Institute of Molecular and Cell Biology

A*STAR

SEMINAR ANNOUNCEMENT

We would like to invite you to attend this seminar hosted by Prof. Hong Wanjin:

Date: 13 March 2019, Wednesday
Time: 11:00AM – 12:00PM
Venue: Level 3, IMCB Seminar Room 3-46, Proteos, Biopolis

Speaker: Prof. Vojo Deretic, Director, Autophagy, Inflammation and Metabolism (AIM) Center of Biomedical Research Excellence
Professor and Chair, Department of Molecular Genetics and Microbiology, University of New Mexico Health Sciences Center, USA
**Title : ** Autophagy Regulation by Galectins During Membrane Damage Homeostasis

Galectins and ESCRT proteins have recently been implicated in the homeostatic response to endomembrane damage that engage autophagy and other process. We refer to this response as MERET (membrane *re*pair, *re*moval and *re*placement). In this presentation, we will discuss components of MERET, what their activities are, and how these activities are coordinated. Autophagy falls within the removal components of MERET's sequential activities. ESCRT proteins, in addition to a variety of their other functions, are known to play a role in the repair of damaged plasma membrane, nuclear envelope, and lysosomal membrane. Galectins are a family of lectins, with galectins and galectin-like proteins found in eukaryotes from fungi to mammals (with 20 NCBI entries in humans). They recognize glycoproteins and glycolipids with galactose containing glycans such as N-acetyllactosamines (Galβ1-3GlcNAc or Galβ1-4GlcNAc), found on the exofacial/lumenal leaflets of the plasma membrane and membranous organelles, including lysosomes and endosomes. They play a multitude of extracellular functions in cell adhesion, migration, and death as well as in inflammation and signaling. However, they are synthesized on cytosolic ribosomes and have intracellular functions that remain to be fully understood. We will present published and unpublished data showing that different galectins function to orchestrate sequential stages of the MERET response.

Biography:
Dr. Deretic is the director of the NIH-funded Autophagy, Inflammation and Metabolism (AIM) Center of Biomedical Research Excellence (https://www.autophagy.center/), which aims to promote autophagy research nationally and internationally as well as to develop a cadre of junior faculty along with senior experts in this area to study fundamental mechanisms and how autophagy intersects with a broad spectrum of human disease and health states. Dr. Deretic is the departmental chair of the Department of Molecular Genetics and Microbiology at the University of New Mexico School of Medicine. He received his undergraduate, graduate and

postdoctoral education in Belgrade, Paris, and Chicago, respectively. Dr. Deretic's main contributions to science come from studies by his team on the role of autophagy in infection and immunity. Recently, his group has become interested in the specific connections between metabolic roles of autophagy and its quality control functions. So far he has published more than 200 papers, including those in the top journals. He has also played an important leadership role in the autophagy research community, by serving as Associate Editor for PloS Pathogens, Autophagy, and Faulty 1000, etc, as well as organizing important international meetings on autophagy including Keystone Symposium and Gordon Research Conference.

ALL ARE WELCOME *(No registration required)*

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