Umecrine Cognition enters collaboration with University College London to increase insights around golexanolone

STOCKHOLM – October 18, 2021. Umecrine Cognition AB today announces the establishment of a collaboration with Professor Trevor G Smart and his research group at University College London. The scope of the collaboration will include molecular and behavioral investigations of Umecrine Cognition's most advanced drug candidate golexanolone.

Umecrine Cognition's lead drug candidate golexanolone is currently in clinical development for the treatment of hepatic encephalopathy. The substance represents a novel target class that interacts with the GABAA receptor in order to balance neural activity and thereby combat debilitating symptoms. The collaboration with Dr Smart constitutes a strategic step forward in the development of golexanolone.

"Dr Smart and his team at the Department of Neuroscience, Physiology & Pharmacology at UCL are uncovering the mechanistic basis of neurosteroid activity with publications in top-tier scientific journals", says Dr Magnus Doverskog, CEO of Umecrine Cognition, "This is a unique strategic opportunity for the company to further explore an expansion of the use of golexanolone and to develop other neurosteroid-based drugs for other applications."

By employing state-of-the-art techniques in structural biology, synaptic physiology, and behavioral models, Dr Smart and his team study the impact of neurosteroid activity on the GABAA receptor as well as the resulting effect on behaviour [1-3]. In forthcoming studies, such techniques will be used to study the molecular interaction between golexanolone and other neurosteroids with its target receptor, and how this interaction affects neural networks with relevance to the treatment of medical conditions.

TO THE EDITORS

About Umecrine Cognition AB

Umecrine Cognition is developing a potential therapy that represents a new target class relevant for several major CNS-related disorders. The lead compound golexanolone (aka GR3027) presently in clinical development is positioned primarily as a novel therapy for the treatment of hepatic encephalopathy in patients with cirrhosis and considered for other CNS-related disorders. For more information, please visit www.umecrinecognition.com.

About Hepatic Encephalopathy

Hepatic encephalopathy (HE) is defined as brain dysfunction due to acute and chronic liver disease. Its pathophysiology is multi-factorial and, while lowering of plasma ammonia levels reduces the risk and frequency of overt HE events, recent studies suggest that the effects on the brain of hyperammonaemia and other injurious insults such as neuroinflammation are mediated by neurosteroid-induced allosteric activation of inhibitory GABA-A receptors [4].

About Golexanolone
Golexanolone is a novel small molecule GABAA receptor modulating steroid antagonist under development for treatment of cognitive and vigilance disorders due to allosteric over-activation of GABAA receptors by neurosteroids. It restored spatial learning and motor coordination in animal models of hepatic encephalopathy (HE) [5] and mitigated the effects of intravenous allopregnanolone in healthy adults in a dose-dependent fashion [6].

[1] Laverty D et al., Crystal structures of a GABA A-receptor chimera reveal new endogenous neurosteroid-binding sites. Nature Struct Mol Biol 2017;24:977-985.
[2] Seljest S et al., Probing GABA A receptors with inhibitory neurosteroids. Neuropharmacology 2018;136:23-36.
[3] Sexton AS et al., Structural determinants and regulation of spontaneous activity in GABA A receptors. Nature Commun 2021;12:5457
[4] Montagnese S et al., A pilot study of golexanolone, a new GABA-A receptor-modulating steroid antagonist, in patients with covert hepatic encephalopathy. J. Hepatology 2021;75:98-107.
[5] Johansson M et al., GR3027 antagonizes GABAA receptor potentiating neurosteroids and restores spatial learning and motor coordination in rats with hepatic encephalopathy, Am J Physiol Gastrointest Liver Physiol. 2015;309:G400-9.
[6] Johansson M et al., GR3027 reversal of neurosteroid-induced, GABA-A receptor-mediated inhibition of human brain function: an allopregnanolone challenge study. Psychopharmacology 2018; 235:1533-1543.

For further information, please contact:

Magnus Doverskog, CEO, Umecrine Cognition AB
Phone: +46 (0)730 39 20 52, e-mail: magnus.doverskog@umecrine.se

Attachments

Umecrine Cognition enters collaboration with University College London to increase insights around golexanolone