



The McKnight Brain Research Foundation

Championing research to better understand and
alleviate the effects of cognitive decline and
age-related memory loss since 1999



McKNIGHT BRAIN
RESEARCH FOUNDATION

Preserving memory, enhancing life



In commitment to our Vision, the McKnight Brain Research Foundation strives to:

- 1** Lead in generating interest in and **support of scientific research** on age-related cognitive decline and memory loss
- 2** Inspire **commitment** and **shared vision** to promote cognitive and brain health for life
- 3** Promote **partnerships** and **collaborations** among research scientists, institutions, and organizations engaged in research on age-related memory loss
- 4** **Nurture, recognize** and **reward** achievements of young investigators and clinicians dedicated to innovative research and discoveries leading to the better understanding and alleviation of age-related memory loss

The McKnight Brain Research Foundation aims to improve quality of life by better understanding and alleviating age-related memory loss.

The McKnight Brain Research Foundation is the only private foundation devoted exclusively to solving the mysteries of the aging brain and helping people achieve a lifetime of cognitive health.

Four Strategic Pillars

Research

Recognizing a void in understanding how cognitive aging can be prevented and reversed, the McKnight Brain Research Foundation has established a dedicated field of investigator-led research in age-related cognitive decline and memory loss over the past 20 years.

Partnerships & Collaboration

Creating long-standing partnerships with the Foundation for the National Institutes of Health (FNIH) and the National Institute on Aging (NIA), resulting in the Research Partnership in Cognitive Aging and three Cognitive Aging Summits, has greatly expanded the understanding of how people think as they age.

McKnight Brain Institutes

Establishing Evelyn F. McKnight Brain Institutes at the University of Alabama at Birmingham, the University of Arizona, the University of Miami and the Evelyn F. and William L. McKnight Brain Institute at the University of Florida has institutionalized the field of cognitive aging research at the university level.

Scholarships & Grants

Offering scholarships and grants to attract bright young researchers and support current researchers to ensure a steady pipeline of innovative research in the field of age-related cognitive decline and memory loss.

The McKnight Impact

- **\$15 million awarded** to FNIH resulting in nearly 40 new grants over two cycles
- Supporting clinical studies by **six** young investigators through the McKnight Clinical Translational Research Scholarship in Cognitive Aging and Age-Related Memory Loss
- Supporting a total of **five endowed Chairs** and **more than 240 faculty researchers** dedicated to age-related cognitive decline and memory loss through the four McKnight Brain Institutes
- **Hosted three successful Cognitive Aging Summits** in partnership with the NIA, one outcome of which is the Reserve and Resilience Program to develop state-of-the-art definitions and research guidelines to align the national and international research community on key concepts associated with resilience against cognitive aging
- Partnership with the National Academy of Medicine to develop the **Cognitive Aging Report** to advance understanding of age-related changes in the brain and identify specific actions to promote cognitive health



The McKnight Brain Research Foundation and four McKnight Brain Institutes foster cross-discipline, productive collaboration among leading researchers to better understand and alleviate the effects of age-related cognitive decline and memory loss.

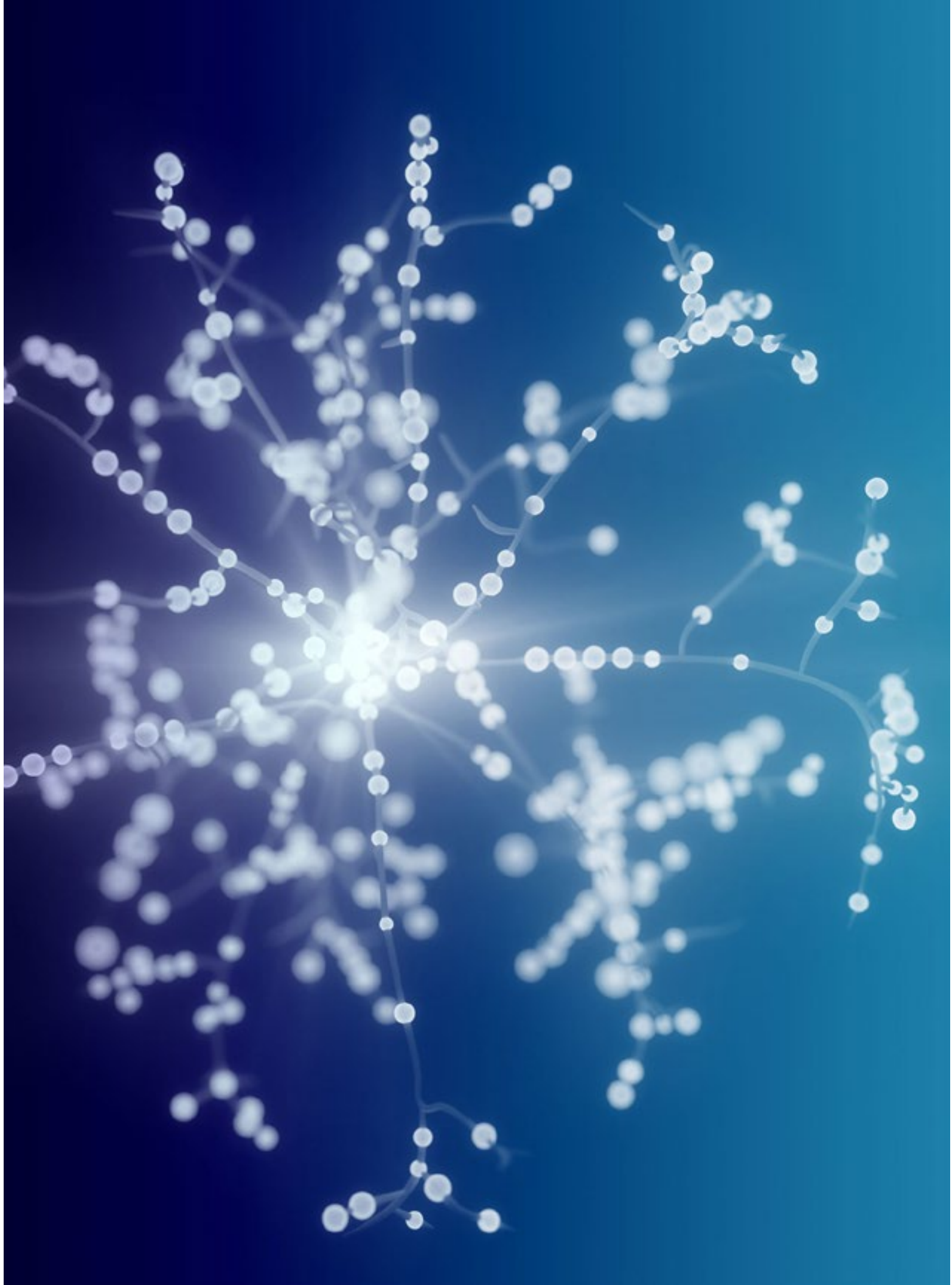
The scientific research conducted at the McKnight Brain Institutes examines the fundamental mechanisms that underlie the neurobiology of learning and memory and the influences contributing to successful aging. Findings and discoveries are applied clinically to help people maintain their cognitive health and manage the effects of age-related cognitive decline and memory loss.

In the photo: McKnight Brain Institutes' Leadership Council (L-R) Lee Ryan, Ph.D. (UA); Thomas Foster, Ph.D. (UF); Ron Lazar, M.D. (UAB); Todd Golde, M.D.; Ph.D. (UF); Steven DeKosky, M.D.(UF); Carol Barnes, Ph.D. (UA); Ralph Sacco, M.D. (UM); Ronald Cohen, Ph.D. (UF); and Tatjana Rundek M.D., Ph.D. (UM). Not pictured: David G. Standaert, M.D., Ph.D. (UAB), Erik D. Roberson, M.D., Ph.D. (UAB) and Jada Lewis, Ph.D. (UF).

Evelyn F. McKnight Endowed Chairs

Recognizing Evelyn McKnight's generous support for ongoing brain research, the McKnight Brain Research Foundation established Endowed Chairs at each of the four McKnight Brain Institutes in her honor.

- Evelyn F. McKnight Endowed Chair in the Department of Neurology at the University of Alabama at Birmingham
- Evelyn F. McKnight Endowed Chairs for Learning and Memory in Aging at the University of Arizona
- Evelyn F. McKnight Chair for Research on Cognitive Aging and Memory and Evelyn F. McKnight Chair for Clinical Translational Research in Cognitive Aging at the University of Florida
- Evelyn F. McKnight Endowed Chair for Learning and Memory in Aging at the University of Miami



The University of Alabama at Birmingham

Established in 2004, the Evelyn F. McKnight Brain Institute at the University of Alabama at Birmingham (UAB) brings together scholars and researchers working in the forefront of basic, translational and clinical neuroscience, with the overarching goals of discovering new biological principles in pre-clinical models and bringing them to bear on human cognitive concerns.

Utilizing state of the art laboratory facilities, brain imaging modalities, and clinical settings, the UAB MBI faculty and students explore the mechanisms that underlie human and animal cognitive neuroscience in an effort to develop new interventions for creating cognitive resilience as people age.

Evelyn F. McKnight Brain Institute Leadership

Director, Ronald M. Lazar, Ph.D., FAHA, FAAN

Director and Evelyn F. McKnight Endowed Chair, Dr. Ronald M. Lazar, is a graduate of New York University with a prize in Psychology and a PhD graduate in Psychology from Northeastern University. Since beginning his tenure with UAB, Dr. Lazar has worked to fulfill his vision of establishing new relationships with patient-oriented departments and clinical faculty to build upon the already-existing strengths in basic and translational neuroscience at UAB.

Associate Director, Erik Roberson, M.D., Ph.D.

Associate Director, Dr. Erik Roberson, is a neurologist and neuroscientist whose research is focused on age-related cognitive impairment. He received his A.B. with highest honors from Princeton University and earned his M.D. and Ph.D in neuroscience at Baylor College of Medicine where he studied molecular mechanisms of learning and memory.

[Learn more about the Leadership Team on the UAB MBI website](#) →

Specialized Research on Cognitive Aging

Research at the UAB McKnight Brain Institute involves an interdisciplinary collaboration across departments and programs at the University of Alabama Birmingham, targeted at mitigating age-related cognitive decline.

McKnight Brain Aging Registry (MBAR)

With tremendous investment in organizing and harmonizing data from across the four McKnight Brain Institutes, the McKnight Brain Aging Registry now includes a single data set that has undergone quality control and is sufficiently similar to be compared across sites. Recruitment and data acquisition for this collaborative project remains in progress.



Clinical and Population-based Research

Clinical and population-based research at the UAB MBI focuses on healthy aging adults, as well as adults with age-related memory loss and cognitive decline, Alzheimer's disease and related dementias, stroke and other cerebrovascular conditions, among others. Areas of research include: cognitive resilience and recovery in aging; age-related cognitive function; quality of life for the aging through research, education and clinical care; functional activity, decisional capacity, and cognition in persons with cognitive impairment; and more.

Center for Translational Research on Aging and Mobility

The Center for Translational Research on Aging and Mobility is a multisite study measuring cognitive testing and brain MRIs.

55+

faculty members spanning
across more than 15
academic departments

200+

peer reviewed
publications in high
impact journals annually

[Learn more about the UAB MBI](#) →

The University of Arizona

Founded in 2006, the mission of the Evelyn F. McKnight Brain Institute at the University of Arizona is to discover the mysteries of the normally aging brain to achieve a lifetime of cognitive health.

Scientists used to view the aging brain as an inevitable story of decline. It's now known that the brain continually adapts throughout life— a more hopeful outlook on the world's most condensed mystery.

Because of the inventive research of Dr. Carol Barnes and other affiliated faculty, along with the continual development of new technologies, the Evelyn F. McKnight Brain Institute is poised to contribute to southern Arizona as a center for high-level neuroscience, while also improving cognitive understanding and health for the entire world.

Evelyn F. McKnight Brain Institute Leadership

Director, Carol A. Barnes, Ph.D.

Director, Dr. Carol A. Barnes is a Regents Professor in the Departments of Psychology, Neurology and Neuroscience, the Evelyn F. McKnight Endowed Chair for Learning and Memory in Aging, Director of the Evelyn F. McKnight Brain Institute and Director of the Division of Neural Systems, Memory & Aging at the University of Arizona, Tucson, Arizona. Dr. Barnes is past-president of the Society for Neuroscience, an elected Fellow of the American Association for the Advancement of Science, and an Elected Foreign Member of the Royal Norwegian Society of Sciences and Letters, and an elected fellow of the National Academy of Sciences.

Associate Director, Lee Ryan, Ph.D

Dr. Lee Ryan is a Professor in the Departments of Psychology and Neuroscience, Director of the Evelyn F. McKnight Brain Institute, Director of the Cognition and Neuroimaging Laboratory, Head of the Department of Psychology at the University of Arizona, Tucson, Arizona. Her work focuses on investigating the aging brain and how memory changes with age and identify ways to maintain a healthy brain through healthy lifestyle choices.

[Learn more about the Leadership Team on the UA MBI website](#) →

Specialized Research on Cognitive Aging

CLARITY Method

In the University of Arizona McKnight Brain Institute lab, researchers are learning how memory changes over time, recording live brain activity at a cellular level, and mapping cell activity across the entire brain with new molecular imaging methods.



They are also developing a method called CLARITY, which makes the brain translucent, and are building a novel microscope that can see deep inside an entire brain to identify relevant memory circuits.

Normal Brain Aging Research

Recognizing that a brain can't be returned to normal if it isn't first understood what that normal is, the UA MBI researchers are also focused on better understanding how the brain ages normally as a fundamental step to furthering treatments available for Alzheimer's, Parkinson's, and other neurological diseases.

40⁺

affiliate facility spanning 21
departments and 5 colleges

200⁺

articles published annually
on topics related to aging

\$29M

in research funding

[Learn more about the UA MBI](#) →

The University of Florida

With the start of the new millennium, the University of Florida Brain Institute, a world class \$60 million building, was renamed the Evelyn F. and William L. McKnight Brain Institute of the University of Florida (UF MBI) to celebrate and commemorate a **\$15 million** gift from the McKnight Brain Research Foundation.

Today, the UF MBI is one of the nation's most diverse neuroscience research centers. Its mission extends far beyond its physical walls and serves as a "transparent umbrella" connecting and supporting faculty members from other departments, centers and programs with concentrations in neuroscience research throughout UF's 16 colleges. Across campus, researchers collaborate with cognitive aging core faculty — supported by the gift from the McKnight Brain Research Foundation — on multidisciplinary teams to better understand how the brain works and how various diseases alter brain function.

Ultimately these researchers and physician-scientists hope to broaden the understanding of many neurological and psychiatric disorders and change them from untreatable to treatable, incurable to curable and inevitable to preventable.

Evelyn F. & William L. McKnight Brain Research Foundation Leadership

Director, Todd E. Golde, M.D., Ph.D.

Director, Todd E. Golde, M.D., Ph.D., oversees, champions and facilitates neuroscience and neuromedicine research programs across the UF campus. A professor of neuroscience, Golde joined the UF faculty in 2009 and became founding director of the university's Center for Translational Research in Neurodegenerative Disease (CTRND).

Co-Deputy Director, Steven T. DeKosky, M.D.

Co-Deputy Director, Steven T. DeKosky, M.D., is also the Aerts-Cosper Professor of Alzheimer's Research at the UF College of Medicine, co-deputy director of the UF MBI and associate director of the 1Florida ADRC.

Co-Deputy Director, Jada Lewis, Ph.D.

Co-Deputy Director, Jada Lewis, Ph.D., is a professor of neuroscience and investigator at UF's Center for Translational Research in Neurodegenerative Disease. She has co-led the UF MBI's Education and Outreach Committee with Jennifer Bizon, Ph.D., for the last two-plus years.

Evelyn F. McKnight Endowed Chairs for Research

Chair for Research on Cognitive Aging and Memory, Tom Foster, Ph.D.

Chair for Clinical Translational Research in Cognitive Aging, Ron Cohen, Ph.D., ABPP, ABCN



Specialized Research on Cognitive Aging

Center for Cognitive Aging and Memory Clinical Translational Research (CAM Center)

Co-directed by Ron Cohen, Ph.D. ABPP, and Jennifer Bizon, Ph.D., with Sara Burke, Ph.D., and Adam Woods, Ph.D., serving as associate directors, the CAM Center is a multidisciplinary research center focused on brain aging and cognition with researchers specializing in the neurobiology of aging, neuroplasticity, physiology, behavior and clinical intervention. Research approaches underway at the CAM Center include analysis of single cells and molecules; interrogation of neural circuits; and design and testing of interventions to improve cognitive health.

With strengths in both preclinical discovery-based research and clinical science, researchers are dedicated to translating leading edge brain aging discoveries into interventions that will preserve cognitive function and improve the quality of lives for older adults. The CAM Center is a fertile training ground for those interested in preclinical or translational research careers focused on preventing or reversing age-related cognitive decline.

200+

faculty members from
more than 50 academic
departments

3rd

ranking in neuroscience
for NIH funding among
public universities

50+

labs totaling 260,000
square feet of
research space

[Learn more about the UF MBI](#) →

The University of Miami

Research at the Evelyn F. McKnight Brain Institute at the University of Miami is dedicated to advancing medical knowledge about memory loss and related neurological diseases.

UM MBI researchers are studying ways to improve the lives of people with Alzheimer's disease and other types of dementia, with a goal of developing new strategies to stop the disease process, minimize the impact on individuals, restore lost functions and eventually find the cause and cure for these devastating illnesses.

Evelyn F. McKnight Brain Institute Leadership

Executive Director, Ralph L. Sacco, M.D., M.S.

Executive Director, Dr. Ralph L. Sacco, is also the Chairman of Neurology, Olemberg Family Chair in Neurological Disorders, Miller Professor of Neurology, Public Health Sciences, Human Genetics, and Neurosurgery, and Chief of the Neurology Service at Jackson Memorial Hospital.

Dr. Sacco, an elected member of the National Academy of Medicine, is the founding Principal Investigator of the 26-year NINDS-funded Northern Manhattan Study, and co-investigator of multiple other NIH grants.

Scientific Director, Tatjana Rundek, M.D., Ph.D.

Scientific Director and Evelyn F. McKnight Chair for Learning and Memory in Aging, Dr. Tatjana Rundek is a Professor of Neurology, Epidemiology and Public Health with tenure, Vice Chair of Clinical Research, and Director of the Clinical Translational Research Division in the Department of Neurology of the University of Miami, Miller School of Medicine. She holds a secondary faculty appointment at the Department of Neurology at Columbia University in New York.

[Learn more about the Leadership Team on the UM website](#) →

Cognitive Aging Research

The McKnight MRI Core and Neuropsychology Core Projects

The McKnight MRI Core and Neuropsychology Core Projects are collaborative core projects with other McKnight Brain Institutes involving ongoing research and collection of standardized brain MRIs and neuropsychological assessment data in patients with memory and cognitive loss.

Evelyn F. McKnight Brain Institute Cognitive Disorders Clinical and Biorepository Registry Collection

This comprehensive longitudinal database registry includes patients with age-related memory disorders and dementias. Participants are enrolled from the University of Miami Memory Disorders Clinic, a collaborative effort between Neurology and Psychiatry & Behavioral Sciences. The databank collects information on patient demographics, clinical assessments, medical history, genetic risk factors, imaging data and treatment modalities.



Identification of Biomarkers for Early Diagnosis of Cognitive Impairment in the Elderly

This ongoing study aims to identify new biomarkers that can be detected in participants who are at risk of developing dementia and/or who have cognitive impairment.

Evaluating Frailty as a Preventive Measure in Maintaining Quality of Life in Aging

This frailty research evaluates a clinical and community cohort of aging adults to determine their propensity towards being non-frail, pre-frail and frail, with the goal of early detection and prevention of frailty symptoms and clinical characteristics.

Analysis of Cognition in Patients with Memory Complaints

By analyzing patients with memory complaints, this research project examines questions related to the cognitive, psychological and biomedical variables associated with dementia and its subtypes, including demographics and risk factors that help identify predictive variables to improve the understanding of dementia and other memory disorders and their comorbidities.

1st

medical school in Florida, the Leonard M. Miller School of Medicine, founded in 1952

1962

Founding of the Department of Neurology, one of the oldest departments within the Miller School

85+

clinical and research faculty, with one of the largest neurology training programs

[Learn more about the UM MBI](#) →

THE MCKNIGHT BRAIN FOUNDATION LEADERSHIP



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Miami, FL



Evelyn F. McKnight, a nurse, established the Evelyn F. McKnight Brain Research Foundation® on May 26, 1999. Mrs. McKnight and her late husband, William L. McKnight, were interested in the effects of aging on memory. This interest inspired Mrs. McKnight to establish the Foundation as a legacy of support for brain research with the specific goal of better understanding and alleviating age-related cognitive decline and memory loss.



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www.mcknightbrain.org