A MESSAGE FROM THE DIRECTORS

The past year has been a period of expansion and achievement for the Center for Vital Longevity. Center researchers are achieving international recognition for work using new brain imaging techniques that are revealing for the first time how the aging brain functions and changes. Center scientists published studies showing how the brains of healthy adults maintain function in the face of pathology associated with Alzheimer’s disease. Other research discovered differences in neural circuits in older adults that were associated with good versus poor memory. Breakthroughs were reported in understanding how to train and improve core cognitive abilities like attention and working memory, along with how exercise and some video games can support specific functions of the mind.

Because of the quality and importance of our research, we have been successful at securing highly competitive national grants and have presented our research far and wide in the international scientific community. The scientific energy and excitement at the center is palpable. We were able to recruit three exceptionally talented young faculty members to our center and now have one of the largest and most accomplished concentrations of researchers studying the aging mind in the world. Center research is further strengthened by our many collaborations with The University of Texas Southwestern Medical Center.

We are proud of the tremendous growth and scientific accomplishments of our center. Learning how the aging mind works is the key to unlocking a world where neural health is treated as readily as cardiovascular health. Research on the aging mind has received only a small fraction of the investment that cardiovascular and cancer research has enjoyed. We can confidently state that Center for Vital Longevity investigators can use research investments to uncover new truths about the aging brain that will play an important role in maintaining cognitive vitality in future generations.
The Center for Vital Longevity (CVL) continued to forge an impressive track record of scientific achievement in 2012, including publication of more than 40 peer-reviewed research articles, awards of more than $5 million in federal research dollars and expansion of faculty and staff. We also hosted world-renowned experts in the fields of memory, cognitive aging and Alzheimer's disease.

**CVL Leadership Nets $4 Million in Federal Funding**

Center co-directors Dr. Denise Park and Dr. Michael Rugg both received prestigious research awards totaling more than $4 million in funding from the National Institute on Aging, part of the National Institutes of Health. The funds will support sophisticated brain-imaging studies on how aging affects the brain and memory. During the next five years $3 million will be devoted to the Dallas Lifespan Brain Study, one of the nation’s largest projects examining neural and cognitive aging across the entire adult lifespan.

**Center Hosts Public Lecture by Renowned Longevity Expert**

CVL hosted a highly attended public lecture by Dr. Laura Carstensen, founding director of the Stanford University Center on Longevity, who spoke about how myths and misconceptions regarding aging stop many people from preparing for long, fulfilling and financially stable lives. The center partnered with UT Dallas’ Center for Values in Medicine, Science and Technology for the event.

**Joint Research Symposium with UTSW**

More than 100 researchers and clinicians from across the state of Texas gathered at CVL for a research symposium jointly sponsored by the Center for Vital Longevity and the UT Southwestern Medical Center Alzheimer’s Disease Center. The symposium featured a keynote address by Dr. Reisa Sperling of Harvard Medical School, a leading expert on the early diagnosis and treatment of Alzheimer’s disease, as well as a discussion of new research on how health factors such as hypertension and vascular disease affect how the brain ages.

**New Research Paves Way Toward Early Alzheimer’s Diagnosis**

In a groundbreaking study published in the journal *Neurology*, CVL scientists found that some very healthy adults had high levels of amyloid protein, a diagnostic marker of Alzheimer’s disease. The study marks a crucial step toward being able to predict who may be at risk of Alzheimer’s disease long before symptoms appear.
Center Establishes Sallie Asche Fund for Vital Aging

In March, CVL established the Sallie Asche Fund for Vital Aging in honor of the center's friend, supporter and Advisory Council member Sallie P. Asche. The fund will be used to sponsor lectures and research on the science of the aging mind, with the hope that future generations will no longer suffer from Alzheimer's disease and other cognitive losses associated with aging.

FDA Approves Vital CVL Research Tool

In April, the US Food & Drug Administration approved the first diagnostic test for plaques in the brain associated with Alzheimer's disease. Center scientists were among the earliest adopters of the diagnostic tool, an imaging agent called florbetapir, in their efforts to understand healthy brain aging and the earliest signs of Alzheimer's.

Center Launches Major Donor Campaign

CVL aims to raise $15 million over the next three years to support its mission of ensuring the cognitive health and vitality of current and future generations. The goal is part of UT Dallas' first comprehensive fundraising campaign, which seeks to raise $200 million to accelerate the University's progress toward becoming a Tier One research institution.

New Faculty Build on CVL's Research Momentum

Three outstanding young faculty members at the forefront of understanding how the brain and cognition change with age joined CVL at the start of the 2012-2013 academic year. Dr. Kristen Kennedy, Dr. Karen Rodrigue and Dr. Gagan Wig were named assistant professors of behavioral and brain sciences. They add to the core of excellence established at CVL, which in its short history has become an international leader in improving our understanding of cognitive aging.

2011-2012 KEYNOTE PRESENTATIONS

45 invited presentations, including:
- International Neuropsychological Society
- University of Edinburg
- International Neurology
- 5th International Conference on Memory (UK)
- University of Zurich
- University of California, Irvine
- University of Michigan
- National Chengi University (Taiwan)
- Wayne State University
- Texas A&M University
- The University of Texas Southwestern Medical Center
- Georgia Tech University
- National Institutes of Health
- University of Missouri
- Memory Disorders Research Society (Spain)
- American Psychological Association
- Human Amyloid Imaging Conference
- International Society for Behavioral Neuroscience (Italy)

2011-2012 MAJOR PUBLICATIONS

45 peer-reviewed research papers, in publications including:
- Neurology
- Cerebral Cortex
- Neurobiology of Aging
- Journal of Cognitive Neuroscience
- NeuroImage
- Handbook of Psychology of Aging
- Journal of Neuroscience
CENTER RESOURCES

The Center for Vital Longevity’s scientists compete for prestigious research awards from the National Institutes of Health (NIH). Their current portfolio for these highly competitive national awards is the largest of any center or school at UT Dallas — a testament to the excellence and importance of the research done at the center. In 2012, center researchers received four major new NIH awards that totaled $5.5 million from the National Institute on Aging, including a highly coveted MERIT Award. These funds support research on the neural circuitry of memory, neural and cardiovascular health, as well as the Dallas Lifespan Brain Study.

An award also was received from Avid Radiopharmaceuticals, a division of Eli Lilly & Co., to support the innovative work aimed at understanding the earliest phases of Alzheimer’s disease, before symptoms appear. Each center scientist at the faculty level also receives a one-time “start-up” budget from UT Dallas and other state sources to set up his or her laboratory.

The state-of-the-art neuroimaging techniques, equipment and personnel used by center scientists are quite costly, and there is a critical need for private philanthropy at the center. This will be a major focus for 2013. The center’s development staff or the center co-directors are available to work with interested individuals and foundations.

PHILANTHROPY

The ambitious projects undertaken by the Center for Vital Longevity would not be possible without the generous contributions of all of our donors. We extend special thanks to our Directors’ Research Circle for their support and dedication to our mission.

Anonymous (2)
Mr. & Mrs. Norman Abdallah
Dr. and Mrs. Kenneth Z. Altshuler
Ms. Mary Susan Barnhill
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Mr. Bill H. Venegoni & Ms. Janet Bade
Mr. Lawrence Warder
Ms. Jane A. Wetzel
MISSION

The mission of the Center for Vital Longevity at UT Dallas is to understand and improve the vitality of the aging mind.

Center scientists are using sophisticated brain-imaging techniques to:

- Discover early markers of Alzheimer’s disease long before symptoms appear.
- Understand how memories are formed and retrieved and how these processes change with age.
- Develop interventions that enhance cognitive function and slow the aging process.

FACULTY AND STAFF

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Michael D. Rugg, PhD
Co-Director, Professor and Distinguished Chair

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