Press Release

Göteborg March 12, 2025

IRLAB publishes preclinical data on mesdopetam in the esteemed European Journal of Neuroscience

Gothenburg, March 12, 2025 - IRLAB Therapeutics AB (Nasdaq Stockholm: IRLAB A), a company discovering and developing novel treatments for Parkinson's disease, today announced that preclinical data on mesdopetam has been published in the prestigious, peer-reviewed medical journal European Journal of Neuroscience, EJN. The data provide new insights into the system-level mechanisms behind the antidyskinetic effect of mesdopetam and suggest potential additional benefits in the treatment of Parkinson's related psychosis.

Levodopa, the standard treatment for Parkinson's disease, offers effective symptom relief. However, it often fails to adequately address non-motor symptoms, and its long-term use may result in motor fluctuations and dyskinesia.

The paper reports a preclinical work performed by at the Department of Medical Translational Biology, Umeå University, Sweden and Integrative Neurophysiology, Lund University, Sweden, in collaboration with scientists at IRLAB. The recent study examines the effects of IRLAB's drug candidate mesdopetam, amantadine and pimavanserin in a preclinical model of levo-dopa induced dyskinesia. It explores the mechanisms of levodopa-induced dyskinesia and the associated pharmacological strategies to alleviate dyskinetic symptoms.

The study elegantly shows that the reduction of a specific type of brain activity, narrow gamma band oscillations (NBGs), especially in the sensorimotor areas, correlates with decreased dyskinesias for both amantadine and mesdopetam. The findings suggest that diminishing NBGs is an essential biomarker for assessing the effects of antidyskinetic treatments. Additionally, the data offer insights into the systems-level mechanisms behind the antidyskinetic effectiveness of mesdopetam and suggest potential additional benefits for the treatment of Parkinson's-related psychosis.

"This is a comprehensive series of studies enabling in depth comparisons of the compounds. The results clearly illustrate the differences in effect profiles and action mechanisms, favoring mesdopetam as a treatment for dyskinesia," says Nicholas Waters, EVP and Head of R&D at IRLAB.

Press Release

Göteborg March 12, 2025

The article *Neurophysiological treatment effects of mesdopetam, pimavanserin, and amantadine in a rodent model of levodopa-induced dyskinesia* is written by N Abdolaziz R et al.

The published article can be read in full here: https://onlinelibrary.wiley.com/doi/full/10.1111/ejn.70032

For more information

Kristina Torfgård, CEO
Phone: +46 730 60 70 99
E-mail: kristina.torfgard@irlab.se

Nicholas Waters, EVP and Head of R&D
Phone: +46 730 75 77 01
E-mail: nicholas.waters@irlab.se

About mesdopetam

The investigational drug mesdopetam (IRL790), a dopamine D3 receptor antagonist, is being developed as a treatment for Parkinson's disease levodopa-induced dyskinesias (PD-LIDs). The objective is to improve the quality of life for people living with Parkinson's and having a severe form of involuntary movements commonly occurring after chronic levodopa treatment. Around 25-40 percent of all people being treated for Parkinson's develop LIDs, which equates to approximately 1.4-2.3 million people in the eight major markets globally (China, EU5, Japan and the US). Mesdopetam has also potential as a treatment for Parkinson's disease Psychosis (PD-P), and other neurological conditions such as tardive dyskinesia, representing an even larger market. The Phase Ib and Phase IIa studies showed a good safety and tolerability profile as well as proof-of-concept with potential for a better anti-dyskinetic effect compared with current treatment options. A Phase IIb study, completed in 2023, showed that mesdopetam has a dose-dependent anti-dyskinetic and anti-parkinsonian effect in combination with a tolerability and safety profile on par with placebo. The mesdopetam program is now undergoing preparations for Phase III.

Press Release

Göteborg March 12, 2025

About IRLAB

IRLAB discovers and develops a portfolio of transformative treatments for all stages of Parkinson's disease. The company originates from Nobel Laureate Prof Arvid Carlsson's research group and the discovery of a link between brain neurotransmitter disorders and brain diseases. Mesdopetam (IRL790), under development for treating levodopa-induced dyskinesias, has completed Phase IIb and is in preparation for Phase III. Pirepemat (IRL752), currently in Phase IIb, is being evaluated for its effect on balance and fall frequency in Parkinson's disease. IRL757, a compound being developed for the treatment of apathy in neurodegenerative disorders, is in Phase I. In addition, the company is developing two preclinical programs, IRL942 and IRL1117, towards Phase I studies. IRLAB's pipeline has been generated by the company's proprietary systems biology-based research platform Integrative Screening Process (ISP). Headquartered in Sweden, IRLAB is listed on Nasdaq Stockholm (IRLAB A). For more information, please visit www.irlab.se.

Attachments

IRLAB publishes preclinical data on mesdopetam in the esteemed European Journal of Neuroscience