NCRAD

The National Cell Repository for Alzheimer's Disease

# NCRAD Quarterly Newsletter

**January 2014**

## Annual Sample Distribution Reports

It is time again for NCRAD's annual Sample Distribution Reports. This is sent out every January to the Center Director. Please contact Kelley Faber (kelfaber@iu.edu) if you would like a copy sent to you directly as well. As a reminder, this report is intended to assist your Center in demonstrating your contribution to sample banking efforts encouraged by NIA.

The report summarizes the number of samples provided by your site as part of initiatives banking samples at NCRAD. For example, a Center could be sending samples as part of the ADGC, ADNI, and LOAD initiatives. Please note that the number of samples provided on the report is a count of unique individuals within a study. Some studies are collecting longitudinal samples or multiple types of samples and these are not distinguished.

The annual report also summarizes how frequently samples contributed by your site are requested by researchers. The report shows the total number of samples contributed by your site that were ever distributed to researchers as well as the number that were distributed in the past year. This is a total count and is not restricted to unique subjects. Samples from the same subject may be requested by more than one investigator. This count does not reflect the samples that were returned to the contributing site as their one free aliquot.

Our summary report also provides the number of unique investigators that have requested samples contributed by your Center. We provide this information for the past year and also in a cumulative form across all years. Finally, all NIH grants that were supported by the samples contributed by your site are listed.

## ADSP-Alzheimer's Disease Sequencing Project

The ADSP is completing both whole genome sequencing and whole exome sequencing at the LSSCs (Large Scale Sequencing Centers). All samples were sent, quality review has been completed and sequencing is under way.

For the whole genome sequencing, 580 subjects from 111 families having multiple late onset family members are being sequenced. This is expected to be completed by the end of January 2014 and released for use by approved researchers through dbGaP and NIAGADS.

The whole exome sequencing includes 5,125 cases, 4,987 controls and 888 enriched cases. Among these 11,000 samples, 3,270 came from ADC samples sent to NCRAD as part of Phase 1 and Phase 2 efforts of the ADGC. We truly appreciate all of the work the Centers put into getting samples to NCRAD!

## NCRAD Blood Sample Initiative

A major effort of both the Alzheimer Disease Genetics Consortium (ADGC) and NCRAD has been to create a centralized sample resource that accompanies the strong centralized data management resource at NACC. This has long been a goal of both groups and reflects the unusual situation of AD research, which has never required ADCs to bank samples in a central repository.

The reimbursement phase of the ADGC initiative will be ending **March 14, 2014**. However, NCRAD will continue to accept a blood sample on all subjects on the NACC Phase 2 list. While NCRAD is not able to provide monetary compensation, we will cover the cost of shipping, provide a blood kit and return 25ug of DNA for free. We hope you continue to send samples for this very valuable project!

A Central Repository with DNA 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 that you will continue to support this effort!

Please contact us with any questions or concerns about NCRAD at 800-526-2839/317-274-7360, by email at kelfaber@iu.edu or visit our web-site: www.ncrad.org Thanks!!

# NIAGADS

The National Institute on Aging Genetics of Alzheimer's Disease Data Storage Site

## NIAGADS—A Resource in AD Research

The NIA Genetics of Alzheimer's Disease Data Storage Site (http://www.niagads.org) is a national repository that facilitates access to genetic, genomic, and related data to qualified investigators for the study of Alzheimer's disease (AD). It is funded by the National Institute on Aging (NIA) under a cooperative agreement (U24 AG0416890; PI: Li-San Wang, Ph.D.) between NIA and University of Pennsylvania Perelman School of Medicine. NIAGADS's mission is to enable rapid data sharing and speedy identification of new pathways for therapeutic approaches and prevention of the disease. All genetic and related data derived from NIA-funded studies for late-onset AD (LOAD) are deposited at NIAGADS, another NIA-approved site, or both. NIAGADS makes genetic, genomic, and phenotypic data relevant to genetic analysis such as clinical and neuropathology data elements available to qualified investigators for secondary analysis. In turn, secondary analysis data are provided back to NIAGADS.

adsp
Alzheimer's Disease Sequencing Project

## ADSP Website Live

The NIA Genetics of Alzheimer's Disease Data Storage Site (NIAGADS) provides access to genotypic and phenotypic data for the ADSP, as well as secondary analysis data, and data from NIA funded genetic and genomic studies. Additional phenotype data for ADSP will become available as the project progresses. An ADSP website with information on study design and data access has been developed by the NIAGADS team and can be found at http://www.niagads.org/adsp.

## ADSP Data Portal

The focal point of the ADSP website is the data portal (https://www.niagads.org/adsp/portal/). The data portal is a fully customized web interface that allows projects additional flexibility using the dbGaP infrastructure. Requests for ADSP data should be submitted through dbGaP. Further information on accessing ADSP data can be found on dbGaP by searching the ADSP dataset ID **phs000572.v1.p1** or at the ADSP website at https://www.niagads.org/adsp/content/instructions-application. Questions regarding ADSP data access or the project in general should be sent to adsp-help@niagads.org.

## Other Resources from NIAGADS

DRAW
SP

**DRAW+SneakPeek** is a resource developed by NIAGADS to support next generation sequencing analysis. The software is a workflow that takes data from sequencing machines, processes the individual data, and returns annotated variant calls. It includes a database with a web interface to present the results and statistics in an informative and easy to use format. More information about DRAW+SneakPeek can be found at https://www.niagads.org/content/dna-seq.

The **NIAGADS Genomics Database** was designed to allow users to browse published AD results in a graphical format. The NIAGADS Genomics Database can be found at https://www.niagads.org/genomics/. Users can search based on SNP data, candidate genes and annotations, and genomic loci. The database uses GUS4, a new version of the database optimized for high throughput sequence data and capturing experimental metadata, as well as JBrowse, the replacement for the GMOD genome browser, GBrowse. Additional datasets will be added to the database as they are received.