



Purpose/Mission

•To promote the health and independence of older adults by fostering multidisciplinary collaboration in basic and clinical research, research training, professional education, and community outreach.



Leadership

L. Baker, Assoc Director J. Willamson, Assoc Director G.Byrd, Outreach J. Bateman, Clinical T. Register, C. Shively Neuropath Neuropath W. Harrison, Brinklev Neuropath **Research Education** I. Leng, . Whitlow Data Lockhart, S. Letchworth, M. Espelanc M. Mielke, Imaging **Research Education** Data Neuropath

Membership

The WF ADRC is Interdisciplinary and Collaborative



Since 2017, ADRC has funded 57 investigators and engaged 62 affiliates across >25 Departments and Centers



We are eager to engage with our new partners!

Sticht Center for Healthy Aging and Alzheimer's **Prevention: Alzheimer's Initiatives**

Suzanne Craft, Ph.D., Department of Internal Medicine-Section of Gerontology and Geriatric Medicine

ADRC Themes and Impact

Wake Forest NIH Alzheimer's Disease Research Center Awarded in 2017

- NIH funded Center of Excellence
- One of 34 ADRCs nationally



Benefits of ADRC

Wake Forest Baptist Medical Center

- Provides immediate integration into collaborative network of top tier institutions
- Provides infrastructure for rapid expansion of research and funding for AD research
- Funding related to AD at WFSOM has nearly tripled since ADRC was awarded, totalling \$205 Million

ADRC Theme: Early Detection and Prevention

Why is it so difficult to treat AD?



Brain of healthy 75 year old

diagnosis of AD

The key to prevention is early risk identification

- Preventing or delaying onset by 5 years:
- Reduces the number of adults who will develop AD by 41%
- Reduces annual care costs for
- Medicare/Medicaid by 40%
- For those who develop AD, 5 year delay reduces per person care costs by \$500,000 Zissimopoulos et al. The Value of Delaying

Alzheimer's Disease Onset. Forum Health Econ Policy. 2014



Centers (partial list)

- Columbia University
- Emory University
- Harvard Medical School
- Johns Hopkins University
- Mayo Clinic
- **Mount Sinai School of Medicine**
- Northwestern University
- Stanford University
- University of California, San Diego
- University of Michigan
- University of Pennsylvania
- University of Wisconsin
- Wake Forest University
- Washington University at St. Louis
- Yale University







Brain of 75 year old Patient Brain of Patient Y at stage typical X at stage typical for first for first diagnosis of AD in underrepresented/rural adults



2010 2014 2018 2022 2026 2030 2034 2038 2042 2046 2050 ----- 1-year delay 70+

Wake Forest ADRC Themes are Aligned with the Community We Serve



Abnormal Alzheimer's proteins collect in brain 10-15 years before symptoms; detectable with imaging and blood tests

AD Research is Aligned with our Themes

SPRINT-MIND

- program in development

US POINTER

- Williamson,

How can we best apply and further these scientific advances in our Learning Health System?

- Primary Care Pilot
- Develop optimized, inclusive risk algorithm tailored to our population
- Apply in risk surveillance pilot study in primary care with follow-up validation

Our Vision for the Future

- Expand the impact of our ADRC through Advocate/Atrium!
- Establish ADRC satellites
- Increase availability of cutting-edge clinical trials
- Implement targeted screening program to identify people at risk
- Develop comprehensive prevention/treatment programs to address specific risk profiles
- Translate research discoveries into better healthcare for all





- Transition from normal aging to Mild Cognitive Impairment (MCI) • Primary prevention
- 5 yr delay reduces prevalence by half Transition from MCI to AD
- Secondary prevention, greatest health care cost savings Preserved QOL
- <u>Understanding role of metabolic/</u> vascular conditions and health disparities in risk/progression

• Led by Wake Forest ADRC investigators (Williamson, Director) • First study to demonstrate that intensive blood pressure control delays/prevents MCIvImpacted clinical guidelines, clinic implementation

• Alzheimer's Association and NIH-sponsored; largest trial to date of lifestyle intervention (~\$40 M) for prevention of MCI and AD Led by Wake Forest ADRC investigators Baker(Director), Espeland,

Enrolling 2500 at-risk participants for 2-year multi-modal health system and community-based intervention (diet, exercise, sleep, cognitive stimulation)

