

Umecrine Cognition publishes scientific review on the role of endogenous neurosteroids in neuroinflammation and their potential therapeutic effect

STOCKHOLM – April 16, 2024. Umecrine Cognition today announces that the company has co-authored a scientific review article with leading experts in the research field on the respective roles of the endogenous neurosteroid allopregnanolone and the company's leading drug candidate golexanolone on neuroinflammation and the link to peripheral inflammation. Further, the authors outline and discuss the potential for the development of novel treatments targeting central nervous disease and liver disease, based on the research findings described in the article. The scientific review is published in the top-tier scientific journal *Neuroscience and Biobehavioral Reviews*, ranked among the top 4% in the sub-discipline of cognitive neuroscience.

The review primarily discusses the evolving understanding of neuroinflammation as a key driver of disease-related morbidity and a potential target for therapeutic interventions. Neuroinflammation occurs when the brain's immune system is activated by internal or external stress signals. Chronic neuroinflammation has been linked to various neurological diseases, such as Alzheimer's, Parkinson's, and multiple sclerosis, as well as systemic conditions like liver disease and obesity. It is therefore important to deepen the understanding of neuroinflammation in order to develop novel and effective treatments.

In the article, the authors focus on the roles of the endogenous neural signaling substances allopregnanolone, Umecrine Cognition's lead drug candidate golexanolone and the neuroinflammatory biomarker TSPO. The article summarizes current information bearing on how these substances regulate neuroinflammation, focusing on the interplay between the GABA receptors, and further describes the potential therapeutic strategy of modulating neurosteroids to ameliorate and treat neuroinflammation.

Umecrine Cognition's lead drug candidate golexanolone has been shown in different nonclinical studies to improve both motor and nonmotor symptoms, including cognitive impairment such as fatigue, depression, memory problems, in disease models of hepatic encephalopathy (HE), primary biliary cholangitis (PBC) and Parkinson's disease (PD), while also decreasing levels of neuroinflammatory biomarkers and lowering brain immune cell activation. Collectively, the company's own data align with the published review, which puts forward a coherent image of the importance of neurosteroids, and their synthetic versions, in regulating neuroinflammation and its potential as a therapeutic target.

"This is the first peer review article that ties together inflammatory processes between peripheral organs and the brain, highlighting the importance of the biomarker TSPO, and the neurosteroid allopregnanolone and its antagonist golexanolone. Further, we explain why golexanolone would work to reduce neuroinflammation and be relevant to mitigate inflammatory processes both inside and outside of the central nervous system. Many in the field suggest that modulation of GABAergic neurotransmission is a promising new therapeutic approach for inflammatory and autoimmune diseases and collectively support the therapeutic potential of golexanolone to improve neurological function in patients with liver disease as well as in other diseases associated with chronic neuroinflammation and increased neurotransmission in the GABA system", says Magnus Doverskog, SVP and Chief Scientific Officer, Umecrine Cognition.

Read the full article: <https://www.sciencedirect.com/science/article/pii/S0149763424001374>.

Article Citation

Torbjörn Bäckström, Magnus Doverskog, Thomas P. Blackburn, Bruce F. Scharschmidt and Vicente Felipo, Allopregnanolone And Its Antagonist Modulate Neuroinflammation And Neurological Impairment. Short Title: Neurosteroids and neuroinflammation, Neuroscience and Biobehavioral Reviews 161 (2024) 105668.

For further information, please contact:

Anders Karlsson, CEO, Umecrine Cognition AB
Phone: +46 70 – 918 00 10, e-mail: anders.karlsson@umecrine.se

About Umecrine Cognition AB

Umecrine Cognition AB is developing a completely new class of drugs for the treatment of chronic neuroinflammation – a devastating brain distortion that can lead to severely impaired cognition and fatigue. Chronic neuroinflammation can occur as a result of a number of underlying conditions, including a range of liver diseases as well as neurodegenerative diseases, such as Parkinson's disease. Results from an internationally acclaimed Phase 2 clinical trial indicate that the company's most advanced drug candidate, the GABAA receptor-modulating steroid antagonist golexanolone, normalizes brain signaling and improves cognition and alertness in patients with hepatic encephalopathy. A Phase 2 trial is currently ongoing in patients with primary biliary cirrhosis. Further, based on intriguing preclinical data, the company is planning to pursue the development of golexanolone in patients with Parkinson's disease. For more information, visit www.umecrinecognition.com.

Attachments

[Umecrine Cognition publishes scientific review on the role of endogenous neurosteroids in neuroinflammation and their potential therapeutic effect](#)