Addex Initiates Phase IIa Clinical Trial of Dipraglurant-IR in Parkinson’s Disease Levodopa-Induced Dyskinesia (PD-LID)

- Clinically validated mechanism of action for PD-LID
- Second Phase IIa trial to begin this quarter with Addex allosteric modulators
- Trial funded in part by Michael J. Fox Foundation for Parkinson’s Research

Geneva, Switzerland, March 31 – Allosteric modulation company Addex Pharmaceuticals (SIX:ADXN) announced today the initiation of a Phase IIa clinical trial to evaluate dipraglurant in patients with Parkinson’s disease levodopa-induced dyskinesia (PD-LID), a debilitating movement disorder caused by long-term treatment with levodopa, the gold standard therapy for Parkinson’s disease. The U.S. and European study is supported in part by a grant from the Michael J. Fox Foundation for Parkinson Research. Results are expected to be announced during the first half of 2012.

Dipraglurant (ADX48621) is a metabotropic glutamate receptor 5 (mGluR5) negative allosteric modulator (NAM). The immediate-release formulation of dipraglurant (dipraglurant-IR), which has a pharmacokinetic profile similar to that of immediate release levodopa, achieved satisfactory safety, tolerability and pharmacokinetics in Phase I testing.

“This PD-LID Phase IIa study with dipraglurant is the second clinical trial involving Addex allosteric modulators to begin in 2011. We announced that our partner Ortho-McNeil-Janssen started Phase IIa testing of ADX71149, an mGluR2 PAM, for the treatment of schizophrenia earlier this week. These milestones strengthen the validation of the allosteric approach,” stated Vincent Mutel, CEO of Addex.

“We believe mGluR5 inhibition is a promising approach to alleviating the disabling side effects of levodopa, which are experienced by the majority of Parkinson’s patients as their disease progresses,” said Todd Sherer, chief program officer at The Michael J. Fox Foundation for Parkinson’s Research. “We have been driving the therapeutic development of mGluR5 since 2005 and are excited that the field has matured to the point where the inhibitor dipraglurant-IR is ready for clinical testing.”

ADX48621-201 is a randomized, double-blind, placebo-controlled, multicenter study to investigate the safety tolerability and efficacy of dipraglurant-IR in 72 Parkinson’s disease patients with levodopa-induced dyskinesia (LID). Placebo or dipraglurant (50 mg q.d. to 100 mg t.d.s.) will be administered with up to three of the patients’ daily levodopa doses over 4 weeks. The trial’s primary objective is safety and tolerability with exploratory efficiency, being the secondary objective, involving trained observer LID severity scores, Abnormal Involuntary Movement Scale (AIMS) and patient and doctor PD rating scales including the United Parkinson’s Disease Rating Scale (UPDRS).

Dipraglurant-IR is an immediate release formulation which has a similar pharmacokinetic profile to immediate release levodopa. Dipraglurant is the first drug candidate reported to reduce both of the major PD-LID symptoms, chorea (rapid uncontrolled movements) and dystonia (writhing and cramping movements) in preclinical testing.

Dipraglurant-ER, a longer-acting extended-release formulation of dipraglurant, is being developed for the treatment of non-Parkinsonian dystonia. This occurs as a variety of separate conditions of either primary (e.g. hereditary) or secondary (drug-induced or otherwise acquired) origin. The underlying biological pathways contributing to the expression of some of these types of dystonia are believed to be similar to those in PD-LID. Dipraglurant-ER will have a pharmacokinetic profile that is more appropriate for use in indications where a longer-acting once- or twice-daily form is advantageous. Phase I testing of dipraglurant-ER will commence during the second half of 2011. Phase IIa testing of dipraglurant-ER in dystonia patients is scheduled to start in 2012.

mGluR5 inhibition reduces signaling activity of the neurotransmitter glutamate. The loss of dopamine producing cells observed as a result of Parkinson’s disease leads to excess of glutamatergic stimulation in the brain’s striatopallidal pathway. The mGluR5 are found abundantly in the striatum and inhibition of mGluR5 could provide a novel and complementary treatment option for PD and PD-LID. Research shows that dipraglurant and other mGluR5 inhibitors have reduced LID and generated anti-parkinsonian effects in animal
models of PD-LID and Parkinson’s disease. In addition, two small clinical studies already have shown that the mGluR5 inhibitor AFQ056 reduced LID symptoms in humans with PD-LID*. The mGluR5 inhibition mechanism also has achieved validation for other indications including; fragile X syndrome, pain, anxiety, depression and gastroesophageal reflux disease (GERD), all of which have been validated using mGluR5 inhibitors.

*http://www.novctrd.com

**Addex Pharmaceuticals** ([www.addexpharma.com](http://www.addexpharma.com)) discovers and develops allosteric modulators for human health. The company uses its proprietary discovery platform to target cell surface receptors that are recognized as having therapeutic potential for treating diseases of the central nervous system, metabolic disorders or inflammation. Two Phase IIa clinical trials are ongoing for two lead products: dipraglurant (ADX48621) and ADX71149. Dipraglurant is an mGluR5 negative allosteric modulator (NAM), which is being tested in Parkinson’s disease levodopa-induced dyskinesia (PD-LID). ADX71149, an mGluR2 positive allosteric modulator (PAM), is being tested for treatment of schizophrenia by our partner Ortho-McNeil-Janssen Pharmaceuticals Inc. In addition, Merck & Co., Inc. has licensed rights to two preclinical programs: mGluR4 PAM for Parkinson’s disease and mGluR5 PAM for schizophrenia. Unpartnered products in preclinical testing include: follicle stimulating hormone receptor (FSHR) NAM, with potential for endometriosis and benign prostatic hyperplasia; mGluR2 NAM for Alzheimer's disease; and GABA-BR PAM with potential for chronic pain, Fragile X syndrome, urinary incontinence and gastroesophageal reflux disease. Preclinical diabetes and inflammation discovery programs include GLP-1R PAM, IL-1R1 NAM, and TNFR1 NAM.

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