

## Introductory Remarks to Satellite Symposium (Sat3)

**GBM e.V. Study Group  
'Molecular Neurobiology'**

**The Gut-Brain Axis:  
Interplay of the Immune System,  
Barrier Integrity, and Enteric Nervous  
System in Brain Diseases**

*Jörg W. Bartsch and Stefan Kins, Marburg and Kaiserslautern*

The gut and brain engage in a sophisticated crosstalk through an elaborate network - the gut-brain axis. This bidirectional communication system comprises direct neural pathways via the vagus nerve, alongside indirect signaling through mobile immune cells and molecular messengers, including cytokines and hormones. With four excellent speakers, this symposium highlights some recent breakthroughs illuminating the contribution of the gut-brain axis to mechanisms that drive various proteinopathies, as exemplified by the role of  $\alpha$ -synuclein in Parkinson's disease and  $\beta$ -amyloid to Alzheimer's disease pathogenesis.

This satellite symposium is supported by the GBM e.V. and free of charge.

We warmly invite everyone to join us!



## Satellite Symposium (Sat3)

*Wednesday, March 26, 2025  
9:00 - 11:45, Hall 10*

Chairs: Jörg W. Bartsch and Stefan Kins,  
Marburg and Kaiserslautern

- 09:00 **Welcome and Opening Remarks**  
*Jörg W. Bartsch/Stefan Kins*
- 09:15 Sara Vieira-Silva, Mainz  
QUANTITATIVE MONITORING OF THE ROLE  
OF THE MICROBIOME IN THE GUT-BRAIN AXIS
- 09:45 Jan Homolak, Tuebingen  
INTERACTIONS OF CNS DRUGS AND HUMAN  
GUT MICROBIOTA IN THE CONTEXT OF THE  
GUT-BRAIN AXIS
- 10:15 Kristina Endres, Kaiserslautern  
FROM BRAIN TO GUT - ALZHEIMER'S DISEASE  
FROM ANOTHER PERSPECTIVE
- 10:45 Friederike Zunke, Erlangen  
THE ROLE OF  $\alpha$ -SYNUCLEIN IN THE GUT-  
BRAIN PATHOLOGY OF PARKINSON'S DISEASE
- 11:15 **Discussion and Closing Remarks**  
(All speakers and Organizers)