

School of Life Sciences Seminar Series

Thursday
4:00 PM

7 April

This seminar will be held in the manner of online and offline both.

Offline: Jukhyun Bio Auditorium (RM.121)

Online: [Zoom ID](#) 315 451 8934 (Password: Life2022Sp)



Modulation of endoplasmic reticulum (ER) Stress response in disease model

연사 강민지 교수

소속 울산대학교

Host 김영준 교수

언어: 한국어

학력

- 2004** Ph.D. in Biochemistry and molecular Biology, Seoul National University
- 2001** B.S. in Biochemistry and molecular Biology, Seoul National University
- 1999** B.S. in Pharmacy, Seoul National University

경력

- 2012.9 - Now** Associate Professor, Dept. of Biomedical Sciences, College of Medicine, University of Ulsan
- 2005.8 - 2012.8** Postdoctoral Research Fellow, Dept. of Cell Biology, New York University, School of Medicine
- 2004.9 - 2005.9** Postdoctoral Research Fellow, Dept. of Life Science, POSTECH

Abstract

The endoplasmic reticulum (ER) serves as an essential subcellular organelle for cellular homeostasis. Perturbation of ER functions due to various conditions could induce apoptosis. Chronic stress in the ER is implicated in a wide range of diseases, including autosomal dominant retinitis pigmentosa (ADRP), which is characterized by an age-dependent retinal degeneration caused by mutant rhodopsin alleles. Well-characterized signaling responses to ER stress, referred to as the unfolded protein response (UPR), induce various ER quality control genes that can suppress such retinal degeneration. Here, we report the identification of novel signaling pathway required for ER-stress-induced apoptosis using unbiased in vivo RNAi screen in the Drosophila ADRP model. Disruption of this pathway can delay the course of age-related retinal degeneration in a Drosophila model of ADRP. Moreover, we found that UPR regulator contributes to lifespan extension in response to restriction of amino acids in the diet. Here, I'll present how ER stress and UPR pathway contribute to the progression of degenerative disease and aging.