# **ORUSH**

# Lisa L. Barnes, PhD

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### Advancement of Medicine

In 2023, I had several notable research activities and recognition from the scientific community. Upon the untimely passing of a



Rush colleague, I was asked by the National Institute on Aging to assume the role of Principal Investigator for her Mediterranean-DASH Diet Intervention for Neurodegenerative Delay randomized controlled trial, also known as the MIND diet.

I successfully led the team of co-investigators and staff at Rush and Harvard to complete the trial during the height of the pandemic. Subsequently, we were able to publish the results in the *New England Journal of Medicine* and received significant media attention. Also, I received two prestigious awards for my research on older African Americans: the Paul D. MacLean Award for Outstanding Neuroscience Research and the Lifetime Achievement Award for Research on Black Americans.

I was invited to present my research or chair research symposia at five international conferences and for the National Institutes of Health, or NIH. I also presented my research as a plenary speaker at several society meetings including the International Conference on Nutrition in Medicine, National Academy of Neuropsychology, the Alzheimer's Association International Conference, and the Alzheimer's Research & Prevention Foundation. I was interviewed by STAT news for my impact on aging and Alzheimer's Disease in diverse communities. I also became a board member for the Global Council on Brain Health, which focuses on brain health relating to peoples' ability to think and reason as they age. Finally, I became the deputy editor for one of the top journals in Alzheimer's dementia and received a research grant as a multiple principal investigator to lead the coordinating center for 18 NIH-funded Research Centers on Minority Aging Research.



#### **Community Outreach**

The funds associated with my endowed faculty position continue to support retention efforts for my ongoing NIH-funded, community-based studies of older African Americans. My studies have been in the field since 2004 and 2008, respectively.

It takes considerable effort to retain older adults in longitudinal research. Your support enables me to host different events to keep participants engaged and provide them with valuable resources in appreciation for the time and dedication they devote to research at Rush.

We hosted our seventh annual back-to-school resource and health fair for the community in August 2023 where we brought together city vendors who offered health information, health screenings, COVID vaccinations, and dental exams for young children and their parents. We distributed book bags and school supplies for over 200 children.

We also hosted a senior services resource fair for the participants. This event took several months of planning and community engagement with service providers for seniors. At the fair, we had over 40 vendors, including Walgreens (which offered the COVID vaccine), and close to 200 participants and community members. We had mini-presentations, contests, and giveaways. We were especially pleased that the Lieutenant Governor of Illinois, Julie Stratton, supported our event.

#### Selected Speaking Engagements

- "Risk factors and mechanisms of cognitive aging and Alzheimer's among older African
   Americans," American Psychosomatic Society 2023, March 2023.
- "Alzheimer's Disease in African Americans: Current knowledge, challenges, and keys to prevention," Wayne State University, April 2023.
- "Social determinants of health and brain health in diverse populations," Johns Hopkins University, June 2023.
- "Non-pharmacological interventions and lifestyle changes to prevent cognitive decline and dementia," Alzheimer's Association International Conference, July 2023.
- "Plant-based Diets and Cognition: A population-based Study of Older Black and White Americans," ICNM Annual Meeting, August 2023.



- "Lifestyle factors and cognitive aging in older African Americans," Alzheimer's Research & Prevention Foundation, September 2023.
- "Social determinants and brain health in older adults," Rosalind Franklin University of Medicine and Science Molecular Cellular Sciences Seminar Series, October 2023.

#### Media

- "In the whitewashed world of Alzheimer's research, one scientist is on a quest to understand the diversity of brains," Usha Lee McFarling, StatNews.com, March 30, 2023.
- "MIND diet for brain health shows surprising results in new clinical trial," Sandee LaMotte,
   CNN, July 18, 2023.
- "Alzheimer's and Social Determinants of Health," Cutting Edge podcast.
- "Current Alzheimer's Disease Research," Dementia Matters podcast with Dr. Nathaniel Chin
  of the University of Wisconsin.

#### **Grants**

We were awarded two large grants resulting from activities supported by your generosity.

- First, we received a grant from the National Coordinating Center for the Research Centers on Minority Aging Research, a consortium of 18 centers across the country that are devoted to mentoring the next generation of scholars interested in aging, Alzheimer's disease, and health disparities.
- The second grant is a partnership with Boston University called the Black Women's Health Study. For this national study of over 50,000 Black women, we will recruit 2,500 women over the age of 60 from the study and administer the Rush Alzheimer's Disease Center cognitive battery to study cognitive decline.

### Publication Highlights — Abbreviated

- "Perceptions of Caring Recruitment Among Older Adults: African Americans and Non-Latinx
   Whites," Nursing Research. March-April 2023.
- "The Collaboration and Harmonization of Digital Biomarkers for Alzheimer's Research,"
   Alzheimers & Dementia Journal. December 2022.



- "Qualitative Examination of Knowledge, Experiences, and Considerations of PET Brain Scan
   Participation Among Older Black and Latino Adults," Journal of Alzheimers Disease. 2023.
- "Longitudinal Changes in Blood Biomarkers of Clinical Alzheimer Disease in a Biracial Population Sample," Neurology. February 2023.
- "The impact of attending historically Black colleges and universities on cognitive decline in Black adults: A longitudinal analysis in the KHANDLE and STAR cohorts," Alzheimers & Dementia Journal. February 2023.
- "ADNI and Prevent-AD Research Groups. Sex differences in associations between APOE ε 2
   and longitudinal cognitive decline," Alzheimers & Dementia Journal. March 2023.
- "Association of Early Adulthood Hypertension and Blood Pressure Change with Late-Life Neuroimaging Biomarkers," JAMA Network Open. April 2023.
- "Association of Mediterranean-DASH Intervention for Neurodegenerative Delay and Mediterranean Diets with Alzheimer Disease Pathology," Neurology. March 2023.
- "A Longitudinal Study of Acculturation in Context and Cardiovascular Health and Their Effects on Cognition Among Older Latino Adults," Journal of the American Heart Association.
   March 2023.
- "Age-related and amyloid-beta-independent tau deposition and its downstream effects,"
   Brain. April 2023.
- "The association of perceived discrimination with dementia risk in Black older adults,"
   Alzheimers & Dementia Journal. May 2023.
- "Late-life depressive symptoms and white matter structural integrity within older Black adults," Frontiers in Aging Neuroscience. May 2023.
- "Pragmatic approaches to handling practice effects in longitudinal cognitive aging research,"
   Alzheimers & Dementia Journal. May 2023.
- "Trial of the MIND Diet for Prevention of Cognitive Decline in Older Persons," New England Journal of Medicine. August 2023.

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## The Year Ahead: 2024 and Beyond

In the coming year, we will be celebrating 20 years of cognitive aging research on Black Americans. We plan to prioritize "giving back" to the community by hosting culturally competent celebratory events to acknowledge their contributions, create newsletters to relay our research findings to the community, and measure new biologic indicators of stress in the bloods of participants who donated their blood to the study.

### With Gratitude

I want to sincerely thank you for generously supporting research in the field of gerontology. Because of you, we have created and sustained a premier study of aging that is a model of inclusive science and community-engaged research for the scientific community.