

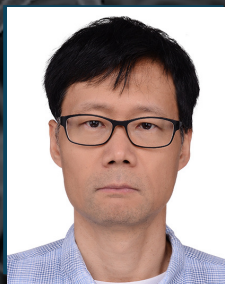
Presynaptic Structural Proteins as a Regulator of Short-term Synaptic Plasticity

September 6th (Sunday), 09:35-11:30

Room 105-106, Daejeon Convention Center, Daejeon, Korea

Registration KSBNS2026.org

Organizer



Suk Ho Lee

Department of Physiology, Department of Brain and Cognitive Sciences, Seoul National University, Korea.

He pioneered presynaptic calcium and vesicle dynamics to elucidate mechanisms underlying short-term synaptic plasticity. Now he extended his question how network dynamics and behavior are regulated by short-term synaptic plasticity.

Speakers



Yongsoo Park

Qatar Biomedical Research Institute (QBRI), HBKU, Qatar

"PIP2 Is An Electrostatic Catalyst for Vesicle Fusion by Lowering the Hydration Energy: Lipid-Centric Paradigm for Membrane Fusion"

He has proposed a new lipid-centric paradigm for vesicle fusion in which phosphatidylinositol 4,5-bisphosphate (PIP2) functions as a lipid catalyst for fusion by lowering the hydration energy barrier.



Takafumi Miki

Department of Cell Physiology, Graduate School of Medicine, Akita University, Japan

"Actin- and condensate-dependent confinement of synaptic vesicles governs their rapid recruitment for sustained neurotransmission"

He pioneered the vesicle dynamics to unveil how synaptic vesicles are re-loaded to an active zone in a small bouton synapses during high frequency transmission. Recently, he has studied it in depth using single vesicle movement tracing techniques.



Daehun Park

Department of Medical and Biological Sciences, The Catholic University, Korea

"Liquid-liquid phase separation-mediated presynaptic assembly and its implications for synaptic function"

He has pursued the question how phase-separated biomolecular condensates regulate neurotransmission and neural circuit function, especially focused on the role of liquid-liquid phase separation (LLPS). His works combine advanced imaging and molecular approaches to address this question.



Kyung Ah Han

Department of Anatomy & Cell Biology, College of Medicine, Chungnam National University, Korea

"Intracellular Signaling in Presynaptic Architecture and Synaptic Plasticity"

She has pursued the question how intracellular signaling regulates active zone architecture and synaptic transmission. She combined molecular and cellular approaches with electrophysiology and behavior to elucidate how these mechanisms translate into circuit-level function.