



Department of Biochemistry and Molecular Biology

Franklin College of Arts and Sciences

UNIVERSITY OF GEORGIA

Announcing a seminar by

Dr. Blaine Roberts

Associate Professor

Emory University

March 18, 2022, 4 p.m.

C127 Life Sciences

<https://zoom.us/j/96775630051>



“Ion mobility mass spectrometry reveals hidden post-translational modifications of amyloid beta in Alzheimer’s Disease.”

Blaine R. Roberts is an Associate Professor at the Emory University in the Departments of Biochemistry and Neurology. Dr. Roberts earned his B.S. in chemistry from Montana State University-Bozeman and his Ph.D. in biochemistry & biophysics at Oregon State University in 2007 under the guidance of Professor Joe Beckman. His Ph.D. studies were focused around the structural rearrangements caused by the mis-metallation of metalloenzymes and their role in neurodegenerative diseases. Following his Ph.D. he was a postdoctoral trainee under the guidance of Professor Colin Masters at the Mental Health Research Institute in Melbourne, Australia where he worked to understand the role of amyloid beta and metals in Alzheimer’s disease brain. His laboratory has worked to develop and applying bioanalytical tools to understand the role of metalloenzymes in Alzheimer’s, Parkinson’s and amyotrophic lateral sclerosis (ALS). His contributions to unravelling the role of mutant Cu, Zn superoxide dismutase has contributed to the development of a clinical trial for ALS and Parkinson’s disease. And he continues to apply metalloproteomics to understand the role of essential trace elements in neurodegenerative disease. His laboratory also studies and develops blood- based biomarkers for Alzheimer’s and Parkinson’s disease. They use state of the art mass spectrometry from bottom-up to top-down techniques to study the role of proteins in neurodegenerative disease including the characterization of metal cofactors. This is paired with traditional biochemistry and biophysical techniques to better understand the role of intrinsically disordered proteins and essential elements in biology and disease.

- from Dr. Roberts