



McKNIGHT BRAIN RESEARCH FOUNDATION

Preserving memory, enhancing life

March 4, 2025

*Established by
Evelyn F. McKnight
to Alleviate Memory Loss
in the Aging*

Mr. Tom Brannan
Vice President for Development and Alumni
The University of Alabama at Birmingham
1264 1720 2nd Ave. S
Birmingham, AL 35294-0112

Dear Mr. Tom Brannan

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At their meeting on February 24, 2025, the trustees of the McKnight Brain Research Foundation (MBRF) reviewed the 2024 annual report submitted by the Evelyn F. McKnight Brain Institute (EMBI) at the University of Alabama at Birmingham (UAB). The trustees are pleased the report provided a favorable representation of the EMBI with its continued growth with numerous collaborations and publications demonstrating the productivity in advancing the research mission in cognitive aging.

The trustees were impressed with the notable NIH funding that has been secured and the expansion of faculty to 65 members extending the collaborations between the EMBI and **nine** academic and research units within UAB. However, trustees encourage the continued leverage of grant funding opportunities and to develop more publications in high-impact journals and increased faculty leadership in authorship.

It was pleasing to the trustees to learn the plan to develop the Brain Aging and Memory Hub (BHAM), mentioned in earlier annual reports, is now operational with space for both clinical and research for the EMBI and four other affiliated brain aging and memory divisions and the Alzheimer's Disease Center.

The establishment and the progress in the development of the Brain Health Advocacy Mission are very impressive and an important and powerful connection between the primary care providers. The implementation of a process to evaluate brain health leading to the establishment of a Brain Care Score in collaboration with the McCance Center is commendable and has the potential of great clinical value. The extension of BHAM with the Birmingham Fire and Rescue service to evaluate the wellbeing and brain health of this vulnerable occupational population is to be commended.

The McKnight Brain Aging Registry (MBAR) remains one of the most successful collaborative research projects funded by the MBRF. The trustees recognize Dr. Kristina Visscher's leadership in its success and making research data available to all the McKnight Brain Institutes and external research investigators.

The importance of growing the next generation of scientists is confirmed with the establishment of training programs in "Neurobiology of Cognition and Cognitive Disorders" in the Department of Neurobiology. Additionally, the UAB Neuroscience Roadmap Scholars Program directed by Dr. Farah Lubin provides the tools for enhancing the engagement and retention of graduate trainees in neuroscience. Each of the programs shows strong commitment to diversity and trainee support.

Please address all correspondence to:

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As further evidence of developing future scholars, the trustees note the recruitment of Drs. Abbi and Caesar Hernandez to the EMBI who received their training at the University of Florida MBI.

The trustees remain interested in the role of the advisory committee in the operation and management of the EMBI. It is noted the committee was scheduled to meet on March 3, 2025. Please provide the trustees with information on the frequency of the advisory committee meetings with a copy of the agenda and the minutes of the March 3, 2025, meeting when available.

The trustees express their collective appreciation for your support and efforts in continuing to advance the research initiatives supported by the McKnight Brain Research Foundation, leading preserving memory and enhancing life through brain health.

Sincerely,

A handwritten signature in cursive script, appearing to read "Amy Porter".

Amy Porter
Interim Executive Director

Cc: Dr. Ronald M. Lazar; Dr. Kristina Visscher; Dr. Anupam Agarwal; Dr. Ray L. Watts;
Dr. David G. Standaert; MBRF Trustees

May 7, 2025

Ronald M. Lazar, PhD, FAHA, FAAN|UAB
Evelyn F. McKnight Endowed Chair
Professor of Neurology and Neurobiology
Director, Evelyn F. McKnight Brain Institute at UAB
Director, Division of Neuropsychology

RE: March 3, 2025, Meeting of the Advisory Committee for the UAB Evelyn F. McKnight Brain Institute

In attendance by Zoom:

Ronald M. Lazar, PhD, Director, UAB Evelyn F. McKnight Brain Institute

Kristina Visscher, PhD, Associate Director, UAB Evelyn F. McKnight Brain Institute

David G. Standaert, MD, PhD, Chair, UAB Department of Neurology

Richard Shelton, MD, Vice Chair for Clinical Research, UAB Department of Psychiatry

Robert Kimberly, MD, Director, Center for Clinical and Translational Science and Senior Associate Dean for Clinical and Translational Research, UAB Heersink School of Medicine

Dear Ron,

Thank you for organizing the recent meeting of the Advisory Committee for the UAB Evelyn F. McKnight Brain Institute (UAB MBI). The committee was pleased to hear about the growth and success of the work supported by the Institute. The UAB-McKnight Advisory Board meeting covered updates on the organization's structure, membership, and grant funding, as well as ongoing research initiatives and collaborations. The importance of brain health was emphasized, with discussions on various programs and studies aimed at improving cognitive function and preventing dementia. The meeting also touched on outreach efforts, including a brain health jingle and a project to provide brain health services to firefighters in Alabama. Some of these aspects are discussed in more detail below

UAB-McKnight Advisory Board Updates and Grants

At the 2025 UAB-McKnight Advisory Board meeting, Ron presented updates on the organization's structure, current membership, and grant funding. The organization has expanded its faculty and added seven new members since June 2024. In the past year, they attended the 15th Annual McKnight Brain Research Foundation Inter-institutional meeting in Gainesville, where 22 UAB participants and six member trainees presented on topics such as chronic ketosis, cognitive function, and white matter disease. They also hosted the 2025 Annual Lecture, featuring Mitch Elkind from the American Heart Association. The organization has secured significant intramural awards, with 83% of them being federal funds. Furthermore, they have ongoing collaborations with the McKnight Brain Aging Registry, which has collected data from over 200 individuals and is now in the data analysis phase. The organization also offers pilot grants for junior faculty, such as the Cognitive Aging and Memory Intervention Core Pilot Grant program, which provided funding for projects on hippocampal function in aged mice and the influence of the gut on metabolism, cognition, and Alzheimer's disease.

David G. Standaert, MD, PhD, Chair
Department of Neurology

Brain Health Advocacy and McCann's Score

Ron discussed the importance of brain health and the Brain Health Advocacy Mission Bham. He mentioned a 2021 scientific statement from the American Heart Association about integrating brain health into primary care. Ron also detailed a program where brain care champions work with patients to improve their brain health through modifiable biological factors and risk factors. The program uses the McCann's brain care score to measure lifestyle behaviors and risks. Ronald shared that for every 5 points on a 21-point scale, there's a 50% decreased risk for dementia and stroke. He also mentioned a stress management consultation for patients who select stress or anxiety as one of their targets.

Ron discussed the importance of brain health and the factors that affect it. He presented data on the first 161 patients, highlighting exercise level, diet, and body weight as the most frequently requested target factors. The data showed that anxiety was a common issue, with 25% of the population having a history of anxiety and depression. Ron also provided statistics on age, blood pressure, hemoglobin levels, cholesterol, and BMI. He emphasized the importance of early intervention and noted that most participants were African American women. At a 6-month follow-up, Ron reported improvements in stress, nutrition, and aerobic activities, but noted a lack of improvement in sleep. He also mentioned that sleep disorders were more common than expected, with 25% of the population having sleep apnea.

UAB Neuroscience Research Updates

Ron provides an update on several research initiatives. He discusses a pilot program involving 160 patients to study the effects of exercise on brain health, aiming to recruit 30 participants across three study arms. The study, funded by the McCann Center for Brain Health and UAB, is measuring changes in brain care scores and blood pressure, with retinal microvascular density as a biological marker. Ronald also mentions the formation of a global brain care coalition with other institutions, aiming to reduce cognitive decline worldwide. He notes that the brain care score has been validated for predicting late-life depression, stroke, and dementia. Lastly, Ron mentioned that over 20 UAB McKnight members presented posters at a recent neuroscience meeting, covering various areas of brain health research.

Brain Activity Dynamics and Processing Speed

In the meeting, Kristina discussed a new study on brain activity dynamics and their relationship with cognitive performance, particularly processing speed. She mentioned that the study found a strong and significant relationship between processing speed and these dynamics. Bob inquired about processing speed, and Kristina explained that it is a measure of how quickly the brain can process information, which declines with age and is a major problem in cognitive decline. Ron added that processing speed is often predominantly in the frontal lobe and is significantly affected by vascular factors. He also mentioned that patients with Parkinson's disease often have slower processing speed.

"Save the Brain" Jingle Unveiled

Ron played a jingle called "Save the Brain" for the team, which was composed by DJ Supreme and features the Alabama Symphony Orchestra. The aim is to use catchy music to engage people in saving their brains. Ronald also shared his experience of playing the jingle at a grand rounds at Yale University, where it received a positive response. Moreover, Ron mentioned that they are using the jingle as an educational tool and plan to distribute it among their participants. The team also discussed a project where they used a similar method to engage individuals in taking care of their health.

Firefighters' Brain Health Services in Alabama

Ron and Kristina presented their work on providing brain health services to firefighters in Alabama, starting with Birmingham Fire and Rescue. They highlight the high health risks faced by firefighters and the potential for firehouses to be laboratories for change. The team is seeking funding to expand the project to Hoover's firehouses. The discussion then shifts to how the McKnight Brain Institute operates

inter-institutionally, with trustees providing additional resources for cross-institutional programs. The team explores potential funding sources for expanding their brain health program, including local foundations like Daniel Foundation and Hugh Call Foundation.

Overall, the Advisory Committee was very impressed with the progress and creativity of the UAB Evelyn F. McKnight Brain Institute and looks forward to hearing more about these important projects.

For the Advisory Committee,

A handwritten signature in black ink, appearing to read 'D. Standaert', with a long horizontal line extending from the end of the signature.

David G. Standaert, M.D., Ph.D.
Professor and Chair of Neurology
John N. Whitaker Endowed Chair