IRLAB's mesdopetam displays antipsychotic properties in an advanced model of Parkinson's disease psychosis

Gothenburg, Sweden, 19 March 2024 - IRLAB Therapeutics AB (Nasdaq Stockholm: IRLAB A), a company discovering and developing novel treatments for Parkinson's disease, today announced that a scientific paper reporting the effects of IRLAB's candidate drug mesdopetam in a preclinical model of Parkinson's disease psychosis (PD-P) has been published in the journal Neurotherapeutics.

The paper reports a series of preclinical studies performed by the group for Integrative Neurophysiology, Lund University, Sweden, in collaboration with scientists at IRLAB. The studies are based on characterization of the neurophysiological brain state in an advanced preclinical model of PD-P. The effects of Mesdopetam, along with two compounds, clozapine and pimavanserin, which are clinically used to alleviate PD-P, and an experimental D3 antagonist, were investigated in this model.

The studies concluded that mesdopetam displays key features associated with antipsychotic efficacy in this PD-P model and should be further explored as a potential novel treatment option for psychosis in Parkinson's disease.

"The brain state characterization presented in the paper is an impressive new technique which enables a new level of understanding of the brain mechanisms underlying PD-P and provides a great tool for evaluation of potential new therapies. These new results strongly support that mesdopetam has potential as a novel therapeutic in PD-P, also in light of the excellent safety and tolerability profile seen in clinical studies with mesdopetam," says Nicholas Waters, EVP & Head of R&D at IRLAB.

For more information

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

About the scientific paper on mesdopetam

Title: Neurophysiological treatment effects of mesdopetam, pimavanserin and clozapine in a rodent model of Parkinson's disease psychosis, Neurotherapeutics, 2024, e00334.
DOI: https://doi.org/10.1016/j.neurot.2024.e00334.

Authors: Tiberiu Loredan Stan, Abdolaziz Ronaghi, Sebastian A. Barrientos, Pär Halje, Luciano Censoni, Emilio Garro-Martínez, Azat Nasretdinov, Evgenya Malinina, Stephan Hjorth, Peder Svensson, Susanna Waters, Kristoffer Sahlholm, Per Petersson.

The studies revealed that the three compounds could reverse important features associated with the psychosis like state: Reduction of aberrant high-frequency oscillations in prefrontal structures together with a decrease of abnormal synchronization between different brain regions was observed, suggesting antipsychotic properties. Further, an overall comparison including clozapine, pimavanserin, and the experimental dopamine D3 receptor antagonist SB277011-A, indicated that mesdopetam was more similar to SB277011-A, than to the other compounds. The findings support that the dopamine D3 receptor play a role in PDP and further corroborates that dopamine D3 receptor antagonism is an important mechanism of action underlying the pharmacological effects of mesdopetam.

About the journal Neurotherapeutics

Neurotherapeutics is the journal of the American Society for Experimental Neurotherapeutics (ASENT). The journal publishes original research articles in translational neuroscience including descriptions of cutting edge therapies that cross disciplinary lines and represent important contributions to neurotherapeutics for medical practitioners and other researchers in the field.

About IRLAB

IRLAB is discovering and developing a portfolio of transformative therapies targeting all stages of Parkinson's disease. The company has its origin in Nobel Laureate Prof. Arvid Carlsson's research group and the discovery of a connection between the brain's neurotransmitters and CNS disorders. Mesdopetam (IRL790), in development for the treatment of levodopa-induced dyskinesias, has completed Phase IIb and is in preparation toward Phase III. Pirepemat (IRL752), is currently in Phase IIb, being evaluated for its effect on balance and fall frequency in Parkinson's disease. In addition, the company is also progressing the three preclinical programs IRL757 (financially supported by the Michael J. Fox Foundation), IRL942, and IRL1117 towards Phase I studies. IRLAB's pipeline has been generated by the company's proprietary systems biology-based Integrative Screening Process (ISP) research platform. Headquartered in Sweden, IRLAB is listed on Nasdaq Stockholm (IRLAB A). For more information, please visit www.irlab.se.

IRLAB

Attachments

IRLAB's mesdopetam displays antipsychotic properties in an advanced model of Parkinson's disease psychosis