

2024 William R. Hazzard, MD
Translational Research in Aging Symposium

Wednesday, February 28, 2024

8:30 a.m. – 3:30 pm EST

Intergenerational Center for Arts and Wellness

Closing Loops: Integrating Brain & Body

8:30 am **Welcome**
Stephen B. Kritchevsky, PhD

Session 1: Session Moderator: Timothy M. Hughes, PhD

8:45 **Neural and energetic drivers of mobility resilience in older age**
Caterina Rosano, MD, MPH
Professor and Vice Chair for Research, Epidemiology
School of Public Health
Associate Director for Clinical Translation, Aging Institute
University of Pittsburgh

9:20 **The relationship between visual function and physical performance in older adults**
Atalie Thompson, MD, MPH
Assistant Professor, Ophthalmology
Wake Forest University School of Medicine

9:40 **Beta amyloid deposition impacts gait and visuospatial attention during performance of complex everyday tasks in older adults**
Lisa Zukowski, PhD
Assistant Professor, Physical Therapy
High Point University

10:00 Q & A

10:10 **Break**

Session 2: Session Moderator: Samuel N. Lockhart, PhD

10:30 **Loops or whoops: are our models of cognitive and motor decline sufficient?**
Aron S. Buchman, MD
Professor, Department of Neurological Science
Rush University Medical Center

11:05 **Deriving measures of brain aging and disease using machine learning**

Ramon Casanova, PhD
Associate Professor, Biostatistics & Data Science
Wake Forest University School of Medicine

11:25 **Neural determinants of sedentary behavior in older adults: a brain network analysis**

Mohsen Bahrami, PhD
Assistant Professor, Department of Radiology
Wake Forest University School of Medicine

11:45 Q & A

12:00p **LUNCH**

Session 3: Session Moderator: Leon Lenchik, MD

1:00 **Brain networks contribute to cognitive and physical function reserve**

Paul Laurienti, MD, PhD
Professor, Radiology
Wake Forest University School of Medicine

1:20 **Feel the burn: effects of acute exercise on brain metabolism**

Jill K. Morris, PhD
Assistant Professor, Neurology
University of Kansas Medical Center

1:55 Q&A

2:05 **Break**

Session 4: Session Moderator: Laura D. Baker, PhD

2:20 **Effects of dance on the brain and body in aging**

Christina Hugenschmidt, PhD
Associate Professor, Gerontology & Geriatric
Medicine
Wake Forest University School of Medicine

2:40 **Exercise and brain health in late adulthood**

Kirk Erickson, PhD
Director of Translational Neuroscience
Mardian J. Blair Endowed Chair of Neuroscience
Senior Investigator, AdventHealth Research Institute

3:15 Q & A

3:30p **End**

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Symposium Namesake **William R. Hazzard, MD**

Dr. Hazzard is Professor of Medicine at Wake Forest School of Medicine, which he re-joined in 2010 after retiring from the University of Washington in Seattle. In 1986, Dr. Hazzard first joined the faculty of the Wake Forest University School of Medicine, where he served as Professor and Chairman of the Department of Internal Medicine and founding Director of the J. Paul Sticht Center on Aging until 2000. This unique dual position allowed the concurrent, mutually reinforcing development of that department and center that has emphasized education and training of medical students, residents, and fellows in an academic mode based upon excellence in both research and care of patients across the continuum so essential for the welfare of elderly patients.



Caterina Rosano, MD, MPH

Dr. Rosano is Professor of Epidemiology at the University of Pittsburgh, Pittsburgh, PA USA. Dr. Rosano's research integrates methods from the fields of neuroimaging, geriatric medicine, epidemiology and neuroscience to implement novel strategies to capture mobility resilience in older age.



Lisa A. Sukowski, PhD

Lisa Zukowski is currently an Assistant Professor at High Point University. Prior to her faculty appointment, she was a Postdoctoral Associate at University of North Carolina at Chapel Hill. She earned her Ph.D. in Biobehavioral Science, with a concentration in Biomechanics, at University of Florida in 2014 and her M.A. in Biological Anthropology, with a concentration in Forensic Anthropology, at University of Florida in 2009. Her research is focused on understanding how kinematics of gait, visual attention during walking, environmental distractions, and performance of a cognitive task interact to affect overall walking performance and ability to participate safely in the community in individuals with age-related declines and chronic conditions.



Aron S. Buchman, MD

Dr. Buchman is a board-certified neurologist with subspecialty training in movement disorders, neuromuscular diseases and clinical neurophysiology. He is a Professor of Neurological Sciences and works at the Rush Alzheimer's Disease Center, where he leads

collection and extraction of novel behavioral and physiologic indices from sensor recordings obtained from community-dwelling older adults. His current research focuses on three inter-related topics. First, his studies quantify novel behavioral and physiologic indices that are collected. Other studies focus on characterizing degenerative changes in motor tissues outside the brain, within and outside the CNS, that may more fully account for motor decline than brain pathologies alone. Finally, a third group leverage diverse omics to determine if molecular mechanisms without a pathologic footprint may hasten or slow cognitive and motor decline in aging adults. Integrating these unique sensor phenotypes with novel degenerative changes and molecular mechanisms can potentially advance mechanistic studies and drug discovery that catalyze personalized medical treatments in aging adults.



Jill K. Morris, PhD

Dr. Morris received a B.A. In Biochemistry from William Jewell College and a PhD in Molecular and Integrative Physiology from the University of Kansas. She also completed a post-doctoral fellowship at the University of Kansas Alzheimer's Disease Center prior to joining the KU Department of Neurology as an Assistant Professor. She currently serves as an Assistant Director of the KU

Alzheimer's Disease Research Center Biomarker Core, Director of the KU Alzheimer's Disease Center Developmental Projects Program, and Chair of the KU Brain Health Training Program Board of Directors.

Dr. Morris' research is focused on the contribution of both systemic and brain energy metabolism to brain health and Alzheimer's Disease. It is possible that energy metabolism plays an early role or is an early marker in Alzheimer's Disease etiology. The lab seeks to explore how energy metabolism can be modified and improved to prevent and treat Alzheimer's Disease.



Kirk Erickson, PhD

Dr. Kirk Erickson is Director of Translational Neuroscience and Mardian J. Blair Endowed Chair of Neuroscience at the AdventHealth Research Institute, Neuroscience Institute. Dr. Erickson is also a Professor of Psychology and Neuroscience at the University of Pittsburgh. Dr. Erickson's research program focuses on the effects of physical activity on brain health across the lifespan.

Dr. Erickson received the prestigious Chancellor's Distinguished Research Award from the University of Pittsburgh and is a Fellow of the Academy of Behavioral Medicine Research. Dr. Erickson was a member of the 2018 Physical Activity Guidelines Advisory Committee, and chair of the Brain Health subcommittee charged with developing the second edition of the Physical Activity Guidelines for Americans. His research has been featured in a long list of print, radio, and electronic media including the New York Times, CNN, BBC News, NPR, Time, and the Wall Street Journal.