2025-2026 Seminar Series

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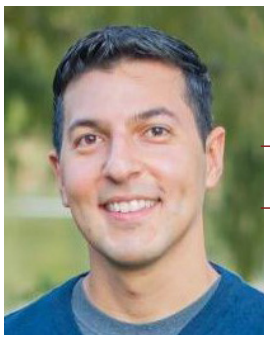
GALLOGLY COLLEGE OF ENGINEERING
OKLAHOMA COBRE IN CANCER IMAGING RESEARCH
The UNIVERSITY of OKLAHOMA

NUTRITIONAL MODULATION OF CEREBROVASCULAR AGING: EFFECTS OF FASTING AND HIGH-FAT DIET



Stefano Tarantini, Ph.D.
Assistant Professor of Research in Nutritional Sciences
OU Health Campus

Friday, October 17 | 11:00 a.m.

Gallogly Hall, Room 126

ABSTRACT

Cerebrovascular aging is characterized by impaired endothelial function, reduced neurovascular coupling, and blood–brain barrier dysfunction. This talk will highlight how dietary patterns such as time-restricted fasting and high-fat diets differentially shape cerebrovascular health, mitochondrial bioenergetics, and inflammatory signaling, offering mechanistic insights into nutritional modulation of brain vascular aging. Using advanced imaging approaches, including two-photon microscopy and functional ultrasound (fUS), we reveal how these dietary interventions influence cerebrovascular structure and function in vivo.

BIO

Dr. Stefano Tarantini is an Assistant Professor of Neurosurgery at the University of Oklahoma Health Sciences Center, where he leads a multidisciplinary program on cerebrovascular aging and vascular cognitive impairment. His research integrates advanced neuroimaging, molecular biology, and metabolic interventions such as time-restricted feeding and modified diets to uncover mechanisms of endothelial dysfunction and neurovascular decline in aging. Dr. Tarantini's work is currently funded by the NIH, the American Heart Association and the American Federation on Aging Research and has been recognized with multiple national and international awards the OUHSC Provost Research Award, and the Valsalva Prize from the Italian Society of Cardiovascular Research. Originally from the Sicilian island in southern Italy, he combines scientific rigor with a deep commitment to mentorship, collaboration, and translational approaches that promote brain health across the lifespan.