

Alzheimer's

D I S E A S E C E N T E R N E W S

A SOURCE OF GREAT KNOWLEDGE

Dallas man says Alzheimer's Disease Center helped prepare couple for new normal

By Jeff Carlton



Photo: David Gresham

Jim and Lonna Atkins are active participants in several studies at the Alzheimer's Disease Center.

Eight of Lonna Atkins' 11 siblings developed Alzheimer's disease, so the Dallas wife and mother always figured that one day she'd be next.

"She was prepared to have Alzheimer's disease," said Jim Atkins, her husband of 52 years and now her primary caregiver. "She thought she would have it. Seven older sisters had it.

"But when the day came," he said, "I was devastated."

Mr. and Mrs. Atkins, both 72, were high school sweethearts. They met at Richardson (Texas) High School when he was 16 and she was 15. They married three years later, had two children and eventually two grandchildren.

Mr. Atkins' career in international business took his family away from

Dallas for nearly 25 years. They lived in Belgium and Hong Kong, and they traveled to more than 20 countries across four continents. Together the couple enjoyed music, art, nature, church activities, and socializing with family and friends.

But Dallas was home, and when the family finally returned, Mrs. Atkins took an active role in caring for her siblings, many of whom were still in the area and developing signs of dementia and Alzheimer's disease. One of her sisters sought out care at the Alzheimer's Disease Center at UT Southwestern, which is how the Atkinses learned of the Medical Center's clinical services and research projects.

"When we came back, Lonna got involved in taking her sister to

the doctor and making sure she was eating," Mr. Atkins said. "Then there was another sister, and then there was another one, and then there was her."

The signs initially weren't obvious to Mr. Atkins. But Mrs. Atkins, so attuned to the symptoms of Alzheimer's disease because of how it ravaged her family, realized that her memory wasn't what it used to be. In 2004, she sought out testing at the Alzheimer's Disease Center, and the results confirmed her suspicions. They've both since been active participants in several studies, and Mrs. Atkins remains under the care of Dr. Mary Quiceno, Assistant Professor of Neurology and Neurotherapeutics and leader of the Center's education core.

The disease progressed slowly, so the Atkinses used the time to prepare themselves by accessing the support groups and training classes made available through the Center and the Alzheimer's Association. Together, they learned memory tips and looked out for the signs indicating that Mrs. Atkins should give up driving. They followed the best nutritional

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SEEING AMYLOID IN THE LIVING BRAIN

Dr. Devous' Alzheimer's lecture to address imaging advances and research focus

By Jeff Carlton

Until recently, clinical trials testing the benefits of clearing out a protein that accumulates in the brains of patients with Alzheimer's disease shared similar outcomes: failure.

The trials were successful in reducing or eliminating this protein – beta amyloid – from the brain, but not in reducing the symptoms of dementia associated with Alzheimer's.

"If we are right that a buildup of amyloid causes Alzheimer's disease, then why were all these trials failing?" said Dr. Michael Devous, Professor of Radiology at UT Southwestern Medical Center and the featured speaker at the Spring Public Forum, presented by the Friends of the Alzheimer's Disease Center. "Because by the time people qualified for treatment, by the time they already had the clinical diagnosis of Alzheimer's disease, it was too late. The damage had been done."

That insight, combined with imaging advances that allow experts to measure levels of amyloid in the brain, have changed how researchers conduct clinical trials for Alzheimer's disease. The research focus has shifted – from

testing on those who already suffer from dementia, now recognized as a late stage of the disease, to participants who have detectable amyloid but no apparent symptoms of Alzheimer's.

Dr. Devous, who directs neuroimaging at the Alzheimer's Disease Center, will explore these changes and the reasons behind them on April 10 at the Spring Public Forum. His lecture is titled "Seeing Amyloid in the Living Brain – How This Impacts New Alzheimer's Disease Treatment Trials."

Since the presence of amyloid in the brain can precede any symptoms of Alzheimer's disease or dementia by as many as 15 years, researchers hope that early intervention can halt or slow its buildup.

"It's a huge change in the design of treatment trials," Dr. Devous said. "Most studies are now looking at people with mild cognitive impairment (MCI), which is a pre-dementia state, or even healthy older people who don't yet have trouble, but are positive for amyloid."

One of the biggest advances came a year ago, when the Food

and Drug Administration approved the first amyloid imaging agent, called Amyvid, for use in positron emission tomography (PET) scans. Amyvid is a radiopharmaceutical that binds to amyloid plaque and "lights up" on a PET scan, allowing radiologists to identify the presence of the harmful protein. It's being used both clinically and in research projects.

Spring Public Forum

7 p.m. • April 10
6000 Harry Hines Blvd.

RSVP • Call the Office of Development at **214-648-2344** to confirm your attendance

Dr. Devous, along with Dr. Denise C. Park, Co-Director of the Center for Vital Longevity at UT Dallas, has used Amyvid in studies of more than 300 trial participants. Their collaboration has made the two institutions national leaders in the study of memory disorders in the aging brain using the imaging agent.

Dr. Devous also works with Dr. Rong Zhang, Associate Professor of Internal Medicine and Neurology and Neurotherapeutics, to see if exercise will reduce amyloid in the brains of MCI patients. In addition, he is investigating with Dr. Joshua Gatson, Assistant Professor of Surgery, to see if amyloid buildup is behind some of the cognitive changes in patients with traumatic brain injury.

"What this is allowing us to do is identify at-risk subjects before they show any symptoms," Dr. Devous said of his work in amyloid imaging. "This can mean a great deal to patients. We're very hopeful that this approach will be successful."

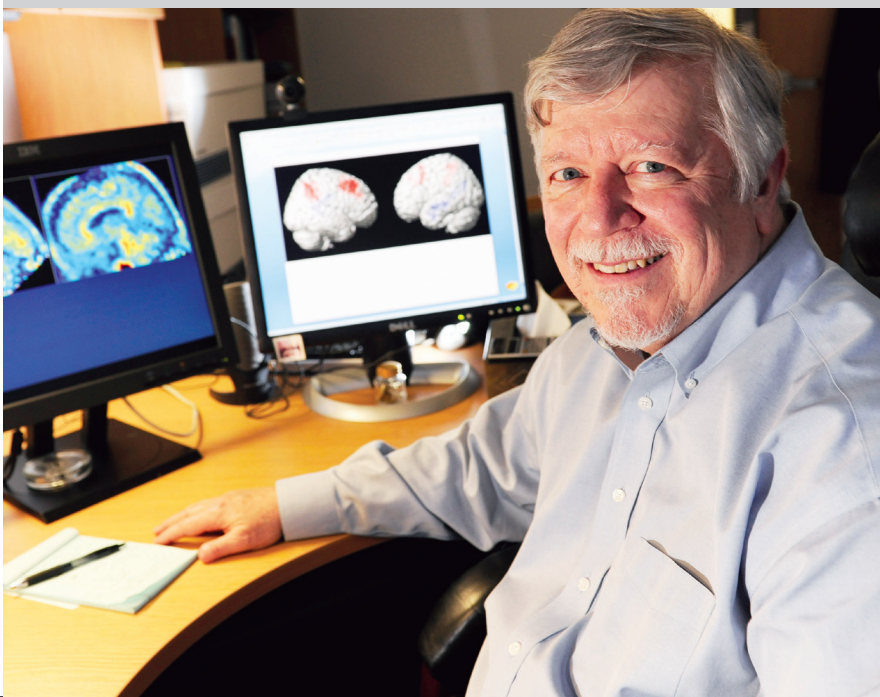


Photo: David Gresham

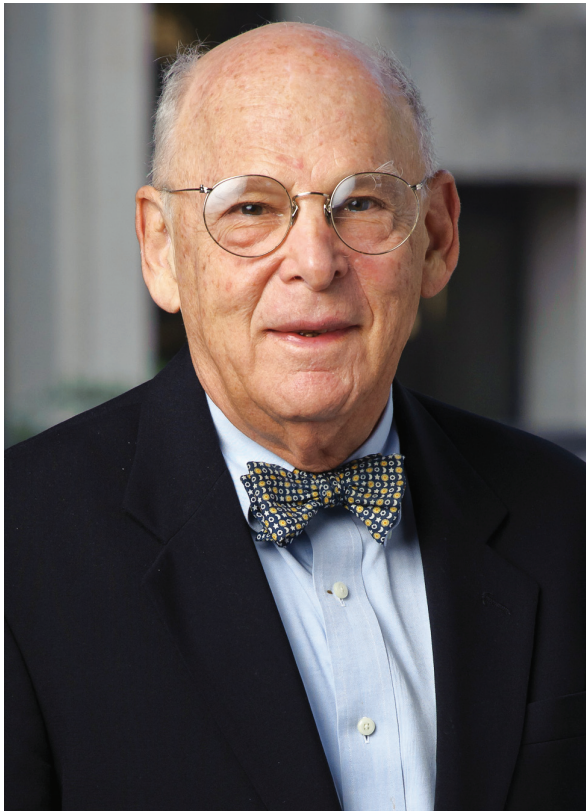


Photo: Brian Coats

In these partisan times, I like to tell people that Alzheimer's is an equal opportunity disease. It affects both liberals and conservatives, Democrats and Republicans. In truth, there's hardly a family in this country that hasn't been touched by the disease.

That's why it is both heartening and entirely appropriate that Alzheimer's disease and other neurodegenerative disorders are having their overdue moment in the national spotlight. The National Alzheimer's Project Act passed unanimously through Congress two years ago, and the president's recent State of the Union address included a call to maintain funding levels for Alzheimer's research.

This sort of attention is critical for the families of the more than 5 million Americans now estimated to have Alzheimer's, a number that's expected to increase by 50 percent in the next 20 years.

Those startling figures are always in the back of our minds, and why we're especially grateful for the consistent and generous support from

the Friends of the Alzheimer's Disease Center. All of the group's contributions, now totaling more than \$1 million since 1996, go directly to supporting Alzheimer's research at UT Southwestern Medical Center. This year, the Friends group is supporting three \$65,000 grants available for junior researchers interested in investigating questions related to Alzheimer's and other neurodegenerative diseases.

In years past, the Friends have supported the work of Dr. Todd Eagar, Assistant Professor of Pathology and Immunology, who is studying the mechanisms of an experimental DNA vaccine against beta-amyloid. The Friends also helped fund the research of Dr. Janine Prange-Kiel, Assistant Professor of Cell Biology, who is examining the expression of the enzyme aromatase in the hippocampus, a region of the brain critical to memory and learning. And last year, the Friends awarded \$65,000 to Dr. Chantelle Sephton, Instructor of Neuroscience, who investigates how the protein FUS regulates inflammation and is involved in neurodegeneration.

This seed money is critical to the success of the Alzheimer's Disease Center, and the investment made by the Friends in our research and expertise has been enriched exponentially through additional grants from the federal government, the Alzheimer's Association, and other generous supporters.

In this issue of the Alzheimer's Disease Center newsletter, we're highlighting other important work that the Friends have helped make pos-

sible. That includes an early February symposium examining the role of the vascular system in cognitive diseases and a profile of a remarkable married couple who have been helped significantly on their Alzheimer's journey by the resources they found at the Center.

We also say goodbye to a pivotal figure in the history of the Alzheimer's Disease Center. Dr. Myron Weiner, who is retiring after 50 years at UT Southwestern, has been the Center's leading clinician, masterful in his evaluation and care of patients, and a valuable counselor and mentor.

I invite all readers of this newsletter and all Friends of the Center to join us in April at our Spring Public Forum. The featured speaker is UT Southwestern's own Dr. Michael Devous, Professor of Radiology, who will talk about how advances in brain imaging have changed Alzheimer's disease clinical trials.

We remain ever hopeful that these trials and our research will move us closer to improving diagnosis and care-giving techniques, medical intervention, and other treatments. The work of the Friends of the Alzheimer's Disease Center supports that mission. ❄

Dr. Rosenberg holds the Abe (Brunky), Morris and William Zale Distinguished Chair in Neurology.

Dr. Weiner holds the Dorothy L. and John P. Harbin Chair in Alzheimer's Disease Research and the Aradine S. Ard Chair in Brain Science.

'BUILDING BRIDGES'

Alzheimer's symposium addresses untapped interest in brain research

By Jeff Carlton

The sign-in list for the Alzheimer's Disease Center's second annual symposium told Dr. Roger Rosenberg everything he wanted to know about UT Southwestern Medical Center's burgeoning interest in researching and treating cognitive diseases.

"The list included a great many young researchers, assistant professors, postdocs, and grad students," said Dr. Rosenberg, the Center's Director and a Professor of Neurology and Neurotherapeutics and Physiology. "There is a real untapped interest on this campus to do research into neurodegenerative diseases."

they increase your susceptibility to Alzheimer's disease," said Dr. Mary Quiceno, Assistant Professor of Neurology and Neurotherapeutics. "This year's symposium represented one of our primary interests in neurodegenerative disease research."

Dr. Quiceno opened the program with a reminder to junior faculty that the Friends of the Alzheimer's Disease Center this year offered three \$65,000 grants for promising research into Alzheimer's and dementia, with the Center itself offering two additional pilot grants each worth \$30,000. The Friends

and related dementias.

In addition, the symposium's lineup included UT Southwestern faculty and researchers from the University of Pittsburgh, Cornell University, UT Dallas, Texas Tech University, University of North Texas Health Science Center, UCLA, and UC Davis.

Dr. Michael Devous, Professor of Radiology, and Dr. Kyle Womack, Assistant Professor of Neurology and Neurotherapeutics and Psychiatry, chaired the morning and afternoon sessions, respectively.

Other symposium organizers included Dr. Munro Cullum, Professor of Psychiatry and Neurology and Neurotherapeutics; Barb Davis, Clinical Research Manager; Dr. Quiceno; Dr. Rosenberg; Dr. Myron Weiner, Clinical Professor of Psychiatry and Neurology and Neurotherapeutics; and Dr. Charles White, Professor of Pathology.

"We're hoping this annual symposium continues to generate collaborative projects and research ideas in the future," Dr. Rosenberg said. "We want to build bridges with colleagues on campus and at other institutions and encourage them to tap the resources of the Alzheimer's Disease Center."

Dr. Cullum holds the Pam Blumenthal Distinguished Professorship in Clinical Psychology.

Dr. Rosenberg holds the Abe (Brunky), Morris and William Zale Distinguished Chair in Neurology.

Dr. Weiner holds the Dorothy L. and John P. Harbin Chair in Alzheimer's Disease Research and the Aradine S. Ard Chair in Brain Science.

Dr. White holds the Nancy R. McCune Distinguished Chair in Alzheimer's Disease Research.



Photo: David Gresham

Dr. George Perry (left) discusses neurodegenerative research with Alzheimer's Disease Center Director Dr. Roger Rosenberg.

More than 160 people attended the daylong symposium, which this year focused on the role of the vascular system in the causation and development of Alzheimer's disease and other neurodegenerative disorders. The topic hits close to home, as it is one of the major themes of the grant from the National Institute on Aging that underwrites some of the Center's research.

"One of our focuses is on the investigation of vascular inflammatory risk factors and markers, and how

were established in 1996 to provide financial support for Alzheimer's research at UT Southwestern. Since then, the group has raised more than \$1 million for grants.

Dr. George Perry, Dean of the College of Sciences and Professor of Biology at UT San Antonio, delivered the keynote address, titled "Is Alzheimer's Disease a Metabolic Disorder?" His talk focused on the role of oxidative stress and mitochondrial abnormalities in the development of Alzheimer's disease

SEEING HOPE

Dr. Weiner found inspiration from families he met at Alzheimer's Disease Center

By Jeff Carlton



Photo: David Gresham

Although he acknowledges that Alzheimer's disease robs its victims of minds and memories, Dr. Myron Weiner long has seen hope where others see hopelessness.

Through interaction with the hundreds of patients he has followed in a 25-year association with the Alzheimer's Disease Center, Dr. Weiner said he has learned how the bonds of families can strengthen when met with the limits of modern medicine.

"Working with our patients, for me, is a chance to be with good families. And the people we see have really good families," said Dr. Weiner, Clinical Professor of Psychiatry and Neurology and Neurotherapeutics, who is retiring this spring after a 50-year career at UT Southwestern Medical Center.

Dr. Weiner was integral to the founding of the university's Alzheimer's Disease Center, a research and treatment effort that has roots

in a mid-career geriatrics training program he undertook in the mid-1980s. Before that, Dr. Weiner spent two decades in psychiatry at UT Southwestern, wrote books on psychotherapy, and managed the psychiatric consultation service at Parkland Memorial Hospital.

Prior to the founding of the Center, UT Southwestern faculty physicians saw very few Alzheimer's patients and conducted little research into the disease. Sensing an opportunity to better serve patients in North Texas and surrounding areas, Dr. Weiner's department chairman suggested in 1983 that Dr. Weiner

attend a one-year fellowship in geriatrics and adult medicine at Mount Sinai Medical Center in New York City.

"There I was at Mount Sinai Hospital, lined up with guys half my age and me saying, 'What am I doing here?'" said Dr. Weiner, who was then 50. "But it was a wonderful experience."

When he returned to UTSW, Dr. Weiner put his new training to use for North Texas patients. Working with three other faculty members, the group set up the Medical Center's first Alzheimer's disease clinic. By 1988, under the leadership of Dr. Roger Rosenberg, UT Southwestern had a federally funded center devoted to Alzheimer's disease.

Today, the Alzheimer's Disease Center is one of about 30 National Institute on Aging-funded centers devoted to helping

patients and conducting research into the disorder. The Center provides subjects for research and makes its banks of data, body fluids, and brain tissue available to researchers at UT Southwestern and elsewhere.

Dr. Weiner spent 15 years as the head of the Center's clinical core, an area now led by Dr. Munro Cullum, Professor of Psychiatry and Neurology and Neurotherapeutics. Dr. Weiner also led the Center's outreach efforts to the Choctaw Nation in Oklahoma, with a monthly telemedicine clinic that he helped start in 2005. Dr. Kyle Womack, Assistant Professor of Neurology and Neurotherapeutics and Psychiatry, will take over those responsibilities.

Dr. Weiner's own clinical research over the years focused on Alzheimer's disease in American Indians, depression and Alzheimer's disease, and dementia with Lewy bodies, which is a common type of progressive dementia. He was senior editor of the third edition of "The Dementias: Diagnosis, Treatment, and Research," and senior editor of the "Clinical Manual of Alzheimer's Disease and Other Dementias," and with UT Southwestern colleagues he helped develop QUALID, a clinical tool used worldwide for measuring quality of life of patients with late-stage dementia-related illness.

Dr. Rosenberg called his colleague "a master at evaluating and caring for patients."

"He has been a valued counselor and mentor to us all in implementing our clinical goals and coordinating our plans and efforts with laboratory investigators," Dr. Rosenberg said. "We hold Dr. Weiner in the highest of

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A SOURCE OF GREAT KNOWLEDGE

Continued from page 1

and medication advice available and networked with other patients and experts at the Center who are traveling a similar path.

Mr. Atkins said he believed the couple's involvement in the Center's research programs already has saved his wife's life. Through routine brain imaging that is part of the Center's ongoing studies, physicians discovered a tumor on Mrs. Atkins' brain. Subsequent surgery stopped the growth of the tumor, which doctors said would have been fatal.

"Alzheimer's is a horrible disease to have, but we have gotten

such great support and care from UT Southwestern," Mr. Atkins said. "I think if you are going to have it, this is a good place to have it. There are so many resources available. Going to the Alzheimer's Disease Center is like visiting with friends who know a tremendous amount about what you have to cope with."

Mrs. Atkins' disease continues to progress, and Mr. Atkins said he will soon move with her to an independent living facility that can provide additional assistance. In the meantime, the couple continues to enjoy drives to the Texas Hill Country, symphony

concerts, art museums, church, and activities with friends and family.

"And, of course, volunteering for UTSW research projects," Mr. Atkins said. "I feel like I am able to pick up the phone and talk to somebody at the Center and know they have a depth of experience and understanding, as well as sympathy, compassion, and support. I can't imagine having gone through this without these resources." *

SEEING HOPE

Continued from page 5

esteem and we are all grateful for his wisdom and dedication."

Dr. Weiner served as a captain in the U.S. Air Force prior to his residency in psychiatry at UT Southwestern. He has four children and seven grandchildren. Although he will retire from his clinical responsibilities, he said he hopes to continue working with doctoral students to help them develop their dissertations

and clinical research expertise. "I'm more interested now in asking questions than knowing answers," Dr. Weiner said. "When I was younger, I prided myself on knowing all the answers. I know better now." *

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Dr. Rosenberg holds the Abe (Brunky), Morris and William Zale Distinguished Chair in Neurology.

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EXERCISE AND BRAIN HEALTH

Is there really a connection?

By Barb Davis

We've known for years about the heart benefits of regular exercise. Now it appears that what's good for the heart is good for the brain. Numerous recent studies suggest that regular exercise can improve cognitive functioning and perhaps lower the risk of memory decline and Alzheimer's disease.

Moderate exercise – done four to six times a week and lasting between 30 minutes and an hour for each session – may help maintain reasoning and thinking skills for persons with no cognitive impairment. In addition, some studies have shown improved memory and cognitive function for those with mild cognitive impairment and a slower progression of memory loss for participants with early Alzheimer's disease.

In these studies, moderate exercise can include a brisk walk, swimming, aerobics, golfing, mowing the lawn, biking, and resistance or weight training.

Exercise appears to improve neuronal connections and blood vessel function, thereby improving overall brain health. In addition, brain imaging in exercise research participants has revealed larger volumes of gray matter in the brain compared with those who do not exercise, correlating to better brain functioning. The Alzheimer's Disease Center is enrolling subjects into an exercise study to investigate the effects of exercise on cognitive and cardiovascular health and changes in proteins known to either damage or protect the brain. See page 7 for more details.

Research Studies

CLINICAL TRIALS

To learn more about current studies or find out when new studies are added, visit www.utsouthwestern.edu/adc or call the UT Southwestern Memory Research Unit at **214-648-9376**.

IGIV (INTRAVENOUS IMMUNOGLOBULIN)

This 18-month study needs people with mild to moderate Alzheimer's disease between 55 and 89 years of age. The trial's researchers will investigate the effectiveness of IGIV infusions in possibly stopping or reversing Alzheimer's disease. Participants will undergo magnetic resonance imaging (MRI) and receive infusions by IV every two weeks for a total of 36 infusions, most of which will be done at home by a home health agency. Trial participation also requires that a study partner accompanies the subject for each visit. Call Kathy Koch at **214-648-9343** for information.

EXERCISE

People with mild cognitive impairment who do not currently adhere to a regular fitness program are needed for a one-year study that will compare individually tailored, supervised aerobic exercise training with flexibility and stretching training. The trial researchers will investigate the effects of exercise on cognitive and cardiovascular health, as well as changes in proteins known to damage and/or protect the brain. Call Kristin Martin-Cook, **214-648-9368** or Lauren Baikie, **214-345-4629**, for information.

COGNITIVE TRAINING FOR MILD MEMORY COMPLAINTS

People age 60 or older who are in overall good health but who are noticing more "senior moments" or have been diagnosed with mild cognitive impairment are needed for a study evaluating the effects of cognitive training on brain function. A brief cognitive screening will be given to determine eligibility for the study.

Those who qualify will receive eight cognitive training sessions, study-related assessments, an electroencephalogram to measure brain waves, and follow-up testing. For more information, call Kristin Martin-Cook, **214-648-9368**, or Audette Rackley, **214-905-3007**.

OBSERVATIONAL AND BIOMARKER DEVELOPMENT STUDIES

While these studies do not require or offer a new treatment, they are the foundation for future research and therapeutic trials.

ADNI 2 (ALZHEIMER'S DISEASE NEUROIMAGING INITIATIVE – PHASE 2)

This study builds on the first ADNI studies. At this point the study is enrolling people ages 55 to 90 who have memory complaints but are without impairment on cognitive testing. Participants will undergo magnetic resonance imaging (MRI), traditional glucose-based positron emission tomography (PET), new amyloid PET scanning to investigate the formation of beta-amyloid plaque formation, and standard neuropsychological and neurological exams. Participants will be compensated. Call Kristin Martin-Cook, **214-648-9368**, for information.

CORE AND TARCC RESEARCH STUDIES

People with mild cognitive impairment, early Alzheimer's disease, or frontotemporal dementia are needed for observational studies. The studies usually involve one visit a year for neuropsychological testing, neurological exams, brain imaging, and blood sampling. The data collected from these visits are used by many investigators studying the aging brain and disorders of cognitive function. These visits often involve financial compensation. Call Sarah Hoefs, **214-648-0563**, for information.

COMING SOON

LOAD (LATE-ONSET ALZHEIMER'S DISEASE GENETICS INITIATIVE)

The LOAD study began enrolling subjects in 2002, with more than 500 subjects enrolled through UT Southwestern. A new grant based on previous findings from that study is offering a phone follow-up contact for subjects from the first study as well as enrolling new subjects. The goal of this national study is to expand upon the scope of information/data gathered from subjects already enrolled in the first phase of LOAD as well as to enroll new large families (with three or more living siblings age 60 or older) diagnosed with Alzheimer's disease. The focus is to learn more about the genetic, environmental, and health risks that may contribute to the development of Alzheimer's. For all subjects previously enrolled in the LOAD study, the coordinator will call each person for phone follow-up only. New subjects from previously participating families who are now age 60 or older may also enroll in this study. Call Barb Davis, **214-648-9367**, for information. *

SUPPORT THE QUEST FOR PREVENTION, TREATMENT, AND A CURE



JOIN THE FRIENDS OF THE ALZHEIMER'S DISEASE CENTER

The Friends of the Alzheimer's Disease Center provides crucial support to UT Southwestern Medical Center's most promising and passionate researchers working to unlock the mysteries of Alzheimer's disease.

In addition to funding research through generous annual grants, the Friends sponsor a community-wide public forum every fall and spring, where the latest breakthroughs and best information on Alzheimer's disease are presented by leading experts from UT Southwestern and major medical centers nationwide.

Membership begins at \$500 per year, per individual or couple. Your donation is tax deductible and truly makes a difference in the fight against Alzheimer's disease.

To join the Friends of the Alzheimer's Disease Center, call 214-648-2344. Your support safeguards vital research into enhancing quality of life through early detection and improving the lives of patients and their families who live courageously each day with Alzheimer's disease.

The Alzheimer's Disease Center News is published by the University of Texas Southwestern Medical Center. We welcome your comments and suggestions at 214-648-3404 or jeffrey.carlton@utsouthwestern.edu

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