UT Southwestern Medical Center

Alzheiner's

One man's fight to educate the community in the wake of loss



Dr. David Ford

Life's adversities become a hardship and heartache for some, but Dr. David Ford turned those trying times into a chance to serve and teach his community about Alzheimer's disease.

Dr. Ford, a professor at the University of Texas at Dallas, went through the same pain as any devoted son would, as he watched his elderly mother develop Alzheimer's disease.

For years Mrs. Ford lived independently in her Irving home, but as she aged into her mid-70s, Dr. Ford noticed a gradual decline in her memory and cognitive ability.

"She started coming up with stories and imagining things," recalls Dr. Ford. "Imagining people had taken things from her. Finally she started wandering off, so we moved her to a senior assisted living facility in Oak Cliff."

The Fords sought the help of the Alzheimer's Disease Center at UT Southwestern Medical Center. Mrs. Ford was treated by Dr. Roger Rosenberg, Director of the Alzheimer's Disease Center, Professor of Neurology and Neurotherapeutics, and Physiology, and holder of the Abe (Brunky), Morris and William Zale Distinguished Chair in Neurology. Mrs. Ford was also treated by Dr. Kyle Womack, Assistant Professor of Neurology and Neurotherapeutics and Psychiatry.

"Until the last years, she remembered me, and I would take her for little outings away from the facility," Dr. Ford reminisces.

Sadly, after a decade of treatment, Mrs. Ford passed away in 2004 at the age of 84.

Until his mother was diagnosed

with Alzheimer's disease, Dr. Ford did not know that Alzheimer's disease is far more prevalent among African-Americans than any other race in the United States. According to a recent report published by the Alzheimer's Association, African-Americans are about twice as likely to have Alzheimer's disease when compared to Caucasians. Even more menacing, the report indicates that African-Americans are over three times more likely to suffer early onset Alzheimer's disease (before the age of 74).

Fall 2014

Since his mother's diagnosis, Dr. Ford has become somewhat of a crusader, on a campaign to both guard his own health and educate others about Alzheimer's disease. He serves on UT Southwestern's Alzheimer's Disease Center minority focus group, as well as the Center's public policy and planning committee to influence legislation on Alzheimer's disease. Dr. Ford has been a participant in two UT Southwestern Alzheimer's

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FALL FORUM: Leader in Alzheimer's genetics to speak



Dr. Randall J. Bateman

Cardiologists don't wait until their patients have heart attacks or strokes. They try to prevent them by controlling high blood pressure and cholesterol. So why wouldn't physicians treating brain disorders try to prevent Alzheimer's disease before it presents itself, wonders Dr. Randall J. Bateman, Professor of Neurology at Washington University School of Medicine in St. Louis.

Dr. Bateman will tackle this question when he presents his lecture, "The DIAN-TU Trial: An Opportunity to Prevent Dementia," at the Fall Public Forum on Oct. 16. The presentation begins at 7 p.m. in the Simmons/Hamon Biomedical Research Building, 6000 Harry Hines Blvd. Reservations are available by emailing *rsvp@utsouthwestern.edu* or by calling 214-648-2344.

The Dominantly Inherited Alzheimer Network (DIAN) is an international network of leading scientists and research centers investigating Alzheimer's disease that is caused by rare, dominantly inherited genetic mutations. Children of individuals who carry one of these genetic mutations have a 50 percent chance of inheriting the mutation and subsequently developing Alzheimer's disease. Carriers of this genetic mutation have a youngonset version of Alzheimer's disease, with symptoms beginning as early as their 30s.

The DIAN Trials Unit, of which Dr. Bateman is the director, is currently launching the first clinical trial in autosomal dominant Alzheimer's disease (ADAD) aimed at preventing the onset of memory impairment and dementia.

"The focus of this trial is to try to treat the disease at its earlier stages, sometimes even before symptoms start," said Dr. Bateman. "We hope to demonstrate that we are able to prevent Alzheimer's disease in the people who have the highest risk of the disease, which may pave the way for future prevention trials."

The Trials Unit received a grant of nearly \$4 million from the Alzheimer's Association to enable the program to move forward quickly with innovative drug and biomarker trials in people with genetically based, young-onset Alzheimer's disease.

Dr. Bateman and his colleagues are currently studying whether alterations in amyloid-beta clearance levels can be used to predict Alzheimer's disease years before symptoms become apparent. Their goal is to prevent damage and loss of brain cells by intervening early in the disease process.

Dr. Bateman's work with Alzheimer's disease has earned him a host of honors, including the Scientific American 50 Award, recognizing the top 50 scientific achievements of the year; the Alzheimer's Research Forum Community Award; the Beeson Award; the Alzheimer's Association Zenith Fellows Award; the Alzheimer's Research Forum Open Innovation Award; and the MetLife Promising Investigator Award, among others.

Dr. Bateman earned his Bachelor of Science degree in Biology and Electrical Engineering from Washington University, and his medical degree from Case Western Reserve University School of Medicine, with a special emphasis on the neurosciences. He completed his medical internship at Barnes-Jewish Hospital, followed by a Neurology residency at Washington University. Dr. Bateman treats patients with dementia at the Memory Diagnostic Center of Washington University.*

WHO: Dr. Randall J. Bateman, Professor of Neurology at Washington University School of Medicine in St. Louis
WHAT: 2014 Alzheimer's Fall Public Forum
WHEN: 7 p.m., Thursday, Oct.16
WHERE: Simmons/Hamon Biomedical Research Building, 6000 Harry Hines Blvd.
LECTURE: "The DIAN-TU Trial: An Opportunity to Prevent Dementia"
NOTEWORTHY: The forum is free to the public, and there is complimentary valet parking. Confirm your attendance by emailing *rsvp@utsouthwestern.edu* or by calling 214-648-2344.

FROM THE DIRECTOR | Roger N. Rosenberg, M.D.

I'm thrilled to introduce you to Dr. Trung Nguyen, Assistant Instructor of Neurology and Neurotherapeutics, and our newest fellow at the UT Southwestern Memory Clinic.

Dr. Nguyen will be providing in-depth clinical diagnoses, implementing treatment plans, and following patients closely. He also will assist in our recruitment of industry-supported clinical trials, and be available for teaching with community groups.

Dr. Nguyen is excited to join the group and looks forward to caring for our patients with memory and cognitive issues, while serving as both a clinician and researcher.

Dr. Nguyen's fellowship comes to us courtesy of a grant from Blondes vs. Brunettes (BvB) Dallas, which is a group of more than 200 young professionals who compete in a powder-puff football game to raise money and awareness for Alzheimer's disease research and treatment. Throughout the course of six years, the event has raised \$1.3 million, and this year we are pleased to be one the event's recipients.

BvB also is providing funding for a pilot study of 30 early-stage Alzheimer's patients who will go through a three-month aerobic exercise program. During the study we will be examining blood chemistry and quality of life of the patients.

The BvB Dallas chapter was founded by Erin Finegold in memory of her grandmother, who developed Alzheimer's disease, and also to honor her grandfather, her grandmother's steadfast caregiver.

On a more somber note, I was saddened to learn of the passing of Mr. Jack Harbin, a long-time benefactor of our efforts here at the UT Southwestern Alzheimer's Disease Center. Mr. and Mrs. Harbin funded the Dorothy L. and John P. Harbin Chair for Alzheimer's Disease Research, among many other charitable endeavors, in the community. He will be greatly missed.

Finally, I'd like to personally thank Charron Denker, who chairs our Friends of the Alzheimer's Disease Center group, for her dedication and support. Due to her work and the efforts of our Friends, three UT Southwestern researchers received grants this year. Throughout this newsletter, you can learn more about the important work these grants are funding.



My congratulations on receiving these grants to Dr. Ryan Hibbs, Assistant Professor of Neuroscience and Biophysics; Dr. Ryan Huebinger, Instructor in the Department of Surgery; and Dr. Florian Plattner, Instructor in the Department of Psychiatry. We look forward to great things stemming from your work.

Thank you for your continual support of the scientific research and therapeutic interventions that take place through the Alzheimer's Disease Center – we look forward to seeing you soon.*

FORD

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Disease Center studies (ADNI Phase 2 and TARCC), even though he shows no signs or symptoms of Alzheimer's disease.

"Participation in these studies is critical to our understanding of Alzheimer's disease," said Dr. Munro Cullum, Chief of the Division of Psychology, Professor of Psychiatry, and Neurology and Neurotherapeutics, and holder of the Pam Blumenthal Distinguished Professorship in Clinical Psychology. "But as a leader in the African-American community, Dr. Ford has a 'multiplier effect' in spreading the news of the prevalence of Alzheimer's disease in the community."

For his latest educational effort, Dr. Ford organized a September Alzheimer's awareness family event at his church, Hamilton Park United Methodist Church, in Dallas. The event was co-sponsored by the UT Southwestern Alzheimer's Disease Center. "The goal is to recruit participants for studies, and provide early screening and information," said Dr. Ford. "I think there is a stigma in our community, a lack of understanding about Alzheimer's disease. If we present the data, people will get it, and get help if they need it."

The fair featured panel discussions, including Dr. Mary Quiceno, Assistant Professor of Neurology and Neurotherapeutics, a discussion for caregivers, vendor displays, and a simulation of dementia.*

FUNDING THE FIGHT

Friends group awards \$195,000 to three UTSW researchers

Since its inception in 1996, the Friends of the Alzheimer's Disease Center has donated more than \$1 million toward UT Southwestern Medical Center-led investigations into Alzheimer's and other neurodegenerative diseases. These critical gifts help early-career researchers get started on important projects and attract additional funding from other governmental groups and supporters. Earlier this year, the Friends awarded three \$65,000 grants to UT Southwestern researchers.



2014 Grant Recipient **RYAN HUEBINGER, Ph.D.**

Dr. Ryan Huebinger, Instructor in the Department of Surgery, was awarded a grant for his project "Lymphocyte Dynamics in Alzheimer's Disease." In 2008, Dr. Huebinger came to UT Southwestern as a fellow and joined the faculty of the Burn, Trauma, and Critical Care Division of the Department of Surgery. Dr. Huebinger's research focuses on resolving biomarkers and genetic variants in patients' responses to traumatic brain injury and Alzheimer's disease.

Dr. Huebinger will examine the levels of lymphocytes and certain proteins in the cerebrospinal fluid and peripheral blood system of patients with Mild Cognitive Impairment (MCI) and Alzheimer's disease. The study aims to provide data focused on understanding the dynamics of the immune system in patients with MCI and Alzheimer's disease.

"Dr. Huebinger is an impressive young investigator who has a promising future in Alzheimer's disease research," said Dr. Munro Cullum, Chief of the Division of Psychology, Professor of Psychiatry and Neurology and Neurotherapeutics, and holder of the Pam Blumenthal Distinguished Professorship in Clinical Psychology. "This cutting-edge research is exactly the type of work we need to be doing to expand our understanding of the underpinnings of MCI and Alzheimer's disease," Dr. Cullum said.

2014 Grant Recipient **RYAN HIBBS, Ph.D.**

Dr. Ryan Hibbs, Assistant Professor of Neuroscience and Biophysics, was awarded a grant for his project "Structural biology of the α 7 nicotinic acetylcholine receptor as a platform for rational therapeutic design for Alzheimer's disease." He joined the UT Southwestern faculty in September 2012.

Dr. Hibbs' project aims to determine the atomic structure of a cell surface receptor that is a therapeutic target in Alzheimer's disease. Achieving this goal would provide the first robust architectural blueprint for design of drugs targeting this receptor.

"Nicotinic acetylcholine receptors are important therapeutic targets in Alzheimer's disease," Dr. Hibbs said. "They have a long history of study and have been critical in the development of the fields of neuroscience and pharmacology. However, determination of their atomic structures has proven elusive. This line of study will provide the first atomic-resolution, 3-D structure of a nicotinic acetylcholine receptor," he said.

"Dr. Hibbs is highly accomplished, both as a student and postdoctoral fellow, and already has exciting data on the α 7 nicotinic acetylcholine receptor, a highly important but difficult problem in the structural biology of the nervous system," said Dr. Joseph Takahashi, Chairman of Neuroscience, and holder of the Loyd B. Sands Distinguished Chair in Neuroscience.





2014 Grant Recipient FLORIAN PLATTNER, Ph.D.

Dr. Florian Plattner, Instructor in the Department of Psychiatry, was awarded a grant to investigate "The role of NR2B-mediated processes in Alzheimer's disease and cognitive enhancement." He joined the UT Southwestern faculty in 2010.

The NMDA receptor, and in particular its subunit, NR2B, are crucial for memory formation. Dysfunction of this receptor has been associated with Alzheimer's disease. In this study, Dr. Plattner aims to unravel the molecular mechanisms by which NR2B governs synaptic transmission and memory formation, and how dysfunction of such mechanisms may contribute to Alzheimer's disease.

Additionally, this study may advance the development of a small, drug-like molecule that can improve neurotransmission and enhance memory, and further evaluate its potential application in patients with Alzheimer's disease. This molecule was developed in the laboratory of Dr. James Bibb, Professor of Psychiatry and Neurology and Neurotherapeutics.

"Dr. Plattner has been an exceptional leader in advancing our understanding of synaptic remodeling mechanisms and how they may be targeted to overcome loss of memory and cognitive function," Dr. Bibb said. "This grant will allow us to make a major advancement toward better treatments for cognitive impairment in Alzheimer's disease and will make a critical contribution to the start of Dr. Plattner's career as an independent investigator."*

Research Studies



OBSERVATIONAL AND BIOMARKER DEVELOPMENT

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

CORE AND TARCC RESEARCH STUDIES

People with no memory complaints, mild cognitive impairment, or early Alzheimer's disease 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 may involve financial compensation. For more information, call Sarah Brisebois, 214-648-0563.

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

The LOAD study began enrolling subjects in 2002. A new grant, based on previous findings from that study, is facilitating a phone follow-up 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 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 of the study is to learn more about the genetic, environmental, and health risks that may contribute to the development of Alzheimer's. For more information, call Barb Davis, 214-648-9367.*****

CLINICAL TRIALS

EFFECT OF PASSIVE IMMUNI-ZATION ON THE PROGRES-SION OF MILD ALZHEIMER'S DISEASE – SOLANEZUMAB VERSUS PLACEBO

This 18-month clinical trial is for individuals ages 55-90 with mild Alzheimer's disease. The trial will examine the investigational drug Solanezumab. Solanezumab is being studied as a neuroprotective agent for persons with Alzheimer's disease, and UT Southwestern researchers are seeking to determine whether or not it will slow the cognitive and functional decline of Alzheimer's disease as compared with a placebo. Participants will be assigned at random to receive the investigational drug or a placebo and will be monitored over the period of the trial. This trial is sponsored by Eli Lilly. For more information, call Kathy Koch, 214-648-9343.

ARICEPT STUDY

Individuals between 50-90 years of age with a diagnosis of mild cognitive impairment or Alzheimer's disease who have received a new prescription for Aricept/Donepezil are needed for an imaging study. This study will measure magnetic resonance imaging changes in patients before and after a two-month treatment of the acetylcholinesterase inhibitor Aricept. For more information, call Zohre German, 214-648-2952.

A4 – ANTI-AMYLOID TREAT-Ment in Asymptomatic ad

The A4 study is looking for individuals ages 65-85 who have normal thinking and memory function, but who have evidence of amyloid plaque build-up in their brains. A4 is a groundbreaking trial that will test an anti-amyloid investigational drug in older individuals who do not yet show symptoms of Alzheimer's disease, cognitive impairment, or dementia with the aim of delaying or preventing memory and cognitive decline. For more information, please call Kathy Koch, 214-648-9343.

COGNITIVE TRAINING FOR MILD MEMORY COMPLAINTS

This study is looking for people 60 years of age or older who are in overall good health but who are noticing more "senior moments" or have been diagnosed with mild cognitive impairment. The study will evaluate the effects of cognitive training on brain function, and 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, please call Audette Rackley, 214-905-3007.

EXERCISE REDUCES BRAIN IN-FLAMMATION AND IMPROVES QUALITY OF LIFE

This study will enroll subjects between the ages 55-79 with early stage Alzheimer's disease and a sedentary lifestyle. Participants will be randomized into a three-month aerobic exercise training or stretching regimen, with brain inflammation quantified before and after intervention. This study will help investigators understand the anti-inflammatory effects of exercise on the progression of Alzheimer's disease. For more information, call Jamaevra Jackson, 214-648-5437.

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MEET A FRIEND Rita Hortenstine

Q: Why did you join the Friends of the Alzheimer's Disease Center?

A: The Alzheimer's Disease Center (ADC) plays an important role in our state's collaborative research project, the Texas Alzheimer's Research and Care Consortium (TARCC). When I was first appointed to the Texas Council on Alzheimer's, it was the charming Dr. Roger N. Rosenberg who introduced me to his center, highlighting the fact that the ADC is one of only 30 such centers funded by the National Institutes of Health, and is the only one located in the south-central United States. Dallas is fortunate to have the ADC located at our doorstep. I knew I wanted to be a part of all that is happening here. Being a Friend of the ADC was the first step.

Q: What would you say to inspire others to join the Friends group?

A: Texas ranks third in the nation for people living with Alzheimer's disease and the impact of this disease cannot be ignored. Increasingly, if people have not been touched by this disease, it is their biggest fear. One can take comfort in knowing that the ADC is participating in collaborative efforts both at the state level through TARCC, and at the national level through the Alzheimer's Disease Genetic Initiative. TARCC actively recruits patients to participate in research efforts that, among other things, study distinctive biomarkers in blood that could determine factors that contribute to the risk of developing Alzheimer's disease.

The Darrell K Royal Research Fund for Alzheimer's Disease, of which I am an advisory member, was instrumental in directing a \$50,000 grant to Dr. Rosenberg's research on a vaccine to prevent Alzheimer's disease. UT Southwestern has many important researchers working tirelessly toward finding a cure or prevention.

I also have had the privilege, through TARCC, of being involved with the work of Dr. Perrie Adams, Dr. Munro Cullum, Dr. Joan Reisch, and Dr. Ryan Huebinger. I am in awe of their commitment to dealing with this treacherous disease. I feel confident the ADC will help move us closer to fighting the challenges of Alzheimer's.

Q: What has been your favorite activity or event as a Friend of the ADC?



Rita Hortenstine

A: That's easy. I love the symposium, where we bring in the latest research on the most novel approaches for detecting or preventing Alzheimer's disease, or finding a possible cure.

I also love being a part of the steering committee and selecting the research that we feel has the most promise. Ultimately, we try to fund them all. I am pleased that this year we funded three promising projects.

Q: Outside of finding a cure for Alzheimer's disease, what are your interests and passions?

A: Having access to knowledge about the latest Alzheimer's research and care information is extremely rewarding to me, but when we have time, my husband and I escape to Montecito, Calif., where the mountains meet the sea. While there, I love hiking, walking on the beach, reading, and going to plays.*

Dr. Adams is Associate Dean for Special Projects, and holds the Margaret D. Harris Professorship in Alzheimer's Research. Dr. Cullum is the Chief of the Division of Psychology, Professor of Psychiatry, and Neurology and Neurotherapeutics, and holds the Pam Blumenthal Distinguished Professorship in Clinical Psychology. Dr. Huebinger is an Instructor in the Department of Surgery. Dr. Reisch is a Professor of Clinical Science, and Family and Community Medicine.

Dr. Rosenberg is the Director of the Alzheimer's Disease Center, Professor of Neurology and Neurotherapeutics, and Physiology, and holds the Abe (Brunky), Morris and William Zale Distinguished Chair in Neurology.

CLINICAL TRIALS

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COMING SOON

SNIFF – STUDY OF NASAL INSULIN TO FIGHT FORGETFULNESS

The Study of Nasal Insulin to Fight Forgetfulness (SNIFF) will be a clinical study for participants aged 55-85 with amnestic mild cognitive impairment or mild Alzheimer's disease who do not take drugs for diabetes (type I or II). The purpose of the SNIFF study will be to find out whether a type of insulin, when administered as a nasal spray, improves memory in adults with a mild memory impairment or Alzheimer's disease. Although this study is not open to enrollment yet, please check our website for updates at *www.utsouthwestern.edu/adc*, as well as *www.clinicaltrials.gov* (search identifier NCT01767909). For more information, call Gloria Williams, 214-648-9331.*****

For more information about approved new studies, please visit www.utsouthwestern.edu/adc.

Join Us

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 sponsors 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.

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