

# Cologne Seminars on Ageing

## Andrew Wojtovich

University of Rochester Medical Center, NY, USA



**Thursday,  
9th of September 2021,  
at 4.00 pm**

Webinar

Host: Dario Valenzano (MPI Age)

### Scientific background and research interests

Andrew Wojtovich is an Associate Professor in the Department of Anesthesiology & Perioperative Medicine at the University of Rochester Medical Center. He received his B.A. in Biochemistry & Molecular Biology and M.A. in Biotechnology from Boston University in 2005. He received his Ph.D. in Pharmacology from the University of Rochester in 2010. After finishing postdoctoral work at the University of Rochester, he joined the Department of Anesthesiology in 2015. His research uses optogenetics to study the role of energetics and site-specific ROS production in mitochondrial physiology and hypoxic stress signaling.

## Controlling mitochondrial energetics and ROS production with light to affect aging

### About Dr. Wojtovich's talk:

Changes in mitochondrial function and reactive oxygen species (ROS) production lead to diverse outcomes ranging from stress signaling to disease. These divergent outcomes are spatially and temporally dependent; when, where and the degree of change in mitochondrial function can influence downstream events. This presentation will highlight the complexity of compartmentalized ROS, the novel tools we use to control mitochondrial function and ROS production, and how site-specific alterations contribute to signaling events and disease. Lastly, the techniques are applied to *C. elegans* to gain insights into the role of mitochondrial function in aging.