### Department of Neurology - Goizueta ADRC Resources

Supported by the National Institutes of Health, Emory’s Alzheimer’s Disease Research Center (ADRC) is part of a national network of research centers dedicated to understanding Alzheimer’s and other related forms of cognitive impairment. With a vision to advance research that reduces Alzheimer’s burden through both early detection and effective intervention, the ADRC aims to gain a deeper understanding of Alzheimer’s disease and other forms of mild cognitive impairment; to increase research participation of underrepresented people, such as African Americans; and to improve the care protocol for people living with Alzheimer’s disease and mild cognitive impairment. The ADRC is committed to improving the lives of individuals affected by Alzheimer's and related diseases through innovative research, education, and compassionate care.

Clinical

The Goizueta ADRC Clinical Core conducts research activities within 25,000 total square feet of space in 6 Executive Park (EP6). This space includes exam, lab, administrative, and participant waiting room and lounge areas on the second floor of EP6. The unit maintains 20 flex exam rooms, 9 testing rooms, 3 cardiovascular rooms, 2 retinal imaging rooms, 7 infusion bays, storage space, a lab for initial biospecimen handling prior to transfer to the CRU Laboratory, and faculty and staff offices with a large participant reception area, constituting approximately 6,000 square feet.All flex exam rooms are equipped with an ophthalmoscope, otoscope, and sphygmomanometer and are supplied for phlebotomy. The exam rooms are also equipped with exam tables for lumbar punctures and other procedures. Cardiovascular rooms are outfitted with SphygmoCor Xcel systems for arterial pulse wave analysis; Itamar Medical EndoPAT devices for measuring flow-mediated dilation and Endothelial Dysfunction; Panasonic CardioHealth Stations capable of measuring Carotid Intima-Media Thickness (CIMT); and CardeaScreen electrocardiograms. A ProtoKinetics Seno Walkway is located in a sequestered area for gait measurement and analysis. The retinal imaging rooms are equipped with NeuroVision Retia machines for capturing retinal imaging.

Laboratory

The CRU Laboratory occupies 2,200 square feet of wet lab space for specimen processing, long-term storage, and analysis. This space is located on the 1st floor of EP6 and is equipped with bench space for 6 individuals and all necessary equipment for the proposed work, including centrifuges, balances, microplate readers, spectrophotometers, refrigerators, hot plates, stirrers, and -20°C freezer. A dedicated freezer room will house ten -80°C freezers and two large liquid nitrogen tanks for long-term biospecimen storage. Additional key CRU Laboratory equipment includes a Cobas e601 analyzer for immunoassays, Tecan liquid handler for HTP handling of liquids and more accurate aliquoting, and two mass spectrometers, including a fully equipped, state-of-the-art Orbitrap Fusion Lumos Tribrid mass spectrometry system.

Computer

All faculty and staff offices are equipped with PCs that are connected to the Emory network and local printers. Faculty and staff have access to Emory site-licensed software (e.g. Microsoft Office), statistical packages (e.g., SAS, SPSS), and bibliographic software (e.g., EndNote). The Emory network allows access to multiple on-line databases including Medline, Embase, and PsychInfo. The Goizueta ADRC uses Salesforce CRM, REDCap, and Emory enterprise-wide systems such as Nautilus LIMS and the Emory Research Subject Registry (ERSR) that have been customized for ADRC data collection, storage and retrieval. Dedicated terminals, label printers, and bar code scanners are available for data entry and sample tracking. The application associated SQL Server, MySQL, and Oracle databases utilize GUIDs to connect the information across platforms and in the Data Mart. The GUIDs are independent of patient identifiers and meet HIPAA privacy standards. The applications and databases reside on servers in a secured zone behind the Emory University firewall that requires network and application logins to access data granted at the user role level. The firewall and servers are maintained by Emory University and comply with their security policies and regulations.