

Sex and Glia in Neuroscience

Sex-dependent mechanisms of neuroglial cells in brain health and disease

2026. 9. 8 (Tue) | 4:05 ~ 6:00 PM Room 204-205
Daejeon Convention Center

Special Session 6

GISTeR Korea Center for Gendered Innovations for Science and Technology Research

Ministry of Science and ICT

What Are We Missing When We Ignore Sex Differences in the Brain?

Despite growing evidence of sex-based differences in brain function, the importance of considering sex as a biological variable remains underrecognized in neuroscience research. This session highlights how sex-aware studies of glial cells can advance neuroscience, improve research design and reproducibility, and generate new insights into brain health and disease.

Organizing Committee



Frank Kirchhoff
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Saarland University



Heisook Lee
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Heajin Kim
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IBS

Speakers



Frank Kirchhoff Professor, Saarland University Medical School, Germany

- Frank Kirchhoff is a full professor at the Center of Integrative Physiology and Molecular Medicine (CIPMM) of the University of Saarland. He is Honorary President of the German Neuroscience Society and member of the Academia Europaea. He is co-founder and speaker of the Center of Gender-specific Biology and Medicine (CGBM) in Homburg.
- His research (ORCID 0000-0002-2324-2761) focuses on the molecular and cellular mechanisms of neuron-glia interactions in the central nervous system, investigating how glial transmitter receptors modulate synaptic transmission and how glial cells respond to acute CNS injuries.

[Talk Title] **The impact of sex-specific differences in neuron-glia communication for brain function**



Kerstin Lenk Associate Professor, Institute of Neural Engineering, Graz University of Technology, Austria

- Kerstin Lenk is an Associate Professor at the Institute of Neural Engineering, Graz University of Technology. Her research integrates computational and experimental neuroscience to investigate astrocyte biology and neuron-astrocyte interactions.
- She is a leading researcher in computational models of astrocyte function and neural networks and has contributed to studies on sex differences in neurological disorders, glial biology, and brain health.

[Talk Title] **Modeling sex differences in astrocyte function: A computational approach**



Julia Schulze-Hentrich Professor, Saarland University, Germany

- Julia Schulze-Hentrich is Professor of Genetics & Epigenetics at Saarland University. Her research focuses on sex-specific gene expression and epigenetic regulation in health, ageing, and disease.
- She investigates the interplay between genetic predisposition and environmental factors in neurodegenerative diseases, with particular interest in epigenetic mechanisms underlying brain development and Parkinson's disease.

[Talk Title] **Sex-specific transcriptional and epigenetic differences in Parkinson's disease**



Joon-Yong An Associate Professor, Korea University, South Korea

- Joon-Yong An is an Associate Professor at Korea University whose research focuses on neurogenomics, brain development, and the genetic architecture of neurodevelopmental and neuropsychiatric disorders.
- His work integrates large-scale genomic and multi-omics approaches to investigate autism spectrum disorder, Alzheimer's disease, and sex differences in brain-related traits and disorders.

[Talk Title] **Sex Differences in the Genetic Architecture of Autism Revealed by Whole Genome Sequencing**



Mridula Bhalla Postdoctoral Researcher, Institute for Basic Science (IBS), South Korea

- Mridula Bhalla is a neuroscientist specializing in astrocyte biology, brain aging, and neurodegenerative diseases, including Alzheimer's disease.
- Her current research focuses on sexual dimorphism of brain aging and the role of glial cells in neurodegeneration with the goal of advancing translational approaches for brain health.

[Talk Title] **Sexual Dimorphism of aging : the role of astrocytic MAOB**