ALZHEIMER'S & DEMENTIA RESOURCE CENTER

THE STATE OF FLORIDA BRAIN BANK RESEARCH PROGRAM

Priorities and Accomplishments

History: The State of Florida Brain Bank Research Program was established in 1987 and is a program of the Department of Elder Affairs funded through the Alzheimer's Disease Initiative.

Structure: The Alzheimer's & Dementia Resource Center is one of only two organizations providing the Brain Bank program in the State of Florida, a program that covers 67 counties. The two Brain Bank recruiting sites work closely with 15 Memory Disorder Clinics throughout the State.

Brain Bank Research Priorities:

- Find a cure
- Collect the brains of individuals with dementing illnesses
- Collect the brains of healthy individuals
- Identify symptom groups and patterns
- Improve diagnostic tools and treatments
- Understand the pathology, including the role of genetics
- Provide families with a definitive diagnosis and feedback to the medical community
- Educate the community about Alzheimer's disease, the related dementias, and the Brain Bank

Outcomes: More than 50 research studies report findings based on the State of Florida Brain Bank.

- Alzheimer's disease is the leading cause of dementia in all age groups, from 50 to 90 years of age.
- Contributed to the refinement of criteria for Lewy Body Dementia, now known to be the 2nd leading cause of dementia and more common among men.
- A family history of dementia is a risk factor for both Lewy Body Dementia and Alzheimer's disease.
- Vascular disease (related to changes in blood flow and blood vessel changes) contributes to a quarter of all dementia cases over the age of 70.
- The accuracy of a diagnosis of Alzheimer's disease increases when known vascular factors are excluded.
- Frontotemporal dementia is more common among younger adults, striking in their 40s and 50s, and a mutation in the progranulin gene (GRN) is the most common cause of Frontotemporal Dementia with TDP-43 immunoreactive inclusions.
- TDP-43 also plays a role in ALS causing muscle wasting and stunted nerve cells.
- Two major healthcare companies (GE Healthcare and Avid Radiopharmaceuticals) established a presence in Florida as a direct result of the availability of potential study participants from the Brain Bank. The study confirmed that a new PET brain-imaging compound highlights the presence of amyloid plaques in the brain. This has provided a new avenue for the diagnosis of Alzheimer's disease.
- The Mayo Clinic hosts one of the largest collections of brains containing Lewy Body Dementia and Progressive Supranuclear Palsy.

Statistics: There are over 6,000 brains housed at Mayo Clinic in Jacksonville which is one of the largest collections in the world and available to researchers both nationally and internationally.

Collaborations:

- Indiana University's Indiana Alzheimer Disease Center National Cell Repository
- Johns Hopkins University
- Mayo Clinic
- University of Central Florida's NanoScience Technology Center