

NEXUS

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**The University of
Texas at Dallas**

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A Generous Gift to UT Dallas and the School of Behavioral and Brain Sciences



Dr. Aage Moller

University of Texas at Dallas faculty and students will benefit from a professor's generosity.

UT Dallas Behavioral and Brain Sciences Professor Aage Moller and his wife, Margareta, are giving the University two separate gifts to endow a new professorship and a new scholarship.

The first, a \$100,000 gift, will fund the Aage and Margareta Moller Endowed Professorship. It will be used to support the research and scholarly activities of a tenured faculty member in the School of Behavioral and Brain Sciences.

Dr. Alice O'Toole has been selected to serve as the first Aage and Margareta Moller Endowed Professor. Her current research compares human performance on face-recognition tests to face-recognition algorithms and other biometrics.

"Professor Moller has been an intellectual and personal inspiration to his many colleagues at UT Dallas, around the U.S. and abroad. I am very grateful for the opportunity to serve as the first Aage and Margareta Moller Endowed Professor," said O'Toole.

In addition to the funding for the new professorship, the Mollers are also giving \$10,000 to create the Aage and Margareta Moller Endowed Scholarship. Proceeds from this scholarship will be awarded competitively and on the basis of financial aid, with preference given to U.S. military veterans.

The endowment is actually the second scholarship to be sponsored by the Mollers. For many years, they have also given annually to support a scholarship that is open to any UT Dallas student who served on active duty in the war in Iraq or Afghanistan.

"Those who have served the country deserve the opportunity to get a good education," said Moller. "My wife and I hope to help military veterans get an education that will give them a bright future."

Students interested in applying for either of the Mollers' scholarships should visit the UT Dallas financial aid Web site for more information. The fall semester application deadline for both scholarships is March 31.

The Mollers hope their donations that fund both the professorship and the scholarships will inspire others to contribute to the University.

Audrey Glickert, UT Dallas Communications

Message from the Dean



Bert S. Moore, Ph.D.
Dean
School of Behavioral and
Brain Sciences

A term that is commonly used these days to describe some forms of research is “translational”. The National Institute of Health, the major research funding agency for Universities and Medical Schools, is placing a priority on translational research. There is probably not a commonly accepted criterion for deciding whether research is translational. Indeed, whether research is “translational” or not, often is in the eye of the beholder. However, generally what is meant is that

the research, while it may not be directed towards answering a specific pragmatic question, such as “Does memorizing multiplication table in the 4th grade predict higher algebra scores in the ninth?”, the results of the research should advance answers to socially important questions and generate a path to direct application.

The School of Behavioral and Brain Sciences has a long-standing commitment to translational work. Faculty and students spend hours each day developing new knowledge with the goal of improving the human condition. The range of inquiry engaged in by School researchers is extraordinary, covering the age spectrum from newborns to the elderly and answering questions ranging from how synaptic chemistry is altered by experience to how family patterns influence childhood obesity. The common ingredient in such research endeavors is unraveling of mysteries in order to improve lives. This enterprise is a vital part of our mission as part of the University and does not exist in isolation from our primary mission of training students, but is part of that role. By being one of the nation’s leaders in research in our fields of training we insure that students receive the most current up-to-date knowledge and become sophisticated generators or consumers of new knowledge. So, we are proud that before “translational” became a buzzword, we were committed to this important quest.

The Center on New Evidence for Communication Treatments (CONNECT)

A new center is in the making at the Callier Center for Communication Disorders. The objective of the CONNECT center is to increase the quantity and quality of evidence available to support clinical decision-making for people with speech, language, and hearing disorders.

“The idea is for Callier CONNECT to be the locus of what we hope will be a growing set of studies that involve people around the world,” comments Dr. Christine Dollaghan, Professor.

“The ideal evidence for use in patient care would come from large numbers

of patients representing the full range of typical variation in age, severity level, co-occurring conditions, and background. No single site can provide the broad spectrum of patients in large numbers within a reasonable time interval. However, by connecting facilities and researchers it will be possible to dramatically increase the amount and quality of scientific evidence concerning how best to diagnose and treat individual people with communication disorders.”

(see “CONNECT” on page 5)



Dr. Christine Dollaghan &
Dr. Tom Campbell

Dr. Denise Park Joins the School of Behavioral and Brain Sciences



Dr. Denise Park

Dr. Denise Cortis Park, a talented scientist in the booming field of cognitive aging, joined The University of Texas at Dallas in January as the T. Boone Pickens Distinguished Chair in Clinical Brain Science.

The \$2 million endowed chair is part of the University's School of Behavioral and Brain Sciences, headed by Dr. Bert Moore. Park, who also will hold the title Regents' Research Scholar, will work closely with researchers in UT Dallas' Center for BrainHealth.

Park's professional areas of interest include the neuroscience of memory and aging, as well as how cultural differences affect patterns of neural activation. She is especially interested in whether stimulating cognitive and social experiences can enhance brain function in older adults.

Park comes to UT Dallas from the University of Illinois, Urbana-Champaign, where she was a professor of psychology and director of the Center for Healthy Minds. She also was a faculty member in the university's Beckman Institute.

Park said, "Opportunities for new discoveries in the field of brain health abound. I am interested in not only understanding how the mind changes with age, but what techniques and interventions we can use to delay the process of cognitive aging and maintain brain health over the lifespan. I believe my new position at UT Dallas offers the resources for further breakthroughs."

"I have no doubt that Dr. Park's insightful studies will aid in improving the cognitive function of humans as they age," Dean Moore added. "Her talent and enthusiasm are contagious, and I look forward to working closely with her, as do many others at the University."

Jenni Hufferberger, UT Dallas Communications

Donor Spotlight: Carol and Maynard Redeker

When Carol Redeker graduated from UT Dallas with a BA in General Studies in 1987, she never thought she would return 20 years later as a donor. Today, Carol, and her husband Maynard, are enjoying early retirement and have made philanthropy an important part of their life. Their first step was establishing a donor advised fund.

Carol contacted the UT Dallas Department of Development in the summer of 2007. The Redekers were interviewing several organizations to see what needs existed and how a potential philanthropic investment would be used. They knew they were interested in early childhood development and human behavior and UT Dallas made the short list. Meetings with UT Dallas faculty, including Dr. Bert Moore, Dean of the School of Behavioral and Brain Sciences, Dr.

Marion Underwood, and Dr. Margaret Owen provided the Redekers with information on research in human development and the important role graduate research fellows play in advancing the science. The result is an endowed graduate fellowship in Behavioral and Brain Science!

We are happy to welcome Carol and Maynard Redeker as new donors at UT Dallas. Their endowment will serve doctoral students for many years to come. We appreciate their decision to support UT Dallas through an endowment that will help the university create an ever brighter future.

(see "Donor Spotlight" on page 4)

The School of BBS Welcomes Jeff Martin, Ph.D.



Dr. Jeff Martin

Dr. Martin received his bachelors and masters degrees in Communication Sciences and Disorders from UT Austin. He became interested in audiological research while completing and publishing his thesis project. "I found the entire process [research] quite fascinating and addicting." Before pursuing Ph.D., however, he felt it was important to improve his clinical skills and to experience first-hand the real "issues" facing clinical audiologists. After graduating from UT Austin, Dr. Martin and his wife (also an audiologist) moved to Boston to complete his clinical fellowship year at Brigham Women's

Hospital and subsequently was promoted to coordinate the Audiology Department. Based on his clinical experiences, he became interested in auditory diagnostics, especially in the area of electrophysiological assessment.

Jeff and his wife moved back to Texas in 2001 and he began working towards a Ph.D. in Communication Sciences and Disorders in the School of Behavioral and Brain Sciences (BBS) at UT Dallas. He did most of his work under the direction of Dr. James Jerger, Distinguished Scholar in Residence. "The decision to go to UTD was not a difficult one when considering the diverse avenues of research being conducted in audiology and hearing science," Jeff says.

Dr. Martin is now an Assistant Professor in the School of BBS at UT Dallas. "The qualities that initially drew me here to do my graduate work also weighed heavily in the decision to stay here to begin my academic career," Jeff explains. "When you look at the caliber of faculty we have at UTD and School, not only in Communication Sciences, but across the board, it's very impressive and collaboration is key."

Dr. Martin's research focuses on Auditory

Processing Disorders (APD) in children and adults—a deficit in neural processing of auditory information within the central nervous system. The condition has been associated with a variety of language-learning problems facing school-aged children and the limitations in the successes experienced by some older adults with traditional amplification. From a clinical perspective, Dr. Martin states that "there is considerable disagreement within the field concerning the underlying nature of APD, how to best diagnose the problem, leading to differences in approaching management and remediation." Using electrophysiological procedures, he aims to gain insight into the brain mechanisms underlying the problem. With better understanding, Dr. Martin hopes to develop better tools for its accurate diagnosis.

Dr. Martin serves as the director of the Cortical Functions Laboratory at the Callier Dallas campus and serves as the assistant director of Dr. Jerger's laboratory on the main UT Dallas campus. Dr. Martin also teaches a number of courses in the Doctor of Audiology (AuD) program, including Hearing Science, Instrumentation, Auditory Processing Disorders, and Clinical Electrophysiology.

Donor Spotlight (continued from page 3)

We also congratulate Kristin Atchison, the first Carol and Maynard Redeker Endowment recipient. Kristin is currently pursuing a Ph.D. in Psychological Sciences and has shown great talent and dedication in her research to understand how infants learn and process language. Kristin's research examines how 4- and 6-month-old infants process acoustic properties of language that communicate affect and intent of adults. This ability is an important component of early communicative development.

*Dena Jackson, UT Dallas Development and
Melanie Spence, UT Dallas School of BBS*



**Carol Redeker, Kristin Atchison,
and Maynard Redeker**

A Tale of Two Undergraduate Advisors



Carol Johnson



Leah Nall

Carol Johnson has both her undergraduate and Masters degree in Counseling from the University of North Texas. While working towards her Masters, Carol had a job at Richland College with continuing education students. In 1999, Carol became an academic advisor for the School of Natural Sciences and Mathematics at UT Dallas. After about a year and a half, she left to work at a Community College in Denison, but found herself drawn back to UT Dallas. She once again returned to advise Natural Sciences and

Math students and two years ago took an advisor position with the School of Behavioral and Brain Sciences (BBS).

Leah Nall got her undergraduate degree in Psychology from UT Dallas in 1995 and then her Masters in Counseling from Southwest Texas State in 1997. After she got her Masters, Leah worked at UT Arlington for two years on a grant to help low-income high school students learn how to apply to college and get financial aid. Ms. Nall has now been advising BBS students since 1998. She also currently teaches a course called Rhetoric (RHET) 1101, in which undergraduate students learn how to make the transition from high school to college, how to succeed in college, and some public speaking skills. Leah is one of the few advisors who teaches what is known as a “bridge RHET 1101 section” for at-risk students during the summer before their freshman year at UT Dallas. “UTD has difficult classes. We want them to do well here. And the class gives me a chance to get to know the students on a more personal level,” says Ms. Nall.

Recently, BBS added a third advisor, Bonnie Dougherty. Bonnie formerly supported the doctoral programs and students in the School of BBS so her background made for an easy transition into her new role as an undergraduate advisor.

CONNECT (continued from page 2)

Callier CONNECT will provide web-based “workspaces” and “learning spaces” within which patients, families, healthcare providers, and researchers around the world can connect in order to: (a) identify high-priority questions about communication treatments; (b) design and implement rigorous, feasible studies of such questions; (c) access the most current information and resources concerning communication disorders.

A kick-off working group meeting took place on April 3-4, when eight well-known clinical researchers from around the world came to Dallas to plan an initial collaborative study and made recommendations on issues such as human subjects protection across countries, data accuracy, reliability, and security, and multi-author publications.



Early identification of children with speech and language disorders will be one objective of the Callier CONNECT

Faculty Profile: Dr. Michael Kilgard

"My interactions with speech scientists, speech pathologists, head injury experts, and many others, aren't hindered by the fact that the specialists are in different departments."

Dr. Kilgard knew right away he wanted to solve speech and language problems in the brain by working to understand what the various neurons were doing. After earning his undergraduate degree in biochemistry from U.C. Berkeley, he went across the bay to U.C. San Francisco for his graduate degree in neuroscience. While there, he did research on the rat auditory cortex and how its processes sound. "I was particularly interested in what parts of the brain help you learn what features of sound are important," comments Mike. "If you're exposed to language, you have to figure out where the information is and where the noise is." Dr. Kilgard conducted a series of experiments involving stimulation of one of the learning centers in the brain and found the brain actually adjusts to the pitch of sounds and can even change its processing speed.

A large number of children don't have the ability to properly separate sounds and the reason for this is unknown. Dr. Kilgard is working on how to train the brain to work specifically on sounds that are harder to understand than others. "We're able to actually follow what the neurons are doing and record the neurons before and after a long sequence of sounds during speech therapy," says Dr. Kilgard. Mike's thoughts about speech processing have been heavily influenced by

watching language development in his own children, now two and five years old.

Mike Kilgard has been at UT Dallas since 1999 and was drawn to the School of Behavioral and Brain Sciences because it doesn't have "departments." "My interactions with speech scientists, speech pathologists, head injury experts, and many others, aren't hindered by the fact that the specialists are in different departments," he says. Dr. Kilgard teaches several courses including Developmental Neurobiology, Learning and Memory, Cellular Neuroscience, and Behavioral Neuroscience.



Michael Kilgard, Ph.D.

Alumni Profile: Dr. Ted Price



Ted Price, Ph.D.

Dr. Price was in the very first UT Dallas undergraduate class, in 1994. He was a physics major for three years, but didn't love what he was studying. Ted decided to speak to his academic advisor who, after hearing more about Ted's interests, recommended he try neuroscience.

After one neuroscience class from Dr. Larry Cauller, currently an Associate Professor in the School of Behavioral and Brain Sciences (School of BBS), Ted

was hooked. He worked in Dr. Cauller's lab on electrophysiology in rats for about 6 months. In Fall, 1998, Ted graduated with an undergraduate degree in neuroscience and then continued to work at UT Dallas with Dr. Alice O'Toole, currently a Professor in the School of BBS, on an honors thesis. Before going on to graduate school, he was hired by Dr. O'Toole to be a technician in her lab for several months.

(see "Dr. Ted Price" on page 7)

School of BBS Grants Since September 2007

Principal Investigator(s)	Funding Agency	Title
Jim Bartlett	UT Southwestern / Department of Veteran Affairs	Material-Specific Encoding and Recognition in Medical Temporal Lobes
	UT Southwestern / Department of Veteran Affairs	Auditory Visual Memory Conjunction Project
Larry Cauller	MicroTransponder, Inc.	MicroTransponder Platforms for Biomedical Implant Applications
John Hart	UT Southwestern / Department of Veteran Affairs	Emotional Memory Circuits Project
John Hart / Mandy Maguire	UT Southwestern / Department of Veteran Affairs	World Retrieval Project
John Hart / Sandi Chapman	Army	Interdisciplinary Studies on the Combat Readiness & Health Issues Faced by Military Personnel
Denise Park	National Institutes of Health / National Institute on Aging	Active Interventions for the Aging Mind
Bart Rypma	National Institutes of Health	Physiological, neural and cognitive bases of age-related working memory change
	UT Southwestern / Department of Veteran Affairs	Attention and Executive Function of the Neuroimaging and Biomarker Studies
Jessica Sullivan	National Institutes of Health	Effect of Auditory Training in Noise on Children with Hearing Impairment
Emily Tobey / Ann Geers	Washington University / National Institutes of Health	Effect of Very Early Cochlear Implantation on Language

Dr. Ted Price (continued from page 6)

Dr. Price did his graduate studies at the University of Texas Health Science Center in San Antonio where he received a National Research Service Award (NRSA) from the National Institutes of Health (NIH) and finished in 2003 with a degree in Cannabinoid Pharmacology. The following year, Ted went to McGill University in Montreal, where he received another NRSA and did post-doctoral research on chronic pain mechanisms.

In January of this year, Dr. Price began as an Assistant Professor in Pharmacology and Neuroscience at the

University of Arizona. He is an American Pain Society Young Investigator Award winner, which will help with funding for his new lab in Arizona. Ted will do collaborative work with a team of six people, two who study pain, two who study Alzheimer's Disease, and two who study Parkinson's Disease.

"My interests came from my experiences at UTD. I'm still in touch with Alice even though we don't do the same kind of research. She was a great mentor," says Ted.

**The School of Behavioral and
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Business Phone _____

Other (Special projects or interests) _____

*Awards, recognitions, professional involvement, marriages,
babies?*

THIS EDITION'S "SCRAMBLER"

Unscramble each group of letters and write the words on the dashes. Then transfer each letter on a numbered dash to its correspondingly numbered dash at the bottom and you'll complete the sentence.

Y M O H E	<u>5</u>	<u>6</u>	<u> </u>	<u> </u>	<u>3</u>
N E S T C	<u>2</u>	<u> </u>	<u> </u>	<u>12</u>	<u> </u>
R E P C A L	<u>1</u>	<u>10</u>	<u> </u>	<u> </u>	<u>11</u> <u>7</u>
L A R G C I	<u>8</u>	<u> </u>	<u> </u>	<u> </u>	<u>9</u> <u>4</u>

Visit www.bbs.utdallas.edu to learn
more about our new Masters program in

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>6</u>	<u>8</u>	<u>9</u>	<u>4</u>	<u>10</u>	<u>7</u>
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Answer to last edition's "Scrambler":
Research Centers