



NEWS from the UNIVERSITY of NORTH TEXAS HEALTH SCIENCE CENTER at Fort Worth

UNT Health Science Center

Work in Aging and Alzheimer's disease

In the last two decades, census figures have shown that the world's vital statistics are changing. In the U.S., the proportion of older adults went from roughly four percent in 1900 to 13 percent today, and will increase to more than 20 percent by 2030.

The UNT Health Science Center has made aging and Alzheimer's disease research one of its core areas of study in an effort to lessen the impact on individuals, families and the healthcare system.

The research team in our Institute for Aging and Alzheimer's Disease Research is focused on early detection of Alzheimer's, estrogen's role in Alzheimer's and Parkinson's, stroke therapy and identification of oxidation processes to measure brain aging.

We're also taking our research from the bench to the bedside. Currently, we have several drugs in clinical trials for the treatment of Alzheimer's disease, Parkinson's disease and stroke. And, we're partners with private-sector biotechnology and pharmaceutical companies in the development of treatments for neurological disorders.

In addition, we work closely with the local Alzheimer's Association, and support educational and health promotion programs that encourage healthy brain aging in our community.

Core Translational Laboratories

1. **Drug Synthesis Core** - a collaboration between the UNTHSC, Washington University and the University of Florida to design, synthesize and pre-clinically assess novel drugs.
2. **Mitochondrial Functional Assessment Core** - a IAADR core, now in operation that can assess mitochondrial function using a Fluorescence Laser Imaging Plate Reader (FLIPR), oxygen electrodes and nitrogen "bombs."
3. **Imaging Core** - Our imaging core to assess cellular and subcellular localization of molecules. Use is in hypothesis development and in drug screening.
4. **Brain Bank** - A facility/activity for identification, securing, autopsy, characterization, storage and use of well-characterized AD and control brain and other tissues.

The UNT Health Science Center partners with other research and healthcare training institutions to seek treatment and prevention for Alzheimer's disease.

The Texas Alzheimer's Research Consortium

The Health Science Center is one of four research partners in the Texas Alzheimer's Research Consortium (TARC), first established by the Texas Council on Alzheimer's Disease and Related Disorders in 1999.

TARC is working to recruit by August 2009 500 Alzheimer's patients and 300 healthy volunteers (control subjects) to research, isolate and identify

- genetic factors associated with early age of onset among Alzheimer's patients and
- biological markers for inflammation, cardiovascular disease, risk factors for heart disease, and diabetes that influence the development and progression of Alzheimer's.

TARC has developed a large shared standardized database to achieve these goals so data on all research subjects can be seen at each of the TARC sites.

Donald W. Reynolds Foundation Awards Grant

The Health Science Center is the recipient of a Donald W. Reynolds Foundation grant to develop comprehensive geriatric medical training. The Texas College of Osteopathic Medicine will develop a program focused heavily on establishing a geriatrics faculty development program for rural osteopathic faculty and developing geriatrics continuing medical education programs for practicing physicians.

The Donald W. Reynolds Foundation's Aging and Quality of Life program was conceived in response to a growing consensus that physicians lack adequate training to meet the increasing needs of the frail elderly patient. Such patients typically suffer from multiple, interactive physical and psychosocial conditions -- both acute and chronic -- that compromise their capacity to function in the daily life and lessen their independence.

The Donald W. Reynolds Foundation's goal is to improve the quality of health care for elderly people across America by preparing physicians to address their special needs.

For more information about the UNT Health Science Center's work in aging and Alzheimer's disease, contact the media office at 817-735-2446.

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University of North Texas Health Science Center

The University of North Texas Health Science Center comprises the Texas College of Osteopathic Medicine, the Graduate School of Biomedical Sciences, the School of Public Health, and the School of Health Professions. Key research areas include aging and Alzheimer's disease, cancer and physical medicine. This year, the Texas College of Osteopathic Medicine was named a top 50 medical school in primary care by *U.S. News & World Report* for the seventh consecutive year. "Fort Worth's medical school and more" contributes \$500 million to the Tarrant County and Texas economies annually. For more information, go to <http://www.hsc.unt.edu/>