



# NCRAD

September 2015

## ADC Samples to NCRAD

NCRAD continues to accept samples from all subjects on the NACC Phase 1 and 2 lists. Even if samples have been previously used in GWAS, NCRAD would still like to have the sample banked centrally. This will allow sequencing to be done on these very valuable samples. NCRAD will continue to provide a blood kit, cover the cost of shipping, and return 25ug of DNA for free. In addition, *APOE* genotyping will be done on all samples submitted. Please continue to send samples for this very valuable project.

## Replenishing Samples

Because samples provided by the ADCs have been widely used for genetic studies, NCRAD has depleted or nearly depleted some of our stocks. In order to continue to provide ADC samples for important genetic projects, it is vital for NCRAD to obtain additional DNA for many subjects. NCRAD will accept blood samples for subjects that have previously had a DNA aliquot transferred. By providing a blood sample, NCRAD will have enough DNA to ensure that we can use the sample for many future projects. In August, NCRAD sent out lists to the sites of those samples that are low volume. Please continue to send in additional samples for these subjects.

## New NCRAD Website

NCRAD would like to introduce our new website: [www.ncrad.org](http://www.ncrad.org). This website features several new tools that we hope will be particularly useful to the Centers. Please be sure to visit the ADC Sample Requirements, Kit Requests and Forms page under "Tools for Active Studies." Here you will find information on each sample type that can be sent to NCRAD, how to request sample supplies (i.e. blood kits, DNA tubes) from NCRAD, and sample forms for each sample type.

To get to the kit request module directly, please visit [kits.iu.edu/adc](http://kits.iu.edu/adc).

You will also find details about holiday closures, how to handle Friday blood draws and the lab shipping address at: [https://www.ncrad.org/friday\\_blood\\_draws.html](https://www.ncrad.org/friday_blood_draws.html).

Finally, you will find archived copies of the NCRAD-NIAGADS Newsletters to reference past information.

Please let us know if there are additional tools or resources we could include that would help your work with our repository. Some screen shots are shown on the following page.

**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 you will continue to support this effort!**

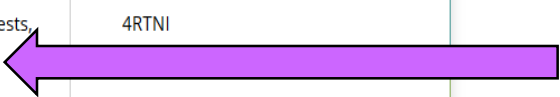
Please contact us with any questions or concerns about NCRAD at 800-526-2839/317-274-7360, by email at [kelfaber@iu.edu](mailto:kelfaber@iu.edu) or visit our web-site: [www.ncrad.org](http://www.ncrad.org) Thanks!!



# NCRAD



<p><b>NCRAD Lab Information</b></p> <ul style="list-style-type: none"> <li>Holiday Closures</li> <li>Shipping Address</li> <li>What to Do for Friday Blood Draws</li> </ul>	<p><b>Alzheimer's Disease Centers</b></p> <ul style="list-style-type: none"> <li>Sample Requirements, Kit Requests, and Forms</li> <li>NCRAD-NIAGADS Newsletters</li> </ul>	<p><b>Study Resources</b></p> <ul style="list-style-type: none"> <li>4RTNI</li> <li>ADNI Depression</li> </ul>
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ADC section of NCRAD website

## ADGC Study Blood Sample Form

Please complete this form when sending blood to NCRAD. The form can be submitted electronically or it may be printed and faxed. **If faxing the form, please do so as soon as possible after the blood is drawn.** NCRAD would like to receive this form before the blood arrives.

**Instructions for Electronic Submittal**

- Fill out the form completely.
- Click the 'Submit Form' button at the bottom of the page
- Print a paper copy of the form to include with the physical sample when shipped

**Instructions for Fax/Email Submittal**

**Center Information**

From:  Center:

Phone:  Fax:

Email:  Date:

**Subject Information**

Site#  **Sample Types Included**

PTID#  Purple Tops for DNA  # of Tubes

Gender:  Green Tops for PBMCs  # of Tubes

Birth Year:  Cryovials for Buffy Coat  # of Tubes

**Sample Information**

Date Blood Drawn:  FedEx Tracking #:

**NCRAD**

ADC Kit Request System

Study Site:  \* must provide value

Specimen Collection Type:  \* must provide value

Web-based kit request module for blood kits, DNA tubes, brain tissue tubes and buffy coat tubes. This can be found through the ADC section of the NCRAD web-site under each sample type or can be reached directly at [kits.iu.edu/adc](http://kits.iu.edu/adc).

New web-based sample form submission option

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

## Spotlight: Coming Soon to the GenomicsDB

### Functional Enrichment Analysis

Perform enrichment analysis (Gene Ontology, Pathways) on uploaded gene lists or gene search results.

### More powerful search tools

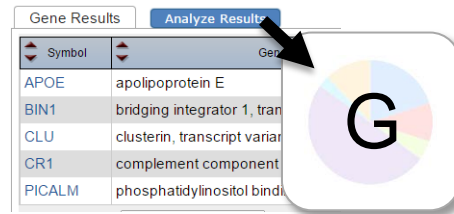
Use a flexible query toolkit to discover SNPs or Genes co-located with sequence feature annotations, including:

- Expressed enhancers (FANTOM5)
- Histone modifications (ENCODE)
- DNase Hypersensitivity Regions (ENCODE)
- Transcription Factor Binding Sites (ENCODE)
- Disease-Trait Associations (NHGRI GWAS Catalog)
- AD-relevant GWAS Significance (NIAGADS)
- User uploaded annotations

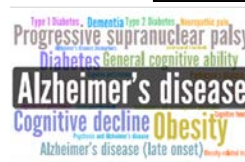
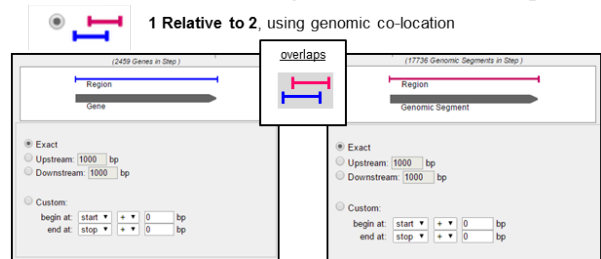
### Graphical search tools

Use interactive visualizations to quickly discover relevant datasets, sequence features, and annotations

To volunteer as a beta-tester for the new GenomicsDB, email [support@niagads.org](mailto:support@niagads.org)



## Combine results from Step 1 with Annotated Regions



## Found 432 GenomicsDB records

- 25 Datasets
- 168 Genes
- 239 SNPs

rsID	chr	Position	Disease	Source
rs2539409	chr1	84254735	Alzheimer's disease	NHGRI GWAS Catalog
rs4143462	chr1	167718499	Alzheimer's disease (late onset)	NHGRI GWAS Catalog
rs2621847	chr1	173557600	Alzheimer's disease (cognitivedecline)	NHGRI GWAS Catalog



## NIAGADS/Alzheimer's Disease Sequencing Project (ADSP) Update

The ADSP Quality Control (QC) Work Group has worked to provide high-quality datasets of single nucleotide variant (SNV) and insertion-deletion polymorphism (indel) genotypes for both the whole-genome sequencing (WGS) and whole-exome sequencing (WES) data. The QC process integrated genotype data from samples sequenced at three NHGRI funded large scale sequencing centers. Data were pre-processed by two genotype calling pipelines to produce a single high-quality set of "consensus" genotypes. The first WGS consensus genotype calls on 578 individuals from 111 families was released in June 2015. WES SNV QC is underway and

genotypes will be available as release 2 in September; a third data release with additional QC steps is expected in mid-November 2015. The QC team is reviewing WGS and WES indel data with an anticipated public release of quality-checked data during late winter/early spring 2016.

NIAGADS is currently developing a software pipeline to mirror the genotype calling and QC process developed by ADSP. This tool will allow investigators to prepare their WGS or WES genotype calling data for comparison with ADSP data. This pipeline is currently under development and should be publicly available later this year. We will announce and release the software and documentation through the NIAGADS website.

## Two New Caucasian Datasets Available

### NG00042 – Miami and Medical School of Mount Sinai

913 Cases and 896 Controls  
GWAS and Imputation data available

### NG00043 – Mayo

844 Cases and 1255 Controls  
GWAS data available

For all available datasets, visit:

<https://www.niagads.org/available-data>

## We're on Twitter!

Follow us [@NIAGADS](https://twitter.com/NIAGADS)

