from both subjects and site raters. Motor performance was improved in the "On" state by ITI-214 relative to placebo treatment as assessed by the Movement Disorder Society Unified Parkinson's Disease Rating Scale (MDS-UPDRS). ITI-214 reduced scores on the MDS-UPDRS total scale and 2 subscales: Part III - clinician ratings of the motor manifestations of PD, and Part IV- motor complications including dyskinesias. In addition, ITI-214 reduced dyskinesia symptoms as measured by the Unified Dyskinesia Rating Score (UDysRS) and increased total On time and On time without dyskinesias as rated by subjects using the Hauser Patient Motor Diary.

Additional results of study ITI-214-105 will be presented at future meetings.

About ITI-214

ITI-214 is a potent and selective phosphodiesterase 1 (PDE1) inhibitor. As the clinical lead compound in the Company's PDE1 portfolio, ITI-214, has been found to be generally well tolerated with a favorable safety profile in four Phase 1 clinical trials, in healthy volunteers. Inhibitors of PDE1 block the breakdown of cyclic nucleotides (cAMP, cGMP), potentiating downstream intracellular signaling. The PDE1 enzyme is highly active in pathological or disease states, and our PDE1 inhibitors are designed to reestablish normal function in these disease states. PDE1 inhibitors have minimal effect on normal function, only acting when cells in the nervous system are stimulated. These "on-demand" effects make this an exciting and novel approach for the treatment of disease. In animal models, inhibition of PDE1 has been shown to reduce neuroinflammation and to reduce neurodegeneration. The mechanism of action of PDE1 inhibitors suggests therapeutic potential across a variety of neurological and cardiovascular diseases.

Preclinical studies suggest that PDE1 inhibitors potentiate L-DOPA and other dopamine replacement therapies yielding improved motor symptom control while reducing adverse motor complications associated with these treatments. Preclinical models have also shown the potential for PDE1 inhibitors to address non-motor symptoms such as excessive daytime sleepiness, cognitive impairment and other non-motor symptoms. The Company has recently demonstrated the importance of ITI-214 and inhibition of PDE1 in reducing neuroinflammation and in regulating microglial function suggesting utility in treating neurodegenerative and neuropsychiatric disease.

About Parkinson's Disease

Over 1.0 million and 1.2 million patients in the United States and Europe, respectively, live with Parkinson's disease. PD is a progressive neurodegenerative disorder largely affecting dopamine systems in the brain and characterized by motor impairment and nonmotor symptoms, including but not limited to excessive daytime sleepiness, cognitive impairment, mood disorders and dysautonomia. Dopamine replacement therapies, with L-DOPA, address early motor symptoms, but are insufficient as the disease progresses and have limiting side effects. There remains a large unmet need for effective treatments to sustain the utility of dopaminergic therapies and to address nonmotor symptoms.

About the MDS-UPDRS

The Movement Disorder Society Unified Parkinson's Disease Rating Scale MDS-UPDRS is a comprehensive 50 question assessment of both motor and non-motor symptoms associated with Parkinson's disease. The MDS-UPDRS has four parts: Part 1: non-motor experiences of daily living; Part 2: motor experiences of daily living: Part 3: motor examination; and Part 4: motor complications. Some sections require completion by patients and their caregivers and other completion by the clinician/investigator.

About Intra-Cellular Therapies

Intra-Cellular Therapies is developing novel drugs for the treatment of neuropsychiatric and neurodegenerative diseases and diseases of the elderly, including Parkinson's and Alzheimer's disease. The Company is developing its lead drug candidate, lumateperone (also known as ITI-007), for the treatment of schizophrenia, bipolar disorder, behavioral disturbances in patients with dementia, including Alzheimer's disease, depression and other neuropsychiatric and neurological disorders. Lumateperone, a first-in-class molecule, is in Phase 3 clinical development for the treatment of schizophrenia, bipolar depression and agitation associated with dementia, including Alzheimer's disease. The Company is also utilizing its phosphodiesterase (PDE) platform and other proprietary chemistry platforms to develop drugs for the treatment of CNS and other disorders. The lead molecule in the Company's PDE1 portfolio, ITI-214 is in development for the treatment of symptoms associated with Parkinson's disease. Ultimately, treatments are needed that protect dopamine containing neurons from damage, providing novel approaches for slowing or halting disease progression. The impact of ITI-214 may be examined in future, longer term studies.

Forward-Looking Statements

This news release contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995 that involve risks and uncertainties that could cause actual results to be materially different from historical results or from any future results expressed or implied by such forward-looking statements. Such forward-looking statements include statements regarding, among other things, the safety and efficacy of ITI-214; our clinical and nonclinical development plans for ITI-214, including our expectations concerning the timing of trials and studies and the availability of data; our beliefs about the potential uses and benefits of ITI-214; the potential of ITI-214 to address unmet needs in the treatment of Parkinson's disease for improved motor control and potential disease modification and development efforts and plans under the caption "About Intra-Cellular Therapies." All such forward-looking statements are based on management's present expectations and are subject to certain factors, risks and uncertainties that may cause actual results, outcome of events, timing and performance to differ materially from those expressed or implied by such statements. These risks and uncertainties include but are not limited to the following: our product candidates may not be successful or may take longer and be more costly than anticipated; product candidates that appeared promising in earlier research and clinical trials may not demonstrate safety and/or efficacy in larger-scale or later clinical trials; our proposals with respect to the regulatory path for our product candidates may not be acceptable to the FDA; our reliance on collaborative partners and other third parties for development of our product candidates; and the other risk factors detailed in our public filings with the Securities and Exchange Commission. All statements contained in this press release are made only as of the date of this press release, and we do not intend to update this information unless required by law.

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