University of Miami
Miller School of Medicine
Evelyn F. McKnight Brain Institute
2020-2025

UNIVERSITY OF MIAMI
MILLER SCHOOL OF MEDICINE
EVELYN F. MCKNIGHT
BRAIN INSTITUTE

INTRODUCTION

This is the first strategic plan for the University of Miami Miller School of Medicine Evelyn F. McKnight Brain Institute (UM-MBI). The UM-MBI was created through an endowment from the McKnight Brain Research Foundation. It is one of only four in the country. UM-MBI brings together a cross-disciplinary team of translational scientists and clinicians to accelerate discoveries of age-related memory loss and cognitive impairment produced by various brain related disorders. It seeks to train the next generation of clinical translational investigators capable of translating scientific discoveries into clinical practice and advance brain health in communities.

DEVELOPMENT OF THE STRATEGIC PLAN

Commencing in 2018 we created an outline for a strategic plan. The following year, we convened the expanded Advisory Board and a multi-disciplinary group of physicians, scientists and research professionals from the Departments of Neurology, Neurosurgery, Psychiatry, Radiology, Internal Medicine, Psychology, Kinesiology and Sport Sciences, Brain Endowment Bank, Center for Cognitive Neuroscience and Aging (CNSA), Center for AIDS Research (CFAR), Clinical Translational Science Institute (CTSI), Hussman Institute for Human Genomics (HIHG) and others to evaluate current UM-MBI research and educational programs and plan the direction and develop goals and strategies of our Institute over the next 5 years

The rationale for this strategic plan was to evaluate and emphasize the strengths of UM-MBI, to acknowledge the weaknesses, recognize challenges and opportunities, and to create and execute the strategic plan to achieve our goals in support of advancing our mission and vision in alignment with the University of Miami Miller School of Medicine (UM-MSOM) strategic plan.

MISSION

To *accelerate discoveries* of the causes and treatments of age-related memory loss and cognitive decline and to *promote* brain health through multi-disciplinary collaborations and partnerships; and to *train new generations* of skilled clinical and translational scientists specializing in age-related memory loss, cognitive decline and promotion of brain health.

VISION

To become a *leading center for clinical and translational research* into the causes, treatments and prevention of age-related cognitive disorders and promotion of brain health.

VALUES

Diversity   Include people from all cultures and backgrounds.

Integrity   Demonstrate honesty and fairness in our actions.

Responsibility   Exhibit pride and accountability in the performance of duties ensuring long-term success.

Excellence   Strive to accomplish our goals with quality, rigor, passion and distinction.

Creativity   Embrace innovation, flexibility and originality.

Teamwork   Work across disciplines, departments, institutes and specialties to achieve optimal results.

GOALS, STRATEGIES AND METRICS

GOAL 1: DEVELOP A SCIENTIFIC PROGRAM DIRECTLY RELATED TO UM-MBI AND THE MCKNIGHT BRAIN RESEARCH FOUNDATION MISSION

The UM-MBI focuses its efforts on age-related memory loss, brain health, and translating research discoveries into clinical practice.

CLINICAL TRANSLATIONAL RESEARCH STRATEGIES

- **Continue** research programs examining vascular, genetic, inflammatory, behavioral, psychosocial, sensory, environmental and imaging biomarkers of cognitive vascular impairment
- **Develop** new clinical translational research projects in age-related memory loss, cognitive decline and brain health; and leverage existing networks, NIH projects, databases and biorepositories (i.e., ADNI, MBAR, 1FL ADRC, OneFlorida, CFAR and others)
- **Develop** a strong clinical interventional program in age-related memory loss, cognitive decline and brain health based on restorative-stem cell, synaptic plasticity, sleep, cognitive-behavioral and lifestyle interventions
- **Identify funding opportunities** (NIH and others) and submit collaborative grants
- **Develop** seed/pilot research grant program for junior faculty and leverage institutional research funding (SAC, CFAR, CTSI pilots)
- **Prioritize** translation of evidence-based research findings into clinical practice
- **Develop** screening programs for cognitive impairment throughout UHealth for memory loss and promotion of brain health

CLINICAL TRANSLATIONAL RESEARCH METRICS

- **Aim** for an annual research and/or training grant submissions by UM-MBI members
- **Track** grant submissions and success among UM-MBI members, collaborators and trainees
- **Track** publications of UM-MBI members, collaborators and trainees
- **Increase** utilization of the research MRI at the UM Coral Gables Campus
- **Complete** a charter, research and business plans for the clinical interventional program and for the screening program in age-related memory loss, cognitive decline, and promotion of brain health

GOALS, STRATEGIES AND METRICS

GOAL 2: EDUCATION AND MENTORSHIP

The UM-MBI provides education and mentorship in age-related memory loss, cognitive decline and brain health

EDUCATION STRATEGIES

- **Establish** a Neuro-Cognitive Post-Doctoral Fellowship
- **Integrate** cognitive aging education program with neurology resident training program
- **Expand** Schoninger Neuropsychology fellowship to include formal training in cognitive interventions focused on age-related memory loss
- **Develop** training program in age-related memory loss and cognitive decline (e.g., NIH T32, R25, F, K)
- **Provide** training in age-related memory loss to students, post doctoral fellows, physicians and scientists using multi-disciplinary seminar series, journal clubs, brain cutting sessions, research roundtables
- **Establish** a MD/PhD and MD/MS research thesis/capstone programs to fund a mentored project in age-related memory loss, cognitive decline and brain health
- **Partner** with the CTSI, CFAR, 1FL ADRC, VA, UM Geriatrics, FIU, Miami Jewish and other institutions in educational activities
- **Develop and strengthen** mentorship programs and leverage mentorship programs through CTSI Mentor-Mentee program and 1FL ADRC AlzSTARS (Alzheimer's Science Training to Advance Research Success) program

EDUCATION METRICS

- **Conduct** at least 10 McKnight Research Seminars annually focused on age-related memory loss and brain health
- **Conduct** quarterly neurology resident journal club lectures focused on age-related memory loss and brain health
- **Conduct** quarterly education lectures focused on neuropsychology, brain image and neuropathology and cognitive neurology
- **Create and annually update** a curriculum for the Evelyn F. McKnight Fellowship
- **Create and annually update** the age-related memory education and training curricula in age-related memory loss, cognitive decline, and brain health for students, post doctoral trainees, residents and fellows
- **Host** annual McKnight Brain Institute Grand Rounds
- **Participation** of UM-MBI trainees in CTSI Mentor-Mentee program
- **Track transition** of UM-MBI trainees to faculty postions, promotions and successful application for F, K, and R grants

GOALS, STRATEGIES AND METRICS

GOAL 3: PROMOTE COMMUNICATION AND COLLABORATION

The UM-MBI promotes and provides a structure to share information and collaborate across clinical translational research, education and clinical landscapes at UM as well as between MBIs focusing on our clinical and translational research strengths and UM-MSOM strategic plan.

RESEARCH SPECIFIC STRATEGIES

- **Enhance** research environment & collaborative interactions across disciplines and across UM departments and institutes, and with other MBIs and non-MBI institutions
- **Identify** leaders across disciplines and departments to develop scientific working groups (SWG)
- **Secure space** for collaborative projects, interactions and seminars/conferences in partnership with the UM-CTSI (leverage CTSI Connection and other collaborative activities)
- **Build upon** the existing Miami CTSI research infrastructure to promote team science in age-related memory loss and brain health
- **Increase c**ommunication across UHealth to develop integrated treatment plans that include referrals and research opportunities

RESEARCH METRICS

- **Track** inter-disciplinary activities (webinars, conferences, seminars, participation in team science classes and activities) among members, collaborators and trainees
- **Create** at least one active SWG by UM-MBI members and apply for a research or education grant
- **Create** the UHealth clinical and research interventional protocols in age-related memory loss, cognitive decline and brain health
- **Reorganize** the UM-MBI website and update regularly on new activities, partnerships and collaborations

GOALS, STRATEGIES AND METRICS

GOAL 4: DEVELOP COMMUNITY OUTREACH

The UM-MBI leads community research in age-related memory loss and cognitive decline and provides information on cognitive decline in communities

COMMUNITY OUTREACH STRATEGIES

- **Establish** a community-based education network and develop community programs to inform community of issues on age-related memory, cognitive decline and to promote brain health

- **Provide** knowledge-based education series to community

- **Develop** social media community outreach to promote brain health

- **Disseminate** research achievements to the community using media, web, social media, etc.

- **Prioritize** translation of evidence-based research findings into community

- **Partner with community leaders** to develop integrated treatment plans that include referrals and research opportunities

COMMUNITY OUTTREACH METRICS

- **Identify and track** community activities, i.e new partners, ALFs community centers and town governments (e.g., Silver Club in Doral) through number of events and community participation in research activities

- **Develop** education programs for community through libraries, senior centers, Mayor's Initiative on Aging Event new mayor in Miami-Dade and don't know if initiative will continue.

- **Expand** ongoing radio outreach programs to educate Latinx community on healthy life style interventions to promotion of brain health

- **Track** our webpage and social media traffic

- **Develop** and conduct at least one outreach program annually for the community of South Florida