BIOGRAPHICAL SKETCH

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NAME: Maestre, Gladys

eRA COMMONS USER NAME (credential, e.g., agency login):

POSITION TITLE: Professor

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE (if applicable)	END DATE MM/YYYY	FIELD OF STUDY
Saint Vincent of Paul College, Maracaibo, Zulia	BS	07/1981	Sciences
University of Zulia School of Medicine, Maracaibo, Zulia	MD	09/1989	Medicine
Columbia University, New York, NY	MPHIL	05/1995	Genetic Epidemiology
Columbia University, New York, NY	PHD	05/1996	Pathobiology
Harvard Medical School, Boston, MA	Fellow	08/1992	Psychiatric Neuroscience

A. Personal Statement

I am a physician-scientist and I have devoted most of my professional life to Alzheimer's research and blood pressure dysregulation of Hispanics/Latinos. After obtaining my medical degree in Venezuela, I was trained in an international fellowship program in Psychiatric Neurosciences at the Department of Psychiatry at the Massachusetts General Hospital. My subsequent doctoral research in the department of Pathology at Columbia University, on the role of a common gene variant, ApoE-ε4 as a risk factor for cardiovascular disease and dementia, provided a solid foundation for my long-term interests in epidemiology of old age. As PI of the Maracaibo Aging Study, I have developed unique community-based cohorts of individuals who have undergone in-depth assessments for cognitive, neuroimaging, and cardiovascular traits and we have followed them since 1997. As PI on a number of NIA- and Fogarty International Center-funded grants, my research has explored cultural, educational, and genetic risks for Alzheimer's disease and cognitive decline, as well as cognitive function and health among minorities and ethnically diverse populations across the life span. I have gained expertise in recruitment, longitudinal follow-up, characterization of biological, genetic, neuroimaging, and environmental risk factors, and data analysis of large, ethnically diverse community-based cohorts. I also have supported several mhealth application development for people living with cognitive disabilities. I have successfully administered diverse projects and have been responsible for analyzing and communicating results of longitudinal studies that I have led. Currently, I am the Director of the Rio Grande Valley Alzheimer's disease Resource Center for Minority Aging Research (P30AG059305) where we support early-career investigators to advance the study of Alzheimer's disease and related disorders in Hispanics. I have taken direct care of 12.000 persons at the Clinical Unit of Memory in Venezuela and I have supported the development of tools, resources, educational programs and services for Hispanic elders and their care providers, with particular focus on those providing dementia care, informal and professional. I am part of several training and mentoring initiatives sponsored by the Society for Neuroscience (Latin American Training Program, LATP, and had contributed to the Trainee Professional Development Awards (TPDA) Program), and the Global Brain Health Institute (GBHI) and Alzheimer's Association pilot awards program.

Ongoing and recently completed projects that I would like to highlight include:

DP1AG069870 Maestre (PI)
09/01/2020-08/31/2025
Integration of Socio-Spatial Data for Neighborhoods with Multi-omic profiles to Identify and Mitigate Factors Affecting Risk of Alzheimer's Disease.

P30 AG059305 (PI: Maestre)
09/01/2018 - 03/31/2023
Rio Grande Valley Alzheimer's Resource Center for Minority Aging Research: Partnerships for Progress

R13 AG066391 Maestre (PI)
03/01/2020-02/28/2022
 Brain Aging, AD and Dementia in Low and Middle Income Countries (LMICs) and Low Resource Settings: Gender, Genetics, Risk Factors, Pathophysiology and Prevention

R01 AG036469 Maestre (PI)
08/01/2011-06/30/2016
 Gene-Environment Interaction in Cognition in Venezuelan Families

R03 AG054186 Maestre (mPI), Terwilliger PI
09/01/2016-05/31/2018
A longitudinal study of mid-to late-life blood pressure profiles as risk factors for Alzheimer's disease in Hispanics

Citations:

1. Melgarejo JD, Lee JH, Petitto M, Yépez JB, Murati FA, Jin Z, Chávez CA, Pirela RV, Calmón GE, Lee W, Johnson MP, Mena LJ, Al-Aswad LA, Terwilliger JD, Allikmets R, Maestre GE, De Moraes CG. Glaucomatous Optic Neuropathy Associated with Nocturnal Dip in Blood Pressure: Findings from the Maracaibo Aging Study. Ophthalmology. 2018 Jun;125(6):807-814. PubMed Central PMCID: PMC5963964.
2. Maestre GE, Mena LJ, Melgarejo JD, Aguirre-Acevedo DC, Pino-Ramírez G, Urribarrí M, Chacon IJ, Chávez CA, Falque-Madrid L, Gaona CA, Terwilliger JD, Lee JH, Scarmeas N. Incidence of dementia in elderly Latin Americans: Results of the Maracaibo Aging Study. Alzheimers Dement. 2018 Feb;14(2):140-147. PubMed Central PMCID: PMC5803319.
3. Maestre GE. Assessing dementia in resource-poor regions. Curr Neurol Neurosci Rep. 2012 Oct;12(5):511-9. PubMed Central PMCID: PMC3434885.
4. Maestre G, Ottman R, Stern Y, Gurland B, Chun M, Tang MX, Shelanski M, Tycko B, Mayeux R. Apolipoprotein E and Alzheimer's disease: ethnic variation in genotypic risks. Ann Neurol. 1995 Feb;37(2):254-9. PubMed PMID: 7847867.

B. Positions, Scientific Appointments and Honors

Positions and Scientific Appointments

2018 -	Director, Rio Grande Valley Alzheimers Disease Resource Center for Minority Aging Research Center, University of Texas Rio Grande Valley, Brownsville, TX
2016 -	Professor, University of Texas Rio Grande Valley School of Medicine, Department of Neuroscience, Harlingen, TX
2014 -	Emeritus Professor, University of Zulia, Maracaibo
2011 - 2014	Visiting Professor, Columbia University, Department of Psychiatry, New York, NY
2005 - 2014	Professor, University of Zulia School of Medicine, Psychiatry Dept., Maracaibo
2003 - 2011	Associate Research Scientist, Columbia University, Gertrude H Sergievsky Center, New York, NY
2000 - 2005	Associate Professor, University of Zulia School of Medicine, Psychiatry Dept., Maracaibo
1996 - 2014	Founding Director, Institute for Biological Research, Laboratory of Neurosciences, Maracaibo
1992 - 2000	Assistant Professor, University of Zulia School of Medicine, Psychiatry Dept., Maracaibo
1989 - 1990	Internship, Hospital La Concepcion, Psychiatry Dept. , La Concepcion

Honors

2019	Excellence Award, University of Texas Rio Grande Valley
2018	Highest Distinction, Bolivian Institute of Cognitive Neurosciences
2012	Highest Distinction, Universidad Nacional Mayor de San Marcos, Lima Peru

2012	Certificate for Life in Research, Academy of Neuroscience, Peru
2009	Member of the Cabinet for Quality of Life, Granada University, Spain
2009	Recognition Plaque, Lyons Club
2006	San Sebastian Order, City of Maracaibo
2000	Bruce S. Schoenberg Award, American Academy of Neurology
1997	Highest Ranking Researcher, National Commission for Academic Merit, Venezuela
1993	Presidential Award, VII International Meeting of Scanning Microscopy
1992	Stanley Cobb Award, Boston Society of Neurology and Psychiatry

C. Contribution to Science

1. My contribution to improvement of quality of life of people with cognitive disabilities and older adults has revolved around the development and implementation of mhealth solutions focused on Hispanic populations.

    a. Maestre GE, Pirela RV, Paz CL, Melgarejo JD, Mena LJ, Chavez CA, Leendertz R, Petitto M, Silva E, Calmón GE, Al-Aswad L, Lee JH, Terwilliger JD. Research on aging during the Venezuelan humanitarian crisis: the experience of the Maracaibo aging study. BMC Public Health. 2021 Mar 9;21(1):473. PubMed Central PMCID: PMC7941117.

    b. Mena LJ, Félix VG, Ostos R, González AJ, Martínez-Peláez R, Melgarejo JD, Maestre GE. Mobile Personal Health Care System for Noninvasive, Pervasive, and Continuous Blood Pressure Monitoring: Development and Usability Study. JMIR Mhealth Uhealth. 2020 Jul 20;8(7):e18012. PubMed Central PMCID: PMC7400045.

    c. Mena LJ, Felix VG, Ostos R, Gonzalez JA, Cervantes A, Ochoa A, Ruiz C, Ramos R, Maestre GE. Mobile personal health system for ambulatory blood pressure monitoring. Comput Math Methods Med. 2013;2013:598196. PubMed Central PMCID: PMC3665224.

    d. Mena LJ, Orozco EE, Felix VG, Ostos R, Melgarejo J, Maestre GE. Machine learning approach to extract diagnostic and prognostic thresholds: application in prognosis of cardiovascular mortality. Comput Math Methods Med. 2012;2012:750151. PubMed Central PMCID: PMC3424632.

2. My contribution to finding new ways to assess health and disease include the establishment of a new cardiovascular index based on blood pressure variability, Average Real Variability (AVR), which has now been validated in populations around the globe. In addition, I proposed a new classification algorithm for discovering patterns of abnormal blood pressure variability. As part of the IDACO consortium, my research contributed to the establishment of new ambulatory blood pressure thresholds for defining hypertension, highlighting that diagnosis of hypertension should be age-appropriate. Those studies also revealed that the time intervals used in ambulatory blood pressure monitoring significantly affect the risk estimates of white coat hypertension, and that a minimum number of ambulatory blood pressure readings is required for accurate assessment of blood pressure variability.

    a. Yang WY, Melgarejo JD, Thijs L, Zhang ZY, Boggia J, Wei FF, Hansen TW, Asayama K, Ohkubo T, Jeppesen J, Dolan E, Stolarz-Skrzypek K, Malyutina S, Casiglia E, Lind L, Filipovský J, Maestre GE, Li Y, Wang JG, Imai Y, Kawecka-Jaszcz K, Sandoya E, Narkiewicz K, O'Brien E, Verhamme P, Staessen JA. Association of Office and Ambulatory Blood Pressure With Mortality and Cardiovascular Outcomes. JAMA. 2019 Aug 6;322(5):409-420. PubMed Central PMCID: PMC6822661.

    b. Mena LJ, Felix VG, Melgarejo JD, Maestre GE. 24-Hour Blood Pressure Variability Assessed by Average Real Variability: A Systematic Review and Meta-Analysis. J Am Heart Assoc. 2017 Oct 19;6(10) PubMed Central PMCID: PMC5721878.

    c. Melgarejo JD, Maestre GE, Thijs L, Asayama K, Boggia J, Casiglia E, Hansen TW, Imai Y, Jacobs L, Jeppesen J, Kawecka-Jaszcz K, Kuznetsova T, Li Y, Malyutina S, Nikitin Y, Ohkubo T, Stolarz-Skrzypek K, Wang JG, Staessen JA. Prevalence, Treatment, and Control Rates of Conventional and Ambulatory Hypertension Across 10 Populations in 3 Continents. Hypertension. 2017 Jul;70(1):50-58. PubMed PMID: 28483916.

d. Mena L, Pintos S, Queipo NV, Aizpúrua JA, Maestre G, Sulbarán T. A reliable index for the prognostic significance of blood pressure variability. J Hypertens. 2005 Mar;23(3):505-11. PubMed PMID: 15716690.

3. My research has improved our understanding of racial/ethnic differences in susceptibility to cerebrovascular disease in old age. For example, my colleagues and I found that the ApoE-e4 allele is a greater risk factor for dementia in Caucasians than in Hispanics, and that the risk in some cluster of Hispanics might be modulated by gender.

a. Melgarejo JD, Aguirre-Acevedo DC, Gaona C, Chavez CA, Calmón GE, Silva ER, de Erausquin GA, Gil M, Mena LJ, Terwilliger JD, Arboleda H, Scarmeas N, Lee JH, Maestre GE. Nighttime Blood Pressure Interacts with APOE Genotype to Increase the Risk of Incident Dementia of the Alzheimer's Type in Hispanics. J Alzheimers Dis. 2020;77(2):569-579. PubMed Central PMCID: PMC7577347.

b. Maestre GE, Mena LJ, Melgarejo JD, Aguirre-Acevedo DC, Pino-Ramírez G, Urribarrí M, Chacon IJ, Chávez CA, Falque-Madrid L, Gaona CA, Terwilliger JD, Lee JH, Scarmeas N. Incidence of dementia in elderly Latin Americans: Results of the Maracaibo Aging Study. Alzheimers Dement. 2018 Feb;14(2):140-147. PubMed Central PMCID: PMC5803319.

c. Chacón IJ, Molero AE, Pino-Ramírez G, Luchsinger JA, Lee JH, Maestre GE. Risk of dementia associated with elevated plasma homocysteine in a latin american population. Int J Alzheimers Dis. 2009 Aug 23;2009 PubMed Central PMCID: PMC2925085.

d. Molero AE, Pino-Ramírez G, Maestre GE. High prevalence of dementia in a Caribbean population. Neuroepidemiology. 2007;29(1-2):107-12. PubMed PMID: 17940342.

4. I demonstrated prevalence and incidence of Alzheimer´s disease and age-associated dementias are significantly high in the Maracaibo Aging Study, and identified non-traditional cardiovascular risk factors, such high plasma homocysteine levels, as particularly important among Latinos.

a. Yang WY, Melgarejo JD, Thijs L, Zhang ZY, Boggia J, Wei FF, Hansen TW, Asayama K, Ohkubo T, Jeppesen J, Dolan E, Stolarz-Skrzypek K, Malyutina S, Casiglia E, Lind L, Filipovský J, Maestre GE, Li Y, Wang JG, Imai Y, Kawecka-Jaszcz K, Sandoya E, Narkiewicz K, O'Brien E, Verhamme P, Staessen JA. Association of Office and Ambulatory Blood Pressure With Mortality and Cardiovascular Outcomes. JAMA. 2019 Aug 6;322(5):409-420. PubMed Central PMCID: PMC6822661.

b. Molero AE, Pino-Ramírez G, Maestre GE. Modulation by age and gender of risk for Alzheimer's disease and vascular dementia associated with the apolipoprotein E-epsilon4 allele in Latin Americans: findings from the Maracaibo Aging Study. Neurosci Lett. 2001 Jul 6;307(1):5-8. PubMed PMID: 11516561.

c. Tang MX, Maestre G, Tsai WY, Liu XH, Feng L, Chung WY, Chun M, Schofield P, Stern Y, Tycko B, Mayeux R. Effect of age, ethnicity, and head injury on the association between APOE genotypes and Alzheimer's disease. Ann N Y Acad Sci. 1996 Dec 16;802:6-15. PubMed PMID: 8993479.

d. Tang MX, Maestre G, Tsai WY, Liu XH, Feng L, Chung WY, Chun M, Schofield P, Stern Y, Tycko B, Mayeux R. Relative risk of Alzheimer disease and age-at-onset distributions, based on APOE genotypes among elderly African Americans, Caucasians, and Hispanics in New York City. Am J Hum Genet. 1996 Mar;58(3):574-84. PubMed Central PMCID: PMC1914582.

5. I was the first to establish a longitudinal study of aging individuals in Latin America. Although initially focused on dementia it has also served to address other relevant health issues across lifespan. Our study was the first report prevalence of dementia in a population-based sample, report on ocular manifestations of Zika in Venezuela and Colombia and also the important role of blood pressure variations in risk of glaucoma, and emphasized the urgent need to discuss and take action on capacity building needs for resource-poor communities.

a. Melgarejo JD, Lee JH, Petitto M, Yépez JB, Murati FA, Jin Z, Chávez CA, Pirela RV, Calmón GE, Lee W, Johnson MP, Mena LJ, Al-Aswad LA, Terwilliger JD, Allikmets R, Maestre GE, De Moraes CG. Glaucomatous Optic Neuropathy Associated with Nocturnal Dip in Blood Pressure: Findings from

the Maracaibo Aging Study. Ophthalmology. 2018 Jun;125(6):807-814. PubMed Central ID: PMC5963964.

b. Castro F, Melgarejo J, Chavez CA, de Erausquin GA, Terwilliger JD, Lee JH, Maestre GE. Total Plasma Homocysteine and Depressive Symptoms in Older Hispanics. J Alzheimers Dis. 2021 Feb 11; PubMed ID: 33579837.

c. Yepez JB, Murati FA, Pettito M, Peñaranda CF, de Yepez J, Maestre G, Arevalo JF. Ophthalmic Manifestations of Congenital Zika Syndrome in Colombia and Venezuela. JAMA Ophthalmol. 2017 May 1;135(5):440-445. PubMed Central ID: PMC5470423.

d. De Moraes CG, Pettito M, Yepez JB, Sakuntabhai A, Simon-Loriere E, Zaidi MB, Prot M, Ruffie C, Kim SS, Allikmets R, Terwilliger JD, Lee JH, Maestre GE. Optic neuropathy and congenital glaucoma associated with probable Zika virus infection in Venezuelan patients. JMM Case Rep. 2018 May;5(5):e005145. PubMed Central ID: PMC5994708.

Complete List of Published Work in My Bibliography:
https://www.ncbi.nlm.nih.gov/myncbi/gladys.maestre.1/bibliography/public/