Center for Molecular Spectroscopy and Dynamics, IBS-Korea University

IBS Center for Molecular Spectroscopy and Dynamics

Seminar

- **SPEAKER**
  Prof. Chungho Kim (Department of Life Sciences, Korea University)

- **TITLE**
  UXT chaperone prevents proteotoxicity by acting as an autophagy adaptor for p62-dependent aggrephagy

- **ABSTRACT**
  p62/SQSTM1 is known to act as a key mediator in the selective autophagy of protein aggregates, or aggrephagy, by steering ubiquitinated protein aggregates towards the autophagy pathway. Here, we use a yeast two-hybrid screen to identify the prefoldin-like chaperone UXT as an interacting protein of p62. We show that UXT can bind to protein aggregates as well as the LB domain of p62, and, possibly by forming an oligomer, increase p62 clustering for its efficient targeting to protein aggregates, thereby promoting the formation of the p62 body and clearance of its cargo via autophagy. We also find that ectopic expression of human UXT delays SOD1(A4V)-induced degeneration of motor neurons in a Xenopus model system, and that specific disruption of the interaction between UXT and p62 suppresses UXT-mediated protection. Together, these results indicate that UXT functions as an autophagy adaptor of p62-dependent aggrephagy. Furthermore, our study illustrates a cooperative relationship between molecular chaperones and the aggrephagy machinery that efficiently removes misfolded protein aggregates.

- **DATE AND VENUE**
  May 12, 2021 (Wednesday, 10:30 - 11:30)
  Virtual Seminar

  (If you want to attend a virtual seminar, please send an email to Dr. Jin-Sung Park (jspark@korea.ac.kr) and ask for a zoom link.)

- **LANGUAGE**
  Korean