

Alzheimer's Disease Research Grant Advisory Board

Ed and Ethel Moore Alzheimer's Disease Research Program

Fiscal Year 2023-24 Annual Report

February 2025

Ron DeSantis Governor

Joseph A. Ladapo, MD, PhD State Surgeon General

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ED AND ETHEL MOORE ALZHEIMER'S DISEASE RESEARCH PROGRAM

INTRODUCTION AND OVERVIEW

Alzheimer's disease (AD) is the most common cause of dementia.¹ AD was officially listed as the sixth leading cause of death in the United States in 2019 and the seventh leading cause of death in 2020 and 2021. Between 2000 and 2019, deaths from stroke, heart disease, and HIV decreased, whereas reported deaths from AD increased more than 145%.² AD remains the fifth leading cause of death among Americans aged 65 and older.³

These AD numbers are estimated to be even higher as many cases go undiagnosed. As a result, greater screening for AD is needed. AD involves parts of the brain that control thought, memory, and language. According to the Centers for Disease Control and Prevention, AD is a progressive disease beginning with mild memory loss and possibly leading to the loss of one's ability to carry on a conversation and respond to one's environment. AD can seriously affect a person's ability to carry out daily activities. Beyond the impact of the disease on the individual, AD also affects family members who often serve as caregivers.⁴ AD can span up to 20 years and is emotionally, physically, and financially challenging to caregivers.⁵

To address the impact of AD in Florida, the 2014 Florida Legislature created the Ed and Ethel Moore Alzheimer's Disease Research Program (Ed and Ethel Moore Program).

The Ed and Ethel Moore Program's long-term goals are to:

- a) Improve the health of Floridians by researching improved prevention measures, diagnosis methods, treatments, and cures for AD.
- b) Expand the foundation of knowledge relating to the prevention, diagnosis, treatment, and cure for AD.
- c) Stimulate economic activity in the state in areas related to AD research.

The Ed and Ethel Moore Alzheimer's Disease Research Grant Advisory Board's (Advisory Board) research agenda emphasizes the creation of intra-state research collaborations to further Florida's progress in becoming the premier state for AD prevention, diagnosis, treatment, and ultimately, cure for this disease. Currently, there are 102 active AD research grants administered under the Ed and Ethel Moore Program.

This Fiscal Year (FY) 2023-24 annual report fulfills the Advisory Board's requirement to submit a FY progress report by February 15, as required by section 381.82, Florida Statutes. Legislative changes effective July 1, 2016, require that this report also provide information regarding additional funding generated because of state-supported AD research grants from this program.

The Advisory Board is authorized in section 381.82, Florida Statutes, and comprises two gerontologists, two geriatric psychiatrists, two geriatricians, two neuroscientists, and three neurologists.

The Advisory Board advises the State Surgeon General as to the scope of the research program and submits funding recommendations for proposals to the State Surgeon General by December 15 of each year. Grants and fellowships are awarded by the State Surgeon General based on scientific merit after consultation with the Advisory Board.

Other responsibilities of the Advisory Board may include, but are not limited to, providing advice on program priorities and emphases; assisting in the development of appropriate linkages to non-academic entities, such as voluntary organizations, health care delivery institutions, industry, government agencies, and public officials; and developing and providing oversight regarding mechanisms for the dissemination of research results.

ALZHEIMER'S DISEASE RESEARCH GRANT ADVISORY BOARD MEMBERSHIP

The names and positions of each Advisory Board member, as of December 13, 2024, are listed below. The second gerontologist position is currently vacant. Biographical statements or curriculum vitae are available upon request.

Gerontologist:

Leilani Doty, PhD Immediate Past Chair, Retired, Director of the University of Florida Cognitive and Memory Disorder Clinic

Geriatric Psychiatrists:

Josepha A. Cheong, MD Professor of Psychiatry and Neurology University of Florida Chief, Consult-Liaison Psychiatry, Malcom Randall Veterans Affairs Medical Center

Geriatrician:

Mariana B. Dangiolo, MD, Assistant Professor of Family Medicine and Geriatrics, University of Central Florida, College of Medicine

Geriatrician:

Niharika Suchak, MBBS, MHS, FACP, Advisory Board Chair, Associate Professor, Department of Geriatrics College of Medicine, Florida State University

Neuroscientist:

Eun-sook Yu Lee, PhD Professor, College of Pharmacy, Florida Agricultural and Mechanical University

Neuroscientist:

Leonard Petrucelli, PhD Assistant Advisory Board Chair, Chair of Department of Neuroscience and Professor of Neuroscience, Mayo Clinic Jacksonville

Neurologist:

Neill Graff-Radford, MD, Professor of Neurology, Department of Neurology, Mayo Clinic Jacksonville

Neurologist:

James Galvin, MD, MPH, Professor, University of Miami, Miller School of Medicine

Neurologist:

Ruth Henchey, MD, General Neurology, Baptist Hospital and West Florida Hospital

NATIONAL INSTITUTES OF HEALTH STATE RANKING

Since the inception of the Ed and Ethel Moore Program in 2014, Florida has continued to increase their AD research infrastructure and, as a result, has also continued to receive increased federal funding that supports Florida researchers. Florida is currently positioned in the top seven for federal follow-on funding (Exhibit 1). Follow-on funding here means that researchers received federal funds due to the investment of state-level funding. According to the National Institutes of Health (NIH), the total program level of funding for the federal fiscal year (FFY) 2023 was \$47.7 billion.⁶ Exhibit 1 shows the NIH-National Institute on Aging (NIA) grant funding in dollars for the top 20 states in FFY 2024, where Florida ranks seventh in the nation to receive NIA grants.

Rank	State	Number of Grants	Funding in Dollars
1	California	832	\$678,717,099.00
2	New York	542	\$401,091,639.00
3	Massachusetts	523	\$349,631,649.00
4	Pennsylvania	265	\$216,917,260.00
5	Texas	249	\$205,347,851.00
6	North Carolina	218	\$156,394,048.00
7	Florida	182	\$145,490,691.00
8	Michigan	161	\$131,548,397.00
9	Illinois	155	\$127,688,202.00
10	Maryland	185	\$121,764,537.00
11	Wisconsin	93	\$111,237,448.00
12	Minnesota	144	\$110,230,701.00
13	Missouri	111	\$88,434,398.00
14	Georgia	119	\$85,433,084.00
15	Washington	98	\$80,919,204.00
16	Arizona	59	\$78,603,898.00
17	Indiana	82	\$68,938,503.00
18	Ohio	120	\$59,459,377.00
19	Connecticut	89	\$56,101,536.00
20	Tennessee	75	\$52,944,274.00

Exhibit 1: NIH-NIA Alzheimer's Disease Research Funding and Top Twenty State Rankings for FFY 2024

Source: National Center for Health Statistics, National Institutes of Health 2024. <u>NIH Awards by Location and Organization -</u> <u>NIH Research Portfolio Online Reporting Tools (RePORT)</u>

Exhibit 2 illustrates the growth in federal funding for AD research in Florida. Over the past five years, NIH funding for AD has increased from \$73.7 million in 2020 to \$145.5 million in 2024, a 97.4% increase. Between 2023 and 2024, however, funding decreased by over 5% from \$153.1 million to \$145.5 million.

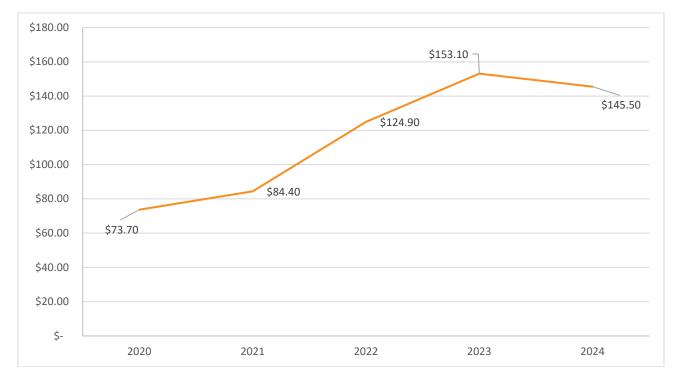


Exhibit 2 NIH Research Funding Trends (in Millions) in Florida FY 2020-2024:

Source: National Center for Health Statistics, National Institutes of Health 2024. <u>NIH Awards by Location and</u> <u>Organization - NIH Research Portfolio Online Reporting Tools (RePORT)</u>

PROGRESS TOWARD PROGRAMMATIC GOALS

The Advisory Board's research agenda emphasizes the creation of intra-state research collaborations to make progress toward Florida becoming the premier state for AD prevention, diagnosis, treatment, and ultimately, cure for this disease. In FY 2023-24, the Legislature provided \$5 million for research grants. The research agenda has six priority areas that are outlined in the Funding Opportunity Announcement and are listed below:

- 1. Therapeutic strategies for dealing with behavioral and social needs of persons with AD and their caregivers.
- 2. The discovery and validation of a broad spectrum of potential therapeutic targets or novel therapeutic strategies that provide novel insights into the pathophysiology of AD or identify novel biomarkers.
- 3. To stimulate a consortium of clinical centers to conduct high quality clinical research studies.
- 4. Epidemiologic studies that improve our understanding of genetic, epigenetic, and acquired neurodegenerative, cardiac, and vascular disorders that result in impairment and AD and how these conditions affect Floridians.
- 5. To support postdoctoral fellowship training that fosters and advances clinical research training to develop expert health provider research skills focused on people with AD.
- 6. To stimulate the discovery and validation of the impact of daily multivitamin use on cognitive disfunction among Medicaid long-term care recipients or state prison populations over the age of 65.

RECOMMENDATIONS FROM THE ALZHEIMER'S DISEASE RESEARCH GRANT ADVISORY BOARD TO FURTHER THE MISSION OF THE PROGRAM

During FY 2023-24, 19 grantees received research funding (see Appendix A). Without this funding, many important scientific advancements, and discoveries in AD would not be possible. There is a growing need to address the concerns of AD in Florida. In response to this growing need, the Advisory Board recommends options to expand the reach of the Ed and Ethel Moore Program in the following areas listed below.¹

- 1. **Increasing research funding:** Approximately 30% of all applicants receive Ed and Ethel Moore Program grant funding. Standard and pilot grants are most frequently funded. Additional funding would allow funding for consortium grants that could provide for increased collaboration on how to best combat AD.
- 2. **Priority Area Six:** This priority area currently calls for research proposals investigating the impact of daily multivitamin use on the improvement of cognitive function and any associated health care cost impacts on Medicaid long-term care or state prison populations over the age of 65. The Advisory Board recommends broadening the scope of this priority area to include other dietary supplements. The Advisory Board also recommends broadening the target population to include those over the age of 65 without restriction. This change would allow researchers to investigate a wider array of interventions and a broader audience.
- 3. Increasing provider education: In 2021, there were 362 geriatricians in Florida. Estimates suggest that a 277% increase in geriatricians will be needed to meet the demand by 2050.⁷ The Ramping up Education of Alzheimer's Disease and Dementia for You (READY) Act focuses on educating current providers on AD issues and resources. Currently, there is a lack of dedicated funding for Project READY, which limits program expansion. Increasing funding for Project READY would provide the opportunity to advance AD education through sharing state-funded AD research, determine a baseline of existing data, and establish Florida as a national leader in AD care.

Information about active and completed grants funded the past three fiscal years, including the funding amount, publications generated from funding, any patents or follow-on funding generated from this funding opportunity, are listed in the following appendices.

¹ These recommendations are from the Advisory Board and do not necessarily reflect the views of the Florida Department of Health.

Appendix A: Newly Awarded Active Grant Details Funded Fiscal Year 2023-2024

Grant #	Institution	Principal Investigator	Award Amount	End Date	Patents	Follow- on Funding	Publications
24A01	Florida Atlantic University	Ruth Tappen, EdD, RN, FAAN	\$350,000.00	2/28/2027	No	No	No
24A02	Florida Atlantic University	Mare Cudic, PhD	\$350,000.00	2/28/2027	No	No	No
24A03	Florida Atlantic University	Qi Zhang, PhD	\$350,000.00	2/28/2028	No	No	No
24A04	Florida State University	Choogon Lee, PhD	\$350,000.00	2/28/2027	No	No	No
24A05	Florida State University	Ravinder Nagpal, PhD	\$100,000.00	2/28/2026	No	No	No
24A06	Mayo Clinic Florida	Wenhui Qiao, PhD	\$100,000.00	2/28/2026	No	No	No
24A07	Mayo Clinic Florida	Yonghe Li, PhD	\$350,000.00	2/28/2027	No	No	No
24A08	Mayo Clinic Florida	Daisuke Ono, MD, PhD	\$100,000.00	2/28/2026	No	No	No
24A09	Mayo Clinic Florida	Minerva Carrasquillo, PhD	\$350,000.00	2/28/2026	No	No	No
24A10	Mayo Clinic Florida	Pamela McLean, PhD	\$100,000.00	2/28/2025	No	No	No
24A11	Nova Southeastern University	Mary Holschbach, PhD	\$100,000.00	2/28/2025	No	No	No
24A12	University of Central Florida	Michal Masternak, PhD	\$349,999.00	2/28/2028	No	No	No
24A13	University of Florida	Jeremy Grant, PhD	\$95,556.00	2/28/2026	No	No	No
24A14	University of Florida	Abbas Babajani- Feremi, PhD	\$349,749.00	2/28/2028	No	No	No
24A15	University of Florida	Carla Fisher, PhD	\$99,991.00	2/28/2026	No	No	No
24A16	University of Miami Miller School of Medicine	Philip Harvey, PhD	\$99,999.00	2/28/2026	No	No	No
24A17	University of Miami Miller School of Medicine	Rosie Curiel Cid, PsyD	\$99,987.00	2/28/2025	No	No	No
24A18	University of Miami	Holly Cukier, PhD	\$350,000.00	2/28/2027	No	No	No
24A20	Mayo Clinic Florida	Thomas Caulfield, PhD	\$165,241.00	2/28/2027	No	No	No

Appendix B: Fiscal Year 2023-2024 Active Grant Details Funded Fiscal Year 2022-2023

Grant #	Institution	Principal Investigator	Award Amount	End Date	Patents	Follow- on Funding	Publications
23A01	Florida International University	Giri Narasimhan, PhD	\$99,783.00	2/28/2025	No	No	No
23A02	Florida State University	Julia Sheffler, PhD	\$350,000.00	2/28/2027	No	No	No
23A03	Mayo Clinic Jacksonville	Yunjung Jin, PhD	\$100,000.00	1/31/2025	No	No	No
23A04	Mayo Clinic Jacksonville	Wilfried O Rossoll, PhD	\$350,000.00	1/31/2025	No	No	No
23A06	University of Central Florida	Susanny Beltran, PhD, MSW	\$99,883.00	2/28/2025	No	No	No
23A07	University of Central Florida	Jihe Zhao, PhD	\$350,000.00	2/28/2027	No	No	No
23A08	University of Florida	Stephen Anton, PhD	\$350,000.00	2/28/2025	No	No	No
23A09	University of Florida	Jie Xu, PhD	\$350,000.00	1/31/2026	No	No	Yes
23A10	University of Miami	David Loewenstein, PhD	\$349,983.00	2/28/2025	No	No	No
23A12	University of Miami	Oliver Bracko, PhD	\$350,000.00	1/31/2026	No	No	Yes
23A15	University of Miami	Elizabeth Crocco, MD	\$349,102.00	2/28/2025	No	No	No
23A16	University of Miami	Rosie Curiel Cid, PsyD	\$349,912.00	3/31/2025	No	No	No
23A17	University of Miami	Claes Wahlestedt, MD, PhD	\$349,995.00	2/28/2026	No	No	No
23A18	University of South Florida	Hongdao Meng, MD, MPH, PhD	\$350,000.00	2/28/2027	No	No	No

Appendix C: Fiscal Year 2023-2024 Active Grant Details Funded Fiscal Year 2021-2022

Grant #	Institution	Principal Investigator	Award Amount	End Date	Patents	Follow- on Funding	Publications
22A07	Mayo Clinic Jacksonville	Fabienne Fiesel, PhD	\$350,000.00	3/31/2026	No	No	No
22A10	University of Central Florida	Nichole Lighthall, PhD	\$742,833.00	3/31/2026	No	Yes	Yes
22A13	University of Florida	Jada Lewis, PhD	\$350,000.00	3/31/2025	No	No	No
22A17	University of South Florida	Hariom Yadav, PhD	\$743,661.00	3/31/2026	No	Yes	Yes

Appendix D: Fiscal Year 2023-2024 Completed Grant Details Funded Fiscal Year 2020-2021

Grant #	Institution	Principal Investigator	Award Amount	End Date	Patents	Follow- on Funding	Publications
21A04	Florida Atlantic University	Qi Zhang, PhD	\$247,620.00	2/28/2025	Yes	Yes	Yes
21A06	University of Central Florida	Suren Tatulian, PhD	\$247,620.00	6/30/2025	No	No	Yes
21A10	University of Florida	Stefan Prokop, MD	\$246,991.00	2/28/2025	No	Yes	No
21A24	University of South Florida	Laura Blair, PhD	\$247,620.00	6/30/2025	No	Yes	Yes

Appendix E: Fiscal Year 2023-2024 Completed Grant Details Funded Fiscal Year 2022-2023

Grant #	Institution	Principal Investigator	Award Amount	End Date	Patents	Follow- on Funding	Publications
23A05	Nova Southern University	Sibel Antonson, DDS, PhD, MBA	\$99,459.00	6/30/2024	No	No	No
23A11	University of Miami	Philip Harvey, PhD	\$99,345.00	2/29/2024	No	No	No
23A13	University of Miami	Tatjana Rundek, MD, PhD	\$100,000.00	1/31/2024	No	Yes	Yes
23A14	University of Miami	Roger Leblanc, PhD	\$52,536.00	5/31/2024	No	No	Yes

Appendix F: Fiscal Year 2023-2024 Completed Grant Details Funded Fiscal Year 2021-2022

Grant #	Institution	Principal Investigator	Award Amount	End Date	Patents	Follow- on Funding	Publications
22A02	Florida Atlantic University	Lisa Wiese, PhD, MSN, RN, GERO-BC, PHNA-BC, CNE	\$250,000.00	9/30/2023	No	Yes	Yes
22A16	University of Miami	Philip Harvey, PhD	\$99,887.00	9/30/2023	No	No	Yes

Appendix G: Fiscal Year 2023-2024 Completed Grant Details Funded Fiscal Year 2021-2022

Grant #	Institution	Principal Investigator	Award Amount	End Date	Patents	Follow- on Funding	Publications
22A01	Florida Atlantic University	Randy Blakely, PhD	\$349,819.00	3/31/2024	Yes	No	Yes
22A03	Florida State University	Robert Tomko Jr., PhD	\$100,000.00	3/31/2024	No	No	Yes
22A04	Mayo Clinic Jacksonville	Yang You, PhD	\$100,000.00	3/31/2024	Yes	No	Yes
22A08	Mayo Clinic Jacksonville	Yasuteru Inoue, MD, PhD	\$100,000.00	3/31/2024	No	No	Yes
22A09	Mayo Clinic Jacksonville	Nilufer Ertekin-Taner, MD, PhD	\$350,000.00	3/31/2024	No	No	No
22A11	University of Florida	Jeremy Grant, PhD	\$99,569.00	6/30/2024	No	Yes	Yes
22A12	University of Florida	Adam Barnas, PhD	\$100,000.00	3/31/2024	No	No	Yes
22A14	University of Miami	Claes Wahlestedt, MD, PhD	\$349,981.00	3/31/2024	No	No	No
22A15	University of Miami	Karen Nuytemans, PhD	\$350,000.00	3/31/2024	No	No	No

Appendix H: Fiscal Year 2023-2024 Completed Grant Details Funded Fiscal Year 2020-2021

Grant #	Institution	Principal Investigator	Award Amount	End Date	Patents	Follow- on Funding	Publications
21A13	University of Miami	William (Dalton) Dietrich, PhD	\$247,620.00	8/31/2023	Yes	Yes	Yes
21A16	University of Miami	Bonnie Levin, PhD	\$99,051.00	8/31/2023	No	No	No
21A17	University of Miami	Holly Cukier, PhD	\$247,620.00	8/31/2023	No	No	No
21A18	University of Miami	Katrina Celis, MD	\$99,051.00	8/31/2023	No	Yes	No
21A20	University of Miami	Tatjana Rundek, MD, PhD	\$247,620.00	8/31/2023	No	Yes	No
21A21	University of Miami	Grace Zhai, PhD	\$247,620.00	2/29/2024	No	No	Yes
21A23	University of South Florida	Mark Kindy, PhD, FAHA	\$247,620.00	8/31/2023	No	No	No
21A25	University of South Florida	Nan Sook Park, PhD, MSW	\$80,000.00	8/31/2023	No	No	Yes

Appendix I: Fiscal Year 2023-2024 Completed Grant Details Funded Fiscal Year 2019-2020

Grant #	Institution	Principal Investigator	Award Amount	End Date	Patents	Follow- on Funding	Publications
20A05	University of Miami	Hong Jiang, MD, PhD	\$250,000.00	10/31/2023	No	No	Yes
20A09	Florida State University	Aaron Wilber, PhD	\$250,000.00	3/31/2024	No	Yes	Yes
20A18	University of South Florida	Saeid Taheri, PhD	\$250,000.00	3/31/2024	No	No	No

ALZHEIMER'S DISEASE ADVISORY BOARD ANNUAL REPORT

REFERENCES

¹ "Alzheimer's is currently ranked as the seventh leading cause of death in the United States and is the most common cause of dementia among older adults," *Alzheimer's Disease Fact Sheet*. National Institute on Aging, <u>Alzheimer's Disease Fact Sheet | National Institute on Aging</u> (Last Accessed Feb 4, 2025); *Alzheimer's disease - symptoms and causes*. Mayo Clinic; Mayo Foundation for Medical Education and Research (MFMER),<u>https://www.mayoclinic.org/diseases-conditions/alzheimers-disease</u> (Last Accessed

Jan 18, 2024).

² Alzheimer's Association. 2023 Alzheimer's Disease Facts and Figures. *Alzheimers Dement*.

2023;19(4). doi:10.1002/alz.13016.

³ 2022 Alzheimer's disease facts and figures. *Alzheimers Dement*. 2022;18(4):700-789.

doi:10.1002/alz.12638; Stats of the State of Florida, Centers for Disease Control and Prevention

(2019) <u>https://www.cdc.gov/nchs/pressroom/states/florida/florida.htm.</u>

⁴ 2023 Alzheimer's disease facts and figures. <u>doi:10.1002/alz.13016</u>.

⁵ Stages of Alzheimer's, Alzheimer's Association, <u>https://www.alz.org/alzheimers-</u>

dementia/stages (Last Accessed Jan 18, 2024).

⁶ NIH Budget Request, National Institutes of Health, <u>Overview of FY 2024 Executive</u>

Summary.pdf (nih.gov).

⁷ 2023 Alzheimer's disease facts and figures. <u>doi:10.1002/alz.13016</u>, 52.