The National Cell Repository for Alzheimer’s Disease

aka NCRAD

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NCRAD

- Established in 1990 at Indiana University
- Recruit families with at least 2 living members with dementia
  - Families followed by telephone and mail
- 915 families enrolled and 630 still actively participating
- Obtain blood and brain tissue
  - Currently have DNA and/or cell lines for 3058 individuals
Sample Distribution

- The primary goal of NCRAD is to provide dementia/genetics researchers with biological materials for their research.

<table>
<thead>
<tr>
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<th>Total</th>
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<tbody>
<tr>
<td># of researchers</td>
<td>85</td>
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<tr>
<td># of samples-DNA</td>
<td>28,651</td>
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<tr>
<td># of samples-cell lines</td>
<td>1,549</td>
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<tr>
<td># of samples-brain tissue</td>
<td>2</td>
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NCRAD expands

- 2003—changed name from the AD Cell Bank to The National Cell Repository for Alzheimer’s Disease
  - First outside study was NIA-LOAD
  - Second study—ADNI 1
    - First study for NCRAD where the samples were banked with us but the main data set was stored elsewhere
    - Blood for 822 individuals and 707 DNA samples received, recruitment complete

- NCRAD was designated as the repository for the biological materials for all NIA funded research in the area of Alzheimer’s disease genetics.
NCRAD expands

- Now bank samples for 10 different dementia studies
- 2 additional studies pending but no samples received yet
  - ADNI-GO
    - Newly enrolled eMCI subjects-yellow top, purple top and PAXgene tubes
    - ADNI1 follow-up subjects-PAXgene tubes, purple top and possibly yellow top tubes but only if need a redraw
  - **This will be first study for NCRAD to receive biomarkers**
ADNI-GO samples to NCRAD

- 1, 10mL Purple top tube-DNA extraction which will be used for the APOE genotyping and the GWAS
  - Blood will be collected at baseline for newly enrolled eMCI and follow-up subjects

- 2, 8.5mL Yellow top tubes-used for creating immortalized cell lines
  - Blood will be collected at baseline for all new eMCI subjects and only as needed for ADNI1 follow-up subjects
  - Immortalized cell lines provide a living, growing source from which DNA can be continually be extracted.
  - They are important for long-term chemical and genetic research and will be stored indefinitely.
ADNI-Go Samples to NCRAD

- 3, 2.5mL PAXgene tubes will be collected at Baseline and Month 12 visits for RNA for all ADNI-GO subjects.
- RNA is collected in order to measure gene expression across time.
ADNI-GO samples to NCRAD

a. If the PAXgene Blood RNA Tube is the only tube to be drawn, a small amount of blood should be drawn into a “Discard Tube” (A) prior to drawing blood into the PAXgene Blood RNA Tube. Otherwise, the PAXgene Blood RNA Tube should be the last tube drawn in the phlebotomy procedure.

b. Using a BD (Becton, Dickinson and Company) Vacutainer® Safety-Lok™ Blood Collection Set, collect blood into the PAXgene Blood RNA Tube using your institution’s recommended standard procedure for venipuncture.

c. Hold the PAXgene Blood RNA Tube vertically, below the blood donor’s arm, during blood collection.

d. Allow at least 10 seconds for a complete blood draw to take place. Ensure that the blood has stopped flowing into the tube before removing the tube from the holder.

e. Gently invert the PAXgene Blood RNA Tube 8 to 10 times.
ADNI-GO samples to NCRAD

- All blood tubes drawn Monday-Thursday will be sent to NCRAD in ambient shippers.
- Please DO NOT SHIP on Fridays or Saturdays or the day before a holiday. We are NOT open on Saturdays.
  - It is ok to draw on Friday if only option BUT please hold purple and yellow top tubes at room temperature over the weekend and ship out in ambient shipper on Monday. If PAXgene is drawn on a Friday please refrigerate over the weekend and send with an ice pack on Monday in separate shipper from purple and yellow.
- Please email or fax a copy of the sample form to NCRAD before shipping so we know to expect the sample
  - NCRAD email: alzstudy@iupui.edu
  - NCRAD fax: 317-278-1100
ADNI-GO Sample labeling

- Sample labels will be checked against the sample form
- If there are any discrepancies noted the sites will be contacted to resolve
- See binder for example of sample label
NCRAD Sample Form

- Please email or fax ahead of shipping so we know what to expect
- Please include in box along with shipment
- Need information for sample verification
- See binder for example of sample form
NCRAD MTA

- NCRAD currently has 97 MTAs in place (IN and OUT)
- Please email me at kelfaber@iupui.edu if you think your PI may have one in place already.
- Recommended language: “No specific samples will be transferred under this agreement, all material transfers into NCRAD will be handled using a completed Appendix D.”
NCRAD MTA-Appendix D

- NCRAD Appendix D to be sent with Sample form.
- First gray box = date original MTA signed
- Second gray box list subject ID of sample being shipped
- Appendix D can cover more than one sample, just needs to be listed or included with an attachment

APPENDIX D

ADDENDUM TO THE MATERIAL TRANSFER AGREEMENT
FOR THE TRANSFER OF MATERIALS TO NCRAD

Whereas the National Cell Repository for Alzheimer’s Disease (NCRAD) was established by the National Institute on Aging (NIA) of the National Institutes of Health (NIH), an agency of the Public Health Service (PHS) and the U.S. Department of Health & Human Services (HHS), to help address the public health needs for continued research concerning Alzheimer’s Disease and related neurological diseases and aging;

Whereas Indiana University, an educational institution organized under the laws of the State of Indiana, on behalf of NCRAD, has entered into a Material Transfer Agreement with Provider (as defined below), fully signed on , to obtain blood, brain tissue, cell lines, and/or DNA and associated phenotypic data (“Research Material”) from Alzheimer Disease Centers, individual investigators, and medical personnel;

Whereas Provider desires to transfer additional Research Material to NCRAD, under the same terms and conditions as referenced in the aforementioned current Material Transfer Agreement between the parties, for furthering research;

Whereas Provider has obtained the Research Material in compliance with all applicable statutes, rules, and regulations;

Whereas Provider desires NCRAD, after consultation with the NIA and the Cell Bank Advisory Committee (CBAC), to derive cell lines from blood, and to distribute submitted and/or derived cell lines and/or DNA along with associated phenotypic data to qualified investigators in the research community;

Therefore, the Provider agrees to provide NCRAD with the following additional materials (using specific identifiers for each material) to be included in the definition of “Research Material” as specified above and in the original Agreement (attach separate page(s) as necessary).
Sites that need MTA

- Albany Medical College
- Banner Alzheimer’s Institute
- Baylor College of Medicine
- Boston University School of Medicine
- Case Western Reserve University
- Cleveland Clinic
- Columbia University
- Dartmouth
- Dent Neurologic Group
- Duke
- Georgetown University
- Howard University
- Jewish General Hospital
- Johns Hopkins University
- Medicine University of South Carolina
- Mount Sinai School of Medicine
- Neurological Care CNY
- New York University
- Northwestern University
- Ohio State University
- Olin NRC
- Parkwood Hospital
- Premiere Neurological Group
- Rhode Island Hospital
- Rush University Medical Center
- Saint Joseph’s Hospital
- Stanford University
- Sun Health Research Institute
- Sunnybrook Health Sciences
- University of Alabama at Birmingham
- University of British Columbia
- University of California, Davis
- University of California, Irvine
- University of California, Irvine-BIC
- University of California, Los Angeles
- University of California, San Diego
- University of California, San Francisco
- University of Kansas
- University of Michigan
- University of Pennsylvania
- University of Pittsburgh
- University of Rochester Medical Center
- University of Southern California
- University of Texas SWMC
- University of Wisconsin
- Wake Forest University
- Washington University, St. Louis
- Wien Center
- Yale University School of Medicine
Questions??

- Please feel free to:
  - Call our toll free number 1-800-526-2839
  - Email a NCRAD coordinator at alzstudy@iupui.edu
  - Email me directly at kelfaber@iupui.edu