

Psychiatry and Neuroscience Seminar Series 2023



Pr Nuno RAIMUNDO

(Host T Galli)

Penn State College of Medicine, Hershey, USA

Mitochondria and the social organelle network

Friday, March 17th, 2023, noon

Room D Levy, 102-108 rue de la santé - 75014 Paris & VISIOCONFERENCE

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Cells work as a small machine in which the different components (organelles) are coordinated with each other, as in a car. When that coordination between organelles is lost, there is development of pathologies that affect muscles (including the heart), liver, eyes, ears, and nervous system. Our goal is to understand how cellular organelles crosstalk with each other so that we can avoid diseases caused by the loss of that coordination. We use mammalian models (mouse) and cellular (human, mouse, rat) to tackle these questions and define novel therapeutic strategies to neurodegenerative, muscular and other diseases.

Major focus of research is to understand how mitochondria communicate with the rest of the cell, both in physiological conditions and in pathology. We employ multiple -omics approaches, including genomics image-based screens, transcriptomics and proteomics, to identify signaling mechanisms underlying metabolic defects. Our work is mostly focused on the mitochondria-lysosome network and its implications for cellular proliferation, autophagy and death, as well as organism-level processes such as aging.

Specialties: Mitochondrial physiology and pathology, lysosome, autophagy, energy metabolism, cellular signaling, AMPK, mTORC1, redox homeostasis, cell biology, live imaging, molecular biology, transcriptome analysis, in silico promoter analysis, Q-PCR, genomic screening, CRISPR, shRNA, siRNA, in vivo, peroxisomes, autophagy, functional assay.

Keywords:

lysosome, autophagy, energy metabolism

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LINK: <https://u-paris.zoom.us/j/85361168289?pwd=aWkwSnMrWdV5V01nbnYrNIhrdU50UT09>

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