IBS Center for Molecular Spectroscopy and Dynamics

Seminar

- **SPEAKER**
  Prof. Min Ju Shon (POSTECH)

- **TITLE**
  High-speed tracking of synaptic protein interactions

- **ABSTRACT**
  Molecular observations of synaptic proteins provide a unique viewpoint on neurotransmission that complements electrophysiology measurements. In this talk, I will introduce molecular tweezers that can monitor the zippering of single SNARE complexes, a process that drives synaptic vesicle fusion. Using a magnetic particle, the method simultaneously manipulates and probes the structure of a SNARE complex with a millisecond time resolution, revealing partially zippered SNAREs and their interactions with other presynaptic proteins. We found that distinct intermediate forms of a SNARE complex are differentially regulated by associated proteins. Overall, these observations highlight the significance of high-resolution measurements of subtle structural changes in biomolecular complexes, and how such force application techniques can be employed to address mechanical aspects of molecular neuroscience.

- **DATE AND VENUE**
  August 02, 2022 (Tuesday, 11:00 - 12:00)
  Seminar Room A (116)

- **LANGUAGE**
  Korean

- **INVITED BY**
  Prof. Seok-Cheol Hong