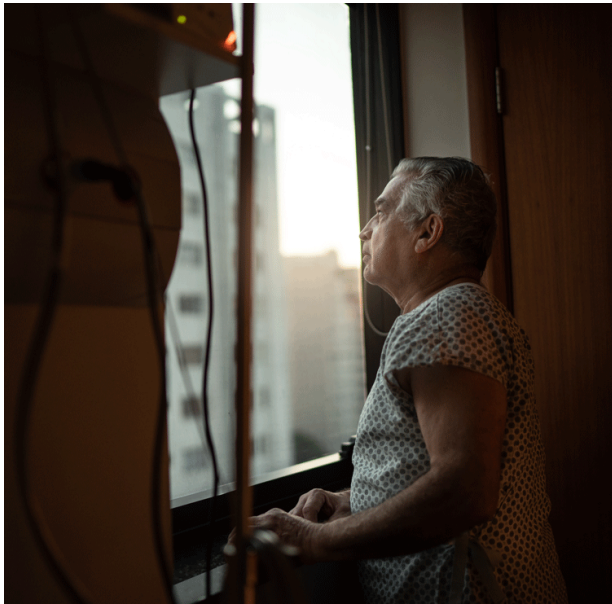


Genetics Researchers Awarded \$11.47 Million NIH Grant to Study Alzheimer's Risk in Mixed-Ancestry Populations

A team of genetic researchers with the University of Miami Miller School of Medicine will lead a new collaborative study on Alzheimer's disease risk in mixed-ancestry populations funded by a \$11.47 million grant from the National Institute on Aging (NIA), part of the National Institutes of Health (NIH).

"With changing U.S. demographics, understanding the risk and protective factors for Hispanics and other diverse groups is vital for improving disease prediction, prevention, diagnosis, and treatment for everyone," said Margaret A. Pericak-Vance, Ph.D., director of the John P. Hussman Institute for Human Genomics (HIHG) and Dr. John T Macdonald Foundation Professor of Human Genetics.



Dr. Pericak-Vance noted that the NIH-supported study is particularly important for South Florida, the Caribbean and South America, since it focuses on individuals with mixed genetic backgrounds who have not been included in prior studies. “It also champions UM’s commitment to diversity, and hemispheric collaborations,” she added.

While Alzheimer’s disease occurs in all ethnic and racial groups, risk due to genetic factors varies greatly across ethnic and racial groups. The new study will look for genetic clues by comparing individuals with admixed backgrounds, such as Caribbean Hispanics descended from Iberian Peninsula (Spanish-Portuguese), Southern Europe and Amerindian ancestors.

The five-year NIH grant, “Genomic Characterization of Alzheimer Disease Risk in Admixed Populations with Native American and Southern European Genetic Ancestry,” began February 1 with principal investigators Dr. Pericak-Vance; Gary Beecham, Ph.D., associate professor in the Dr. John T. Macdonald Foundation Department of Human Genetics and director of the Division of Research Informatics in HIHG’s Center for Genetic Epidemiology and Statistical Genetics; and Farid Rajabli, Ph.D., associate scientist at HIHG. They are supported by several Miller School co-investigators, Jeffery M. Vance, M.D., Ph.D., Michael Cuccaro, Ph.D., Derek Dykxhoorn, Ph.D., Liyong Wang, Ph.D., and Anthony Griswold,

Ph.D., as well as collaborators in Puerto Rico, Peru, Canada, and other U.S. institutions, including Case Western Reserve University, Uniformed Services University of the Health Sciences, and the University of Pennsylvania.

Alzheimer's disease is the most common dementia in the world, and is highly genetic, said Dr. Pericak-Vance. "Most studies have focused on non-Hispanic White populations with primarily northern European ancestry. Only recently have studies expanded to include Hispanics and African Americans, while individuals with Amerindian ancestry remain one of the most underrepresented populations in genetic studies."

This major grant adds to the extensive portfolio of NIH support for the Miller School's genetics research, making it the No. 2 ranked genetics program in the nation in NIH funding.

The researchers plan to enroll Cuban-Americans in Miami, Puerto Ricans in Puerto Rico and the continental U.S., Peruvians, and other Latin Americans. The new study expands on the HIHG's prior collaborations with genetic researchers at Universidad Central de Caribe – Puerto Rico and the Fundacion San Marcos para el Desarrollo de la Ciencia y la Cultura in Peru. "We will study the genes related to Alzheimer's disease, as well as the ancestry around the genes, which can help to understand how ancestry modifies the effect of genes in mixed populations with the ancestors from different continents," said Dr. Rajabli, noting that Europeans from the Iberian Peninsula, for example, may have different genetic risk factors than those from northern Europe, even though they are from the same continent.

“UM is the ideal environment for this research,” said Dr. Beecham. “South Florida provides access to diverse populations. We have access to the clinical and genomics resources through the HIHG’s Center for Education and Outreach, and the Center for Genomic Technologies. Additionally, these studies require tremendous computation power, provided through our interactions with UM’s Institute for Data Science and Computing.”

Collaborators in the wide-ranging international study include Mario Cornejo-Olivas, M.D., Karina Milla-Neyra and Diego Veliz-Otani, with the Fundacion San Marcos para el Desarrollo de la Ciencia y la Cultura in Peru; Briseida Feliciano-Astacio, M.D., Universidad Central de Caribe - Puerto Rico; Jonathan Haines, Ph.D., and William Bush, Ph.D., Case Western Reserve; Peter St. George-Hyslop, M.D., and Ekaterina Rogaeva, Ph.D., University of Toronto; Clifton Dalgard, Ph.D., Uniformed Services University of the Health Sciences; and Gerard Schellenberg, Ph.D. and Li-San Wang, Ph.D., University of Pennsylvania.

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