

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*