

News

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****UT Southwestern receives \$5 million to establish
a center for Alzheimer's disease research

DALLAS -- A \$5-million grant from the National Institute on Aging will establish a national Alzheimer's Disease Research Center (ADRC) at The University of Texas Southwestern Medical Center at Dallas.

The grant will fund a major research effort to explore the underlying genetics and biology of memory loss, dementia and aging. The UT Southwestern ADRC will be the only Alzheimer's center in the Southwestern United States sponsored by the NIA, a branch of the National Institutes of Health.

"In addition to genetic research, clinical researchers will be looking for new ways to influence the patient's ability to function," says Dr. Roger N. Rosenberg, professor and chairman of neurology and director of the ADRC. Deputy director is Dr. Perrie Adams, UT Southwestern associate dean for research.

Alzheimer's, which claims more than 120,000 American lives annually, is the nation's most common irreversible dementing illness. At this time no drug therapy has proved effective against it; the cause remains unknown; and diagnosis is not definitive until an autopsy is performed.

"Continued laboratory advances are needed to move us closer to an improved diagnosis, medical intervention and an eventual cure," Rosenberg says.

The research grant will support five projects already under way, two pilot projects and five core areas. More studies are planned for the future, according to Adams. An interdisciplinary team of researchers will pool their talents and focus on the nature of Alzheimer's from many vantage points.

Current projects include:

--A study of memory loss in Alzheimer's disease, which correlates with the loss of the brain substance acetylcholine. One study aims at altering the activity of the enzyme that produces acetylcholine so that, in the future, the memory loss associated with Alzheimer's may be alleviated. The principal investigator is Dr. Louis Hersch, professor and chairman of the Graduate Studies Committee in Biochemistry.

--A study of the molecular biology of development and aging by Dr. Marcelle Morrison, associate professor of neurology and biochemistry. Her studies are aimed at gaining a better understanding of the genetic and environmental influences involved in aging in the nervous system.

--An in-depth examination of certain sites in the brain that are the targets of cell loss in Alzheimer's disease. Dr. Dwight German, associate professor of psychiatry and physiology, directs this research.

--A study of heat shock genes' structure and expression. Their products may be important in the response of nerve cells to stress and neurotoxic damage. Dr. Joachim Raese, assistant professor of psychiatry and neurology, will lead the study.

--A search for the gene that causes the changes known as "plaques and tangles," which are characteristic of Alzheimer's. Dr. Dennis Sparkman, instructor of pathology and neurology, will work with Dr. Charles White, assistant professor of pathology, on this research.

Pilot projects include:

--Analysis of the neurochemistry of Alzheimer's, looking at neurotransmitters found in cerebrospinal fluid as a way to diagnose Alzheimer's. The investigator will be Dr. Ron Tintner, assistant professor of neurology.

(More)

--Working with area nursing homes to develop ways of influencing the patient's ability to function, while creating various intervention strategies. Research will be directed by Dr. Paul Chafetz, assistant professor of gerontology and geriatric services.

The center's Clinical Core will admit patients with dementia and personality changes for evaluation, treatment and follow-up care. This comprehensive Alzheimer's diagnostic and treatment unit will serve as a regional referral center for the Southwest.

Patients who have not been diagnosed by a physician can be evaluated to rule out the presence of any disease that may simulate Alzheimer's, such as stroke, brain tumor, multiple sclerosis and certain metabolic diseases.

Within the Clinical Core, specialists in neurology, neuroradiology, psychiatry, psychology and gerontology will collaborate in the evaluation and treatment process. They will determine the severity and stage of a patient's disease and chart a course of treatment. The researchers hope to establish methods of detecting early signs of decline so that, in the future, therapeutic intervention can take place at an early stage of the disease. When drug treatment offers potential benefit, physicians may advise participation in investigational drug protocols conducted at the Alzheimer's center.

Co-directors of the Clinical Core are Dr. Myron Weiner, professor and vice chairman of psychiatry; Dr. Ron Tintner; and Dr. Jim Hom, assistant professor of psychology and neurology. Dr. Frederick Bonte, professor of radiology and director of the Nuclear Medicine Center, and Dr. Rosenberg will be active in the Clinical Core.

The Neuropathology Core will participate in a national network of brain banks. Tissue will be collected from Alzheimer's patients on autopsy to confirm the diagnosis, and data will be correlated with clinical and radiological research findings. Dr. Charles White and Dr. Marie-Christine de Lacoste, assistant professor of cell biology, will head this core.

The Educational Core will provide services to area physicians and patients' families, offering them up-to-date information on new developments in Alzheimer's research. This will be accomplished through a newsletter, videotaped information exchange and national teleconferences for physicians. Staff members will work through the local chapter of the Alzheimer's Disease Association to provide support group information to families, including how to care for their loved ones at home. Two faculty members from gerontology and geriatric services will direct the Educational Core efforts: Dr. Helen West, acting program chairman, and Dr. Paul Chafetz.

Statistical Core members will compile and store information gathered by the researchers. In addition, advice on the design of experiments and methods of data analysis will be provided. This core will be organized by Dr. Adams and Dr. Joan Reisch, associate professor in Academic Computing Services.

The Administrative Core, responsible for the business management of the ADRC, will work closely with each of the other cores and research projects through an internal advisory group. It also will coordinate meetings of an external advisory group, consisting of five members from other ADRCs around the country, who will form a peer review committee to evaluate the center's progress and to review proposed new projects.

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Note: The University of Texas Southwestern Medical Center at Dallas comprises Southwestern Medical School, Southwestern Graduate School of Biomedical Sciences and Southwestern Allied Health Sciences School.