

Biomedical Research Seminar Series

Speaker Announcement

Friday, November 16, 2018 @ 3:30 pm

Domenici Hall, Room 109

(Refreshments served at 3:00)



Vojo Deretic, PhD

*Professor, Director of Autophagy
Inflammation and Metabolism Center,
University of New Mexico*

Autophagy: From fundamental processes to disease

Autophagy, as a key cellular homeostatic and metabolic process, is a rapidly evolving biomedical research field of broad fundamental and medical significance. Autophagy not only responds to growth factors, but is exquisitely sensitive to cellular energy and nutritional status. Autophagy affects a spectrum of human health and disease states. This includes cancer, inflammatory and autoimmune disorders, metabolic conditions (obesity and diabetes), cardiovascular problems, neurodegeneration, infectious processes, and age-related diseases. A suite of factors—ATGs (encoded by autophagy-related genes)—define and regulate the pathway. ATGs control formation of autophagosomal organelles. These typically start as isolation membranes in cytoplasm, capture autophagic cargo, and close into double-membraned autophagosomes, which mature through fusion with lysosomes into degradative autolysosomal organelles. Autolysosomal organelles carry out cytosol digestion to sustain cellular metabolic needs, remove damaged or surplus mitochondria, trim and maintain endoplasmic reticulum, and control lipid droplets. As a result, autolysosomal organelles prevent accumulation of toxic protein aggregates, suppress sources of endogenous inflammation, down-regulate immune signaling systems to limit inflammatory responses, play a role in cancer, and protect us against invading pathogens. This seminar will discuss the fundamentals of autophagy, provide a sampling of latest studies from our laboratory, and introduce to the audience at NMSU the goals and the mission of the newly formed Autophagy, Inflammation and Metabolism (AIM) CoBRE center (<https://www.autophagy.center/>), and emerging opportunities associated with the AIM center within our state and broader.



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The BMRS series is supported by the Office of the Provost, the College of Arts and Sciences, the Department of Chemistry & Biochemistry, and the NM-INBRE program.

For more information or to meet with the speaker please contact Ryan Ashley at ryashley@nmsu.edu