

Penn Biomarker Core Of The National Institute On Aging Alzheimer Neuroimaging Initiative

John Q. Trojanowski, M.D., Ph.D.

Institute on Aging

Alzheimer Disease Core Center

Center for Neurodegenerative Disease Research

Marian S. Ware Alzheimer Drug Discovery Program

Department of Pathology and Laboratory Medicine

University of Pennsylvania

Philadelphia, PA



Penn Biomarker Core

- Core Leader: J.Q. Trojanowski
- Co-Investigators: L. Shaw, A. Nanji, V.M.-Y. Lee
- The goals of the Biomarker Core are to:
- 1) Create an ADNI biological fluid bank in the Biomarker Core
- 2) Measure these analytes in ADNI subjects:
 - ApoE genotype
 - Homocysteine (blood)
 - Isoprostanes (blood, urine, CSF)
 - Tau and A β (CSF)
 - Sulfatides (CSF)
- 3) Create immortalized cell lines
- 4) Utilize the Resource Allocation Review Committee (RARC) to distribute samples (including “add on studies”)
- 5) Seek other funding for additional analyses and “add on studies”



Plans For First 6 Months Of The ADNI Penn Biomarker Core

- a) Create a budget for the ADNI Penn Biomarker Core.
- b) Transfer existing personnel to the ADNI budget and recruit new personnel.
- c) Set up the new ADNI Biomarker Core in new space by purchasing and installing equipment (freezers, sample and reagent storage and tracking devices, tubing, labels, general lab supplies, computers, office supplies, database and other software, etc.).
- d) Purchase all kits and assay reagents for testing of assays.
- e) Test assay kits/protocols/methods for measuring homocysteine, isoprostanes, sulphatide, Abeta, tau, as well as DNA extraction from peripheral blood cells for APOE genotyping and DNA storage and immortalizing cell lines.
- f) Train Core personnel in the conduct of all assays.
- g) Conduct pilot studies of all assays/procedures using artificial CSF, plasma and urine "doped" with the analytes of interest followed by similar studies using "live" archival samples.
- h) Train Biomarker Core staff on all aspects of sample receipt, log-in, aliquoting, storage, tracking, report generation, database usage, data transfer to UCSD, etc.
- i) Develop SOPs, QC&QA protocols, and incorporate these into lab manuals for use by staff for implementing all Core activities.
- j) Receive authentic biological fluids from ADNI subjects about 1 April, 2005 and implement the activities summarized above.

