Heather Rice, Ph.D.

Assistant Professor
Aging & Metabolism Research Program

My 101

Alzheimer's disease is a brain disorder that affects memory, thinking and behavior in more than 6 million people across the U.S. One of the hallmarks of Alzheimer's disease is the buildup of plaques that form when proteins called amyloid-beta peptides stick together in the brain. These peptides are fragments from a larger molecule called the Amyloid Precursor Protein.

Reducing the amounts of Amyloid Precursor Protein in the brain may be a potential target for treatment or prevention of Alzheimer's disease. My lab works to understand the normal role of the Amyloid Precursor Protein so we can identify new approaches to manage it and better understand the potential benefits and consequences of its removal.

My laboratory studies the biology of the Amyloid Precursor Protein and its various fragments that break off during healthy aging and in Alzheimer's disease. In particular, we seek to identify the interactions of the Amyloid Precursor Protein with other proteins and the impact of these interactions on cellular functions and brain health.

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Brief CV

Education

B.S. in zoology-biomedical sciences, University of Oklahoma, 2007
Ph.D. in Neurobiology, Harvard University, 2013
Postdoctoral training, VIB-KU Leuven Center for Brain and Disease Research, 2013-2019

Honors and Awards

Junior Faculty Award Winner, Alzheimer's & Parkinson's Disease International Conference, 2019
21st Century Woman of Innovations in Health, The Oklahoman, 2020
Faculty Leadership Fellow, OUHSC, 2020
Trainee, NIA Summer Training Course in Experimental Aging Research, 2021
College of Medicine Alumni Research Scholar, OUHSC, 2021
Academic All-State Honored Alumni, Oklahoma Foundation for Excellence Awards Banquet, 2023

Memberships and Other Activities

Invited Reviewer: Alzheimer's Association International Research Grant Program, PLOS
Biology, Neuroscience, Geroscience, Journal of Gerontology: Biological Sciences, Alzheimer's Research & Therapy, 2017-present
Chair, Gordon Research Seminar: Neurobiology of Brain Disorders, 2018
Early Career Reviewer, Special Emphasis Panel on Molecular and Cellular Causal Aspects of Alzheimer's Disease (ZRG1 MDCN P (56)), 2021
Reviewer, Special Emphasis Panel on Alzheimer's Disease and its Related Dementias (ZRG1 AN Z55), 2023

Joined OMRF scientific staff in 2023