# Umecrine Cognition reports early golexanolone treatment yields sustained benefit in a preclinical model of Parkinson's disease

**STOCKHOLM – November 17, 2025. Umecrine Cognition AB today announced publication in *Neuropharmacology* of findings which show that early treatment with golexanolone provides sustained improvements of both motor and non-motor symptoms in a model of Parkinson's disease (PD). The results suggest that golexanolone may delay the progression of Parkinson's disease symptoms and postpone the need for L-DOPA treatment if the therapy is administered at an early stage in disease progression.**

Starting golexanolone treatment early led to stronger and longer-lasting symptom relief than starting it later. When administered soon after symptoms appeared, golexanolone significantly reduced severe fatigue and lack of movement in a preclinical disease model. Without treatment, subjects were immobile for 72 ± 18% of the time, while golexanolone reduced immobility time to 9.7 ± 3.1% ($p = 0.011$). Short-term memory ($p = 0.014$) was also improved, as shown by the ability to distinguish between familiar and new spaces – a skill lost without treatment.

Furthermore, the study recorded enhanced motor coordination. Treatment successfully produced improved gross motor function (cross a staircase and walk along a walkway) by an average of 4.5 times, compared to 0.8 where no treatment was administered ($p = 0.047$). Gait abnormalities such as bradykinesia and freezing of gait were normalized, with parameters returning to levels similar to those of healthy controls. Crucially, the study confirmed that golexanolone treatment did not cause dyskinesias, a major limitation of dopamine replacement therapy.

At the mechanistic level, golexanolone rebalanced immune (glia) cell activation and neurotransmitter signaling. Treatment reduced activation of microglia and lowered glutaminase levels in the substantia nigra, restoring glutamate levels (127% in treated vs 219% in untreated, compared to healthy controls; $p = 0.042$). In the striatum, GABA levels were normalized (104% in treated vs 178% in untreated, compared to healthy controls; $p = 0.028$), accompanied by partial recovery of dopamine (86% in treated vs 36% in untreated, compared to healthy controls; $p = 0.042$) and preservation of downstream TrkB signaling, a cellular mechanism that supports neuronal plasticity and is critical for motor function in Parkinson's disease.

These findings indicate that golexanolone rebalances major neurotransmitter systems in the brain (glutamate, GABA, and dopamine), whose dysfunction is central to Parkinson's pathology. By restoring neurotransmission, the therapy produced a sustained improvement in both motor and non-motor symptoms, highlighting its potential as a disease-modifying approach rather than just symptomatic relief.

"These results highlight the potential of golexanolone as a first-in-class therapy for both the motor and non-motor symptoms of Parkinson's disease. This is important since fatigue, memory problems, and impaired movement significantly limit independence and quality of life. The evidence that early treatment provides more durable benefits is particularly exciting for slowing symptom progression in Parkinson's, as it supports our strategy to advance the program into clinical development. In conjunction with the company's other recent findings, these results suggest that our class of neurosteroid-based compounds could represent a new treatment approach that goes beyond dopamine replacement therapy when addressing Parkinson's disease and that may be relevant in other brain disorders," said Dr. Magnus Doverskog, CSO at Umecrine Cognition.

The study was conducted with the company's academic collaborators at Centro de Investigación Príncipe Felipe, Valencia, Spain. The results of the study were published in the November issue of Neuropharmacology online ahead of print and can be found here: https://pubmed.ncbi.nlm.nih.gov/41202876/

For citation: Pedrosa MA, Mincheva G, Martinez-Garcia M, Vazquez L, Blackburn TP, Doverskog M, Llansola M, Felipo V. Golexanolone affords sustained improvement of Parkinson's symptoms in rats by reducing microglia activation that restores the glutamate-GABA-dopamine pathway. Neuropharmacology. 2025 Nov 5:110759. doi: 10.1016/j.neuropharm.2025.110759. Epub ahead of print. PMID: 41202876.

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**About Umecrine Cognition**
Umecrine Cognition AB is developing a completely new class of drugs for the treatment of symptoms in the central nervous system related to imbalanced inhibitory GABAA receptor signaling and 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 study 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 covert hepatic encephalopathy. A Phase 2 study is currently ongoing in patients with primary biliary cholangitis. Further, based on intriguing preclinical data, the company is considering pursuing the development of golexanolone in patients with Parkinson's disease. For more information, visit www.umecrinecognition.com.

**Attachments**

Umecrine Cognition reports early golexanolone treatment yields sustained benefit in a preclinical model of Parkinson's disease