

Researcher Services

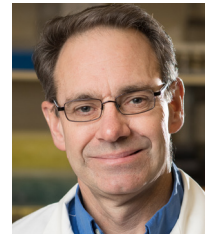


Wisconsin Alzheimer's
Disease Research Center
UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

In order to utilize the below Wisconsin ADRC Researcher Services, contact the respective service leader.

Genotyping Service

The Genotyping Service can consult with investigators on selecting genotype analyses for particular research projects. The service can customize genotyping to any genetic loci and is experienced in performing genotyping for the determination of single nucleotide polymorphisms (SNPs) and genetic repeats in several disease-related genes, including apolipoprotein E (exonic and promoter regions), clusterin (apolipoprotein J), TOMM40, and androgen receptor. *Contact: Atwood*



Craig Atwood, PhD
csa@medicine.wisc.edu

Biomarker and Assay Service

The Biomarker and Assay Service can consult with investigators regarding sample collection, storage methods, and analyses or assays relevant to the research study. The service has experience in performing assays in various biological samples including whole tissue (brain), whole blood, CSF, plasma, serum, saliva, and urine. Current assays include saliva, plasma, serum hormones (sex steroids and gonadotropins), whole tissue, CSF amyloid beta, tau, and tau phosphorylation. *Contact: Atwood*



Rick Chappell, PhD
chappell@biostat.wisc.edu

Data Collection, Statistical, and Epidemiological Services

Investigators can seek consultation and/or collaboration from the Data Collection, Statistical and Epidemiological Service regarding study initiation and data analysis. These include:

- Study design, sample size, and power calculation
- Data collection planning
- Analysis of clinical trials and observational studies
- Statistical programming

Contact: Chappell



Cynthia Carlsson, MD, MS
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Cerebrospinal Fluid (CSF) Collection Service

The CSF Collection Service follows a state-of-the-art protocol for specimen collection developed through collaborations with leading scientists in the field of CSF biomarker research. The CSF Collection Service can assist investigators in designing collection and storage methods, selecting CSF biomarker outcomes, sample collection by Wisconsin ADRC faculty, and training study personnel on collection procedures. *Contact: Carlsson*



Carey Gleason, PhD, MS
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Neuropsychological Evaluation Service

For studies involving collection of cognitive data, the Neuropsychology Service can provide support with designing a cognitive assessment battery, summarizing and interpreting neuropsychological data, data collection by Wisconsin ADRC staff, and training research staff. *Contact: Gleason*

Neuroimaging Service

Investigators examining neuroimaging outcomes in patients with AD and MCI, as well as preclinical and at-risk populations, can obtain assistance from the Neuroimaging Service. The service offers consultation in MRI protocol, scan parameters, and selecting the most appropriate scans for study outcome. The service also assists in imaging acquisition and image processing. *Contact: Johnson*



Sterling Johnson, PhD
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Researcher Resources



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One of the missions of the Wisconsin ADRC is to help further scientific research in Alzheimer's disease and related disorders. To that effect, we make our data available to investigators who are approved through our electronic ADRC Resource Request Application, located on our website, www.adrc.wisc.edu, under the For Researchers tab.

Research Participants

The Wisconsin ADRC's "Clinical Core" is a registry of potential subjects who are diagnostically well-characterized and willing to be approached for possible participation in research related to Alzheimer's disease and other dementias.

Five groups of participants are recruited into the Clinical Core. These include:

- Older adults with Alzheimer's disease
- Older adults with Mild Cognitive Impairment (MCI)
- Cognitively healthy (non-demented) older adults
- Middle-aged adults at risk for Alzheimer's disease due to a parental history (IMPACT Parental History Positive cohort)
- Middle-aged adults whose parents survived to old age without signs or symptoms of dementia; mother survived to age 75 and father to age 70 (IMPACT Parental History Negative cohort)



Archived Data

Clinical Core participants undergo annual study visits, during which interview, questionnaire, examination, and cognitive data are collected. Additionally, fasting blood samples are obtained. Clinical laboratory data are available, as well as apolipoprotein E (APOE) genotype.

In addition to annual study visit data, the Wisconsin ADRC has two optional substudies. Participants can choose to participate in either or both of the following studies:

- Neuroimaging data are collected from eligible participants who agree to complete the optional substudy. Neuroimaging data collected from Clinical Core participants include:
 - Anatomical scans
 - Blood flow scans
 - Functional scans
- Cerebrospinal fluid (CSF) is collected from eligible Clinical Core participants. While some CSF is stored for later use, some of the sample is analyzed for amyloid beta and tau proteins, as well as inflammatory biomarkers



Stored Samples

Banked tissues collected antemortem include serum, plasma, whole blood, DNA, and cerebrospinal fluid (CSF).

Banked tissue collected postmortem include brain tissue and CSF obtained from deceased Clinical Core participants, as well as tissue from decedents enrolled in the Wisconsin Brain Donor Program.

The Wisconsin Alzheimer's Disease Research Center (ADRC) combines academic, clinical, and research expertise from the University of Wisconsin School of Medicine and Public Health and the Geriatric Research, Education and Clinical Center (GRECC) of the William S. Middleton Memorial Veterans Hospital in Madison, Wisconsin. Founded in 2009, the ADRC receives funding from private, university, state, and national sources, including a National Institutes of Health/National Institute on Aging grant for Alzheimer's Research Centers (P50-AG033514).