



September 2019

Expanded Blood-Based Collection

Thank you to all Centers that have expressed interest in participating in the Alzheimer's Disease Centers Fluid Biomarkers (ADCFB) pilot initiative to expand the range of blood-based samples banked at NCRAD! The ADCFB protocol involves collecting and sending plasma, serum, DNA, RNA and PBMCs to NCRAD using a uniform protocol. The ADCFB protocol ensures uniform blood collection and processing across all sites, reducing pre-analytical variables from samples collected at different Centers. Since launching this pilot initiative in June 2019, eleven Centers have been trained in the collection protocol and we have already received samples at NCRAD from more than fifty subjects!

As a reminder, we are reserving a subset of the aliquots from each sample type submitted for the exclusive use of the contributing center for five years.

We are currently writing a U19 grant application to continue this initiative longitudinally for five more years. As part of this U19, APOE genotyping, GWAS, and plasma biomarker data will be generated and returned to the Centers. If your Center would like to join in this initiative, please contact Kaci Lacy (lacy@iu.edu).

NCRAD APOE Data at NACC

To obtain the most recent APOE data, visit the NACC website at: <https://www.alz.washington.edu/adgc.html>, select your Center and choose the option to download APOE data from NCRAD. As always, please compare these data with any internal APOE genotype data you have generated. Please notify Kaci Lacy (lacy@iu.edu) if you have any questions or find any discrepancies. We want to work with you in order to resolve these.

Key for APOE results on NACC site

1=e3/e3	4=e4/e4	9=missing/unknown/ not assessed
2=e3/e4	5=e2/e4	
3=e2/e3	6=e2/e2	

NCRAD at AAIC

In July 2019, NCRAD attended the Alzheimer's Association International Conference (AAIC) in Los Angeles, CA and hosted a booth in the exhibition hall. The NCRAD team spoke with numerous academic and commercial researchers from around the world who are interested in both banking samples with NCRAD and also requesting samples from NCRAD to support their research. This was a great opportunity to raise awareness in the dementia research community about the studies and samples stored at NCRAD, and how they can be used to advance research for Alzheimer's disease and related dementias.

NCRAD Biospecimen Application Process

NCRAD has a simple way to identify studies with samples available for researcher requests: https://www.ncrad.org/accessing_data.html.

NCRAD has streamlined and simplified the process to request biospecimens. For more information about our biospecimen application process, please visit: https://ncrad.org/request_procedure.html

NCRAD iPSC Initiative

Researchers funded by NIH are required to share the iPSC and fibroblast lines they develop with other researchers. There can be a significant burden in terms of cost and time to expand the lines, perform extensive characterization, and then distribute them to other researchers. NCRAD is expanding support for the distribution of new cell lines to meet this growing need. We have begun to receive, expand, and distribute iPSC and fibroblast lines this year.

If you have lines you would like to centrally bank, please contact Jeanine Marshall to discuss this initiative further (jldaltzma@iu.edu). You can also visit our website to learn more: https://ncrad.org/ipsc_fibroblasts.html.

A Central Repository with samples available to match the rich dataset collected for all subjects seen in the ADCs is a very valuable resource for the field of AD research. We hope you will continue to support this effort!

ALZHEIMER'S DISEASE GENETICS CONSORTIUM (ADGC) 10-YEAR SYMPOSIUM: Genetics and Genomics of Alzheimer's Disease and Related Dementia (ADRD)

The Alzheimer's Disease Genetics Consortium (ADGC) and the Penn Neurodegeneration Genomics Center (PNGC) will host a 2-day AD genetics symposium, coinciding with the ADGC 10-year anniversary. This novel event will focus on state of the art AD genetics and bring together leaders in genetics, from the US and abroad, and pharmaceutical and technology representatives.

The symposium will generate discussion to explore future possibilities, expand collaborative networks as well as highlight current resources to maximize use of the available tools and data. We hope to see you there!

This event is co-presented by the Alzheimer's Disease Genetics Consortium (ADGC), Penn Neurodegeneration Genomics Center (PNGC), and The National Institute on Aging Genetics of Alzheimer's Disease Data Storage Site (NIAGADS).

CONFIRMED SPEAKERS (PARTIAL LIST):

David Collier
Eli Lilly

Jean-Charles Lambert
European Alzheimer's Disease Initiative (EADI)

Eliezer Masliah
National Institute on Aging

Gerard Schellenberg
University of Pennsylvania

Virginia Lee
University of Pennsylvania

TOPICS:

Overview of AD Genetics Research and Funding

International Collaborations on Alzheimer's Genetics Research

Alzheimer's Genetics in Diverse Populations

Human Genetics/Genomics and Drug Discovery

Genetics Factors, Pleiotropy, Gene-Environment interactions, and Comorbidity

Functional Genomics

Systems Biology

**TUESDAY-WEDNESDAY,
November 12-13, 2019**

Inn at Penn, Philadelphia, PA

Register at www.penn-ngc.org/adgc-10-year-symposium today!
The symposium is FREE to attend but REGISTRATION is REQUIRED.

AAIC 2019 Recap

The NIAGADS team had a great experience at the Alzheimer's Association International Conference (AAIC) this year. AAIC took place in Los Angeles from July 12-17. Penn Neurodegeneration Genomics Center (PNGC) presented four posters during the conference and NIAGADS exhibited for the first time. We were able to connect with a number of collaborators and met researchers that are interested in the data we host and share. Having a booth at the conference was a great opportunity to share NIAGADS with the research community!



New Datasets available at <https://www.niagads.org/datasets>

NIAGADS has added a number of new datasets, bringing the total number of datasets in NIAGADS to 61, with over 59,000 samples and 33 billion genotypes.

NG00084

Immune-related genetic enrichment in FTD summary statistics –
Broce et al. 2018

NG00074

Multi-cohort study of endolysosomal system genetics and dementia

New Website for Alzheimer's Machine Learning Research: Cognitive Systems Analysis of Alzheimer's Disease Genetic and Phenotypic Data

The NIH has announced a new funding opportunity (PAR-19-269) inviting applications around artificial intelligence (AI), machine learning (ML), and/or Deep Learning (DL) approaches that identify gene variants that contribute to risk of or protection against Alzheimer's disease and related dementias (ADRD). NIAGADS has developed a website that provides more background on the FOA, details the ADSP and

available data, describes the NIAGADS Data Sharing Service (DSS) platform, and provides information on how to participate. You can access the website here: <http://csa-ad.niagads.org/>.

Submissions for the FOA opened on September 5, 2019, and applications are due on October 5, 2019.