NACC Project #2016-04
Plasma biomarkers in Lewy body disease

Lead investigator
Neill Graff-Radford, MD

Collaborating centers
Mayo Clinic Jacksonville, University of North Texas Health Science Center, University of Washington, University of Texas at Dallas

Project description
The purpose of this project is to collect the requisite data and build the necessary collaborative relationships to submit a grant for a large-scale prospective study of the utility of blood-based biomarkers in Lewy body disease (LBD). The long-term goal of this line of research is the generation of blood-based profiles that have diagnostic, prognostic, and theragnostic value in LBD. Given the rapidly growing elderly population, neurodegenerative dementias are a major public health problem. LBD is the 2nd most prevalent neurodegenerative dementia accounting for 15 – 20% of cases and is often misdiagnosed as Alzheimer's disease (AD). LBD is an α-synuclein disorder that is characterized by Lewy body and Lewy neurites in specific areas of the brain as well as acetylcholine neuronal degeneration. There is frequent AD and LBD overlap, making the differential diagnosis between LBD and AD a significant problem in clinical practice. Additionally, there is an urgent need for methods to predict clinical course in LBD to design trials and monitor interventions. Based on preliminary findings it is our hypothesis that a blood-based biomarker profile can be accurate in detecting and distinguishing LBD from AD and controls. The Specific Aims of this project are as follows: Specific Aim 1 — Replicate our blood-based profile of LBD in a larger sample; and Specific Aim 2 — To identify biologically-based subgroups in LBD.

Contact information
For more information about this study, please contact:
Neill Graff-Radford, MD, Mayo Clinic
e-mail: graffradford.neill@mayo.edu
http://mayoresearch.mayo.edu/mayo/research/alzheimers_center/