Alice Warren: Helping researchers unravel the genetics of Alzheimer’s disease

Alice Warren knows the tragedy of Alzheimer’s disease all too well, with friends and family members experiencing its impact, but she considers it a call to action.

“I’m all about prevention,” said the 85-year-old mother and grandmother of three, who participates in two ongoing studies with UT Southwestern’s Alzheimer’s Disease Center. “I do it because of my family. I do it for my son and grandchildren.”

She leads a full and active life from her home in North Dallas, with regular dancing, exercise, yard work, tennis, socializing, and travel. But her dedication to helping find treatments for Alzheimer’s disease trumps these other interests. For the last 23 years she’s been coming to UT Southwestern for annual evaluations, and participates in two ongoing studies – the LOAD study, and core observational study.

The LOAD (Late-Onset Alzheimer’s Disease Genetics Initiative) study tracks families with three or more siblings aged 60 or older who have been diagnosed with Alzheimer’s disease. The core observational study tracks seniors who show no symptoms, such as Ms. Warren, along with people who have mild cognitive impairment or early Alzheimer’s disease.

“Our physician-scientists are looking for a specific type of genetic inheritance that might be tied to Alzheimer’s disease. The type of inheritance pattern is autosomal dominant (genetic) and results in one-half of the children on average of an affected parent of developing the disease,” said Dr. Roger Rosenberg, Professor of Neurology and Neurotherapeutics, and Physiology, and Director of the Alzheimer’s Disease Center.

“Determining the inheritance pattern in a family is important to provide the accurate ‘at-risk’ status for patients who have developed Alzheimer’s disease. We pursue obtaining a detailed family history with this objective in mind,” said Dr. Rosenberg, holder of The Abe (Brunky), Morris and William Zale Distinguished Chair in Neurology.

Ms. Warren grew up near Ada, Okla., and went on to a career as a fashion director for Bobbie Brooks and a buyer for Neiman Marcus before marrying her late husband of 35 years, Phil Warren. She served as Co-Chair of the Dallas Mental Health Association in the 1960s. Memories of relatives who have Alzheimer’s disease continue to inspire her to do her part.
The SNIFF Study (Study of Nasal Insulin to Fight Forgetfulness) will be a clinical study for participants age 55 to 85 with amnestic mild cognitive impairment (aMCI) or mild Alzheimer's disease who do not take drugs for diabetes (type I or II). The purpose of this study is to evaluate the efficacy of monthly doses of aducanumab in slowing cognitive and functional impairment as compared with placebo, for persons with mild cognitive impairment due to Alzheimer's disease and for persons with mild Alzheimer's disease. Each participant will need a study partner – someone who is close to them, such as a family member or close friend – to attend certain study visits and provide information to the study team. You may be able to take part in this study if you have a study partner, are 50 to 85 years of age and are experiencing symptoms that might be related to mild Alzheimer's disease, such as problems with memory or thinking clearly. Please call Zohre German at 214-648-2952 for more information about this study.
IN MEMORIAM: MARGOT WINSPEAR

Philanthropist Margot Winspear, who died Oct. 20, 2015, at age 83, had spent years battling Alzheimer’s disease, both personally after her diagnosis in 1994 and through her generous philanthropic efforts.

In 2002, Bill and Margot Winspear donated $2 million to UT Southwestern Medical Center, which established the Winspear Family Special Center for Research on the Neuropathology of Alzheimer’s Disease, led by Dr. Charles L. White, III, Professor of Pathology and Director of the Department’s Neuropathology Section and the Winspear Center. Through the years, the Center has helped fund numerous studies on the Neuropathology of Alzheimer’s disease.

MARGOT WINSPEAR

Margot Winspear, PhD, a long-time UT Southwestern employee who served as the University’s first executive assistant to the president, died on Oct. 20, 2015. She was 83.

She was born March 18, 1932, in Edmonton, Alberta, and attended University High School in Edmonton and the University of Alberta, where she met her husband. The Winspears were married May 30, 1955, in Edmonton, and eventually moved to Dallas in 1975. The couple were staunch supporters of Dallas’ fine arts community.

Mrs. Winspear served on numerous boards, including the Dallas Opera, Dallas Symphony, Dallas Ballet, and the Women’s Council for the Dallas Arboretum and Botanical Garden. The Winspears’ support for the opera culminated in the Margot and Bill Winspear Opera House in Dallas, part of the AT&T Performing Arts Center.

“Margot Winspear was a delightful woman whose grace and charm overshadowed the ambition and drive behind her selfless contributions to the worlds of art and science,” said Dr. White, who holds the Nancy R. McCune Distinguished Chair in Alzheimer’s Disease Research. “We will always be grateful for the impact that Margot, her equally charming and generous husband Bill, and their children have had on Alzheimer’s disease research at UT Southwestern.”

The effects of exercise and aggressively reducing cardiovascular risk as a way to ward off or forestall Alzheimer’s disease will be the subject of a major study by UT Southwestern’s Alzheimer’s Disease Center and the Institute for Exercise and Environmental Medicine at Texas Health Presbyterian Hospital Dallas, a partnership between UT Southwestern and Texas Health Resources that studies human physiology. The study is funded by an $11.7 million grant from the National Institutes of Health.

The five-year study will examine the brain function of 640 individuals between ages 65 and 79 who have at least one first-degree relative with Alzheimer’s disease. Study participants will begin moderate to vigorous exercise for 30 minutes, three times a week, and build up to about 200 minutes per week. The study will use anti-hypertensive drugs and atorvastatin to treat hypertension and hyperlipidemia following evidence-based national guidelines.

“A sedentary life is a ‘disease’ and the presence of hypertension and hyperlipidemia increase the risk of Alzheimer’s disease,” said Dr. Rong Zhang, Associate Professor of Internal Medicine, and Neurology and Neurotherapeutics at UT Southwestern, and Principal Investigator of the study. “Increase in physical activity and using clinically approved drugs to reduce cardiovascular risk factors might be the key to preventing or halting the progression of Alzheimer’s disease. We believe improving cardiovascular health plays a pivotal role in preventing cognitive decline, and this study will give us the chance to see just how important that is.”

Neuroimaging and blood bio-markers will be taken of study participants to help in the assessment of brain structure and function, and to understand their underlying mechanisms.

Investigators from Washington University in St. Louis, University of Kansas Medical Center, and the Pennington Biomedical Research Center at Baton Rouge, LA., will participate in data collection, and Michigan State University will coordinate magnetic resonance imaging.

Dr. C. Munro Cullum, Professor of Psychiatry, and Neurology and Neurotherapeutics, Chief of the Division of Psychology, Clinical Core Leader in the UT Southwestern Alzheimer’s Disease Center, who holds the Pam Blumenthal Distinguished Professorship in Clinical Psychology, will be a co-investigator.

“ne the benefits of exercise and reducing cardiovascular risks are many and well-known,” said Dr. Zhang, “and some participants get a free health club membership to boot.”

If you are interested in participating in the study or want to learn more, contact the study coordinator, Marcel Turner, at 214-345-4973 or MarcelTurner@texashealth.org.

EXERCISE: Continued from page 4

The Darrell K Royal Research Fund for Alzheimer’s Disease recently awarded $450,000 for work being done by UT Southwestern researchers.

The Darrell K Royal Research Fund was established to honor legendary former University of Texas football coach Darrell Royal, and fund research into the treatment and cure of Alzheimer’s disease and mild cognitive impairment (MCI).

Texas Wingo, Assistant Professor of Pathology, and Neurology and Neurotherapeutics, will study the role of a newly identified cell death effector in dementia.

“Neuron injury and neuronal cell death are key features of dementia that cause problems with memory, thinking, and behavior,” said Dr. Wingo. “In the proposed project, we will study the detailed molecular and cellular mechanisms of neuronal cell death in dementia, which may ultimately lead to an effective therapy.”

Dr. Kan Ding, Assistant Professor of Neurology and Neurotherapeutics, was awarded $150,000 over three years for a project titled, “Neurovascular Decoupling and Memory Impairment After Traumatic Brain Injury.”

Dr. Ding’s group will study cerebral blood supply in TBI patients with forgetfulness, poor concentration, and slow thinking processes. Researchers hope the data obtained will reveal an important vascular mechanism, provide a better understanding of the pathophysiology of TBI-related dementia, and identify early biomarkers for developing effective therapies to improve brain health and prevent post-traumatic dementia in TBI survivors.

This marks the second consecutive year UT Southwestern researchers received DKR Fund awards. Last year, Dr. Steven Patrie, Assistant Professor of Pathology and John L. Roach Scholar in Biomedical Research, Dr. Mazur Durakoluglu, Assistant Professor of Molecular Genetics, and Dr. Florian Platter, Instructor of Psychiatry, received grants.

“We developed small drug-like interfering peptides that facilitate neurotransmission and enhance memory in rodents,” wrote Drs. Platter and Durakoluglu in a recent update report to the fund. Their work will continue to assess if these peptides can rescue or minimize the memory impairment in AD mice.

Drs. Patrie and Platter have both been recipients of ADC Friends grants, Dr. Patrie in 2013, and Dr. Platter in 2014.

“The sad fact is that most everyone in our state is touched by this disease and the Darrell Royal family is no exception,” said Edith Royal, his widow. “The DKR Research Fund represents a commitment to excellence in Alzheimer’s research and care for Texans, the nation, and the world. I am grateful for the opportunity to create this legacy for my husband, and for the incredible group of prominent Texans who want to join us in this endeavor.”

The Darrell K Royal Research Fund supports new UT Southwestern research in dementia, TBI

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Barb Davis, Manager of Clinical Research in Neurology and Neurotherapeutics, explains ongoing research underway in the Alzheimer’s Disease Center to participants of the Brain Smart University, held at Shiloh Road Baptist Church in Plano.

Dr. Mary Quiceno, Associate Professor of Neurology and Neurotherapeutics, and Pat Knowles, Clinical Research Coordinator, participate in Brain Smart University, an educational program that reaches out to the black community, a demographic group that is at an elevated risk for Alzheimer’s disease.

Advances in drug to treat Alzheimer’s disease

Three UT Southwestern faculty members reported promising results on a drug to potentially treat Alzheimer’s disease and other central nervous system diseases in a recent study appearing in Neurodegenerative Diseases.

The drug, ANAVEX 3-71, formerly AF710B, appeared to enhance neuroprotection and cognition in Alzheimer’s disease models, the researchers said.

Dr. Ilya Bezprozvanny, Professor of Physiology, Dr. Lili Wu, former senior research scientist, and Dr. Daniel Ryskamp, postdoctoral research fellow, authored the paper, “AF710B, a Novel M1/Sigma-1 Agonist with Therapeutic Efficacy in Animal Models of Alzheimer’s Disease,” along with Dr. Abraham Fisher of the Israel Institute for Biological Research, who developed the compound.

“Our preclinical findings for ANAVEX 3-71 demonstrate its significant potential to enhance neuroprotection and cognition through activation of sigma-1 and muscarinic acetylcholine receptors,” said Dr. Bezprozvanny, who holds the Carl J. and Hortense M. Thomsen Chair in Alzheimer’s Disease Research. “This could be a highly effective treatment for Alzheimer’s when compared with competing drugs, including donepezil (Aricept).”

The Bezprozvanny laboratory demonstrated that ANAVEX 3-71 was able to reverse synaptic loss in hippocampal neurons from mouse models of Alzheimer’s disease. The actions of this compound at the synapse may explain its ability to mitigate cognitive impairments and lessen Alzheimer’s-like pathologies in mouse models of Alzheimer’s disease, the researchers concluded. Now the team will study the target and the mechanism of the compound to better understand how it acts.

I also like the fact that becoming a Friend is accessible to many; it’s an easy way to get informed and participate, without a huge financial or time commitment. Because of this collective effort, I strongly believe that we will see major breakthroughs in my lifetime or my children’s lifetimes.

Q: What do you hope for the future of the Friends?
A: I’d like us to continue to broaden the base of our membership and cultivate the next generation of Friends.

Q: What would you like to share with your fellow Friends?
A: Thanks to Friends like you, brilliant and deserving young investigators receive the seed funding they need to kick-start novel research, which, in turn, could be just the spark that ignites the next major breakthrough in neuroscience.
JOIN THE FRIENDS OF THE ALZHEIMER’S DISEASE CENTER

The Friends of the Alzheimer’s Disease Center provide 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.

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