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# Miller School Plays Pivotal Role in Securing a $15 Million National Alzheimer's Disease Research Center

University of Miami Miller School of Medicine investigators play a pivotal role in a consortium of Florida institutions just awarded a $15 million grant to collaborate on Alzheimer's disease research.

The five-year National Institutes of Health/National Institute on Aging grant brings together top Florida researchers to focus on better understanding how to diagnose, treat, prevent, and potentially cure Alzheimer's in diverse populations.

From left, Rosie Curiel, Psy.D., David Loewenstein, Ph.D., and Elizabeth Crocco, M.D.

The 1Florida Alzheimer's Disease Research Center, or 1Florida

ADRC, will be recruiting participants from the University of Miami Miller School of Medicine, the University of Florida, and Mount Sinai Medical Center in Miami Beach. Investigators from these institutions will also be collaborating other Florida academic institutions including Florida Atlantic University and Florida International University.

“We are honored that this Alzheimer’s Disease Research Center is one of 31 centers of excellence designated by the National Institute on Aging. Of the 31 centers in the U.S., the 1Florida ADRC is the only funded center in Florida,” said David Loewenstein, Ph.D., ABPP/CN, associate director of 1Florida ADRC and director of the Center for Cognitive Neuroscience and Aging (CNSA) at the Miller School.

Miller School researchers are involved in all aspects of the 1Florida ADRC, including recruitment, onsite evaluation, and research. Dr. Loewenstein is leading the Miller School investigative team. Other UM researchers include Rosie E. Curiel Cid, Psy.D., leader of the1Florida ADRC Outreach, Recruitment and Engagement Core, associate professor and chief, cross-cultural neuropsychology and cognitive neuroscience, in the Center for Cognitive Neuroscience and Aging; Elizabeth Crocco, M.D., chief of geriatric psychiatry and director of UM’s state-funded Memory Disorders Clinic and medical director of the CNSA, who will be running the medical aspects of the 1Florida ADRC; and Tatjana Rundek, M.D., Ph.D., professor of neurology and Evelyn F. McKnight Endowed Chair for Learning and Memory in Aging, who is co-leading the ADRC’s educational core with Glenn Smith, Ph.D., ABPP/CN, from the University of Florida.

“The Miller School is recruiting hundreds of older adults from our local community,” said Dr. Loewenstein. Their focus is on engaging African American and Hispanic older adults to make sure they are well represented, because these groups are historically largely under-represented in aging research, including studies looking at Alzheimer’s disease.

“I am the daughter of Cuban exiles; the first to be born in this country.  Spanish was my first language. Miami has nurtured this multicultural identity and I am privileged to bring it to the forefront of my work,” Dr. Curiel said. “One of the greatest challenges in aging research is ensuring that the methods we develop to detect and treat diseases of the aging brain are generalizable to *all* older adults. The CNSA is committed to addressing this by developing tools and methods that are cross-culturally applicable. Now, the 1Florida ADRC will significantly broaden our reach. We assembled a passionate team of scientists from diverse cultural backgrounds to engage, educate, listen to, and partner with our richly diverse communities. We hope to generate new knowledge and contribute to national efforts to accelerate clinically meaningful outcomes for older adults and their families.”

To better understand diseases of the aging brain, even decades before they occur, the ADRC scientists have an expertise in studying people who don’t yet have symptoms but might be concerned about their risk for developing Alzheimer’s for another reason, such as family history.  They also study older adults who may have thinking or memory problems but haven’t yet been diagnosed, as well as people who have been diagnosed with early mild cognitive impairment.

“People in the study will receive annual evaluations including comprehensive neuropsychological testing, a careful clinical examination, an MRI scan of the brain and an amyloid scan,” Dr. Loewenstein said. “We will follow them on an annual basis.”

Dr. Loewenstein and colleagues at the Miller School developed a novel cognitive stress test, called the Loewenstein-Acevedo Scales for Semantic Interference and Learning (LASSI-L) test, which will be used in the 1Florida ADRC study. LASSI-L is a scientifically proven measure that is highly sensitive to early Alzheimer’s disease brain pathology and can pick up early changes in memory before traditional cognitive testing detects the disease.

The Miller School also stands out for being the only university in the state funded by the NIH to conduct tau imaging. Miller School researchers have a number of federally funded grants that are studying abnormal tau protein in the brain. The presence of amyloid alone is not the only indication of future Alzheimer’s disease. Some people start to show signs of tau deposition years, even decades, before developing symptoms.

“The University of Miami Miller School of Medicine brings something very special to the table and that is why we were asked to be a major part of this initiative. It was because of our strengths in novel cognitive testing, neuroimaging and ability to engage and recruit persons from diverse cultures,” Dr. Loewenstein said.

The 1Florida ADRC will also help to train the next generation of scientists in Alzheimer’s and other neurodegenerative

diseases. Dr. Rundek said the ADRC's Research Education Component, called 1Florida Alzheimer's Disease Science Training to Advance Research Success, or AlzSTARS, will train diverse, multidisciplinary early stage investigators at all participating institutions for leadership roles in research translation, especially in regard to diverse and underserved communities.

"The AlzSTARS program will provide a unique opportunity for our young trainees from diverse backgrounds to train with clinical and research leaders in Alzheimer's disease across Florida and the nation. They will become the next generation of leaders and scientists to successfully translate scientific discoveries to prevention and treatment of Alzheimer's disease," Dr. Rundek said.

Dr. Crocco, who has devoted more than 22 years to working with South Florida's older population affected by Alzheimer's disease, will also offer her expertise in Alzheimer's disease and related disorders to the 1Florida ADRC Clinical Core.

"The ADRC brings us to the level of a national center of excellence," Dr. Crocco said. "We have the funding and the ability now to be able to promote and really develop more and more these wonderful diagnostic strategies, treatment strategies and, hopefully, one day a cure for Alzheimer's disease and other neurodegenerative disorders."

Florida is home to about 12% of the approximately 5.4 million people in the U.S. who have Alzheimer's disease. For more information about 1Florida ADRC including how to participate, visit www.1floridaadrc.org, email info@1floridaadrc.org or call 352-273-7425 or 305-355-9080.