Dear Colleagues,

As 2017 draws to a close, we can look back at a number of accomplishments for the O’Donnell Brain Institute. We have seen significant growth in the clinical practice and have expanded clinical sites to include Las Colinas and Fort Worth. The new Physical Medicine and Rehabilitation (PM&R) Neuro-Rehab Clinic opened on the 5th floor of Aston this past summer. The end of 2017 also marks the first full year of the Spine Center.

Over the past 12 months, the O’Donnell Institute has held several events including an inaugural Town Hall with UT Southwestern leadership, outstanding departmental CME events, an O’Donnell Institute Faculty Development Seminar, and a Sleep Research Symposium. Capital investments include a new confocal microscope and a soon-to-be-delivered AIRC research MRI. We have also recruited many new faculty including Clinical Vice Chairs in Neurology and PM&R.

Ultimately, the main successes of the Institute are the summation of many individual contributions made daily in clinical care, research, and scientific discovery. We have had many of those in 2017 and look forward to more in 2018.

In the coming year, we can expect to continue recruitment including a Brain Institute director. Construction has begun on the Clements University Hospital third tower (home of inpatient neurosciences) and a Frisco hospital and office building in conjunction with Texas Health Resources. Finally, planning for a North Campus building that will accommodate growth in the basic neurosciences is underway.

Best wishes to all for a Happy Holiday Season.

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Fall Issue

Dr. Darin Okuda holds 3-D models of brain lesions in his hand. The models have provided new insight into lesions linked to multiple sclerosis.

See page 2 for the story.
Dr. Darin Okuda and team bring 3-D technology to MS research

From fashion to prosthetics to pizza, 3-D printing is being utilized in a variety of innovative ways including medical research. Dr. Darin Okuda, M.D., Professor of Neurology and Neurotherapeutics, and his team at UT Southwestern, applied the technology to learn more about brain lesions associated with multiple sclerosis.

The 3-D models of the lesions led to some surprises, for example, Dr. Okuda says he and his research team observed that MS lesions are more complex than previously believed. Instead of being ovoid and and well-circumscribed, the models showed they are asymmetrical. Dr. Okuda told TechCrunch that these insights could lead to more accurate diagnoses and treatments for MS.

Team Okuda was recognized for its work with 3-D printing at the 2017 European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS) meeting (see photo below). They were one of three teams to share in the Grant for Multiple Sclerosis Innovation. Read the study to learn more.

Dr. Okuda also gave a presentation regarding disease-modifying treatment in radiologically isolated syndrome (RIS). In 2009, he first defined a distinct group of individuals who possessed MRI features typical for MS, but who lacked clinical symptoms related to CNS demyelination. The previously published criteria for the radiologically isolated syndrome is now known as the Okuda Criteria after being named by Nicola De Stefano, M.D., a prominent MS specialist and MRI expert in Siena, Italy.
Welcome to our New Faculty and Advanced Practice Providers

Neurology and Neurotherapeutics

Roger Blair, M.D.
Clinical Interests: general neurology, headache

Physical Medicine and Rehabilitation

Elizabeth Meyer, M.D.
Clinical Interests: electrodiagnosis and MSK/Sports

Psychiatry

Pedro Fernandez, M.D.
Clinical Interests: addictions, integrated behavioral healthcare, cross-cultural psychiatry

Shadmeen Karim, M.D.
Clinical Interests: emergency room psychiatry

Charles Motsinger, M.D.
Clinical Interests: emergency room psychiatry

Minkyung Park, M.D.
Clinical Interests: community psychiatry, primary psychotic illnesses, metabolic syndrome and mental illness

Spine Center

Ryan D’Cunho, MPAS, PA-C

Specialist in pediatric movement disorders joins Peter O’Donnell Jr. Brain Institute

Jeff Waugh, M.D., Ph.D., has a rare focus in the broad field of pediatric neurology. He is one of only a dozen physicians in the U.S. who practice in the area of pediatric movement disorders.

His interest in movement disorders grew out of his graduate work in Neuroscience at UT Southwestern, where he focused on understanding how dopamine is regulated in the basal ganglia.

Dr. Waugh’s current research uses MRIs of the brain to identify structural brain abnormalities in the movement disorder dystonia.

His research has generated four publications in just the last two months, and five dystonia-related publications over the last two years. Dr. Waugh’s imaging studies have identified unexpected abnormalities in the brains of dystonia patients that suggest mechanisms of disease onset.

“The reasons why patients develop dystonia remain a mystery, even in cases where the causative gene has been identified,” said Dr. Waugh, Assistant Professor of Pediatric Neurology. “Studies suggest the anatomical route that those diseases take to produce dystonia.”

“Dr. Waugh is a rare expert who studies and treats children with diseases similar to Parkinson’s,” said Dr. Berge Minassian, Division Chief of Pediatric Neurology at UT Southwestern. “His clinical work helps these young patients now, while his research aims to make these diseases go away in the future.”

Dr. Waugh was most recently on the faculty at Boston Children’s and Massachusetts General Hospital. Previously, he completed his neurology residency and movement disorders fellowship at Harvard Medical School.

Dr. Waugh’s path as a neurologist started at UT Southwestern where he attended medical school and then earned a Ph.D. in Neuroscience.

“It’s wonderful to be back at Southwestern,” said Dr. Waugh. “The opportunities for growth here are really unmatched anywhere. We have been warmly welcomed by colleagues at UT and our new neighbors alike – we’re very excited to come home to Dallas.”
Genevieve Konopka, Ph.D., chosen for international Human Cell Atlas

Genevieve Konopka, Ph.D., Associate Professor of Neuroscience, will lead a team tasked with evaluating technologies for determining how genes are expressed in the brain. The team will also compare different brain-tissue conditions to determine the optimal method for collecting data on gene expression.

The project is part of the Human Cell Atlas, an effort involving select scientists across the globe to create comprehensive maps of all human cells.

Read more from the UT Southwestern newsroom.

Craig Powell, M.D., Ph.D., study of potential autism treatments published in Nature

A study led by Craig Powell, M.D., Ph.D., has identified a pair of autism treatments that may restore brain function to patients who lack a gene needed to maintain connections between neurons.

“The deletion of this gene impairs brain function in a major way, and we found a way to repair the damage,” said Dr. Powell, Professor of Neurology and Neurotherapeutics. “But we have more work to do before we try these treatments on people.”

Read more.

Advanced Practice Provider, Mandy Dirickson, publishes results of study that examines efficacy of education to reduce stroke risk in women

Amanda Dirickson, MS, APRN, ANP-C, SCRN, was the lead author on a study assessing the efficacy of a technology-enhanced, sex-specific educational program for women’s knowledge of stroke.

The HERSTROKE study results were published in the Journal of Neuroscience Nursing.

Read more.

Headlines from the UTSW Newsroom

CLOCK Gene may hold answers to human brain evolution

Good as gold: Paralympian inspires pursuit of adaptive sports

Deletion of a stem cell factor promotes TBI recovery in mice

Standard antidepressant may not help patients with chronic kidney disease

Dr. Joachim Herz named first holder of Distinguished Chair in Alzheimer’s research

Hamon Charitable Foundation $10M gift fuels Alzheimer’s research

O’Donnell News
Neuroscience Department acquires new 3-D microscope

The Department of Neuroscience has a new tool to assist researchers studying the genetic, cellular, synaptic, and network dysfunctions associated with brain disorders.

With the support of the O’Donnell Brain Institute, the department acquired a state-of-the-art, multispectral confocal microscope, the Zeiss LSM 880 Airyscan Fast.

The instrument produces fast 3-D image acquisition of brain sections to capture high resolution images of synapses and other subcellular structures.

UTSW Wheelchair Seating and Mobility Clinic growing to meet demand

UT Southwestern’s Wheelchair Seating and Mobility Clinic recently added clinic times and providers to meet increasing demand. The clinic, part of the Department of Physical Medicine and Rehabilitation, provides specialized services to patients who require detailed assessments, examinations, and recommendations in order to receive optimal seating. These patients may have disorders such as trauma, spine or brain injury, neurodegenerative disorders, and amputations.

Anjali Shah, M.D., Associate Professor of Physical Medicine and Rehabilitation, established the clinic in 2011. It is one of only a few physician-led wheelchair clinics in the nation. Dr. Shah’s team approach means the patient, family, caregivers, vendor, and physician all have input in choosing the device and features needed.

“I find great satisfaction in being able to provide patients independence through mobility,” said Dr. Shah. “In some cases, patients were unable to move about even within their own home.”

The clinic provides seating recommendations ranging from basic manual wheelchairs to sophisticated power wheelchairs that can be independently driven by a patient’s head movements. Dr. Shah and the vendor are present at the patient’s follow-up interview to ensure the patient and family are satisfied with the fit and individual specifications in their new seating device.

“One of the biggest advantages to having a seating clinic run by a physician is the faster time from assessment to delivery of the final product,” said Dr. Shah.

Demand for the clinic’s services has consistently increased over the years and the clinic now meets twice weekly. In response to the growing need, Jennifer Yang, M.D., and Patricia Gordon, NP, have joined Dr. Shah in performing specialized wheelchair seating assessments. Physical and occupational therapists are also available when needed.

Wheelchair Seating and Mobility Clinic

For patient referrals and more information 214-645-2080
Department of Psychiatry provides clinical services and education at Paul Quinn College in Dallas

UT Southwestern’s Department of Psychiatry has teamed up with Paul Quinn College in Dallas to provide campus-wide educational programs and clinical services for students, faculty, and staff.

The initiative began with a collaboration between Dr. Carol Tamminga, Psychiatry Chair, and the President of Paul Quinn, Michael Sorrell.

“Michael Sorrell is an inspiring leader with a broad vision for his students that includes a healthy lifestyle,” said Dr. Tamminga. “We have been invited to be a part of the campus to identify and treat mental challenges as well as to promote overall wellness.”

The clinical service opened in September with the Department of Psychiatry providing evaluations, treatment, and referrals every Thursday.

“We are collaborating with the school, a traditionally black college, to change the conversation around mental illness and promote wellness,” said Dr. Moore. “African-Americans are less likely to access mental health care treatment than Caucasian-Americans and these programs help address a significant healthcare disparity.”

The clinic is staffed by fourth-year residents, Dr. Monica Gonzalez (left), Dr. Nishina Thomas (center), Dr. Yolan Shaw (not pictured), and Dr. Sarah Baker (not pictured). Dr. Timothy Wolff is Clinic Director (back) and Dawn Quantrell is Program Coordinator (right).

Along with clinical services, UT Southwestern outreach at Paul Quinn has included various campus-wide educational programs:

- Student-focused seminars on depression, suicide, substance use (specifically, alcohol and marijuana), as well as managing grief and trauma
- Town halls on mental health awareness
- Mental health first aid to faculty and staff
- Seminars on stress management for members of student government
- Stress management and anger management seminars for students in the retention program

The collaboration between UTSW and Paul Quinn also includes campus-wide student and faculty engagement to promote awareness and reduce the stigma of mental illness. Dr. Jessica Moore, Child and Adolescent Psychiatry Fellow, developed a program at Paul Quinn to engage the community in mental health and wellness services.

Dr. Jessica Moore (2nd from left) received the Healthcare Diversity Excellence Award in recognition of her work at Paul Quinn College on behalf of underserved groups. She was recognized at the 2017 Greater Dallas Healthcare Diversity Summit.
Awards and Recognition

Takashi Kitamura, Ph.D., Assistant Professor of Psychiatry and Neuroscience, is a co-recipient of the 2017 Gruber International Research Award. The Society for Neuroscience gives the award to recognize young neuroscientists for outstanding research and educational pursuit.

Raquel Kirmse, PsyD, Postdoc, and Emily Smith, B.S., Practicum Student in PM&R's Division of Rehabilitation Psychology training program, received the Edith Kaplan Scholarship Award.

The Women in Leadership committee of the National Academy of Neuropsychology (NAN) awards the scholarships to encourage students to attend NAN's annual conference.

Did you know?

The Peter O'Donnell Brain Institute has a Speakers Bureau.

Learn more

Got news?

Do you have a news item for the O'Donnell newsletter? Please send us an email.

obinews@utsouthwestern.edu
The 7th Annual UTSW Stroke Symposium held last month had its largest attendance to date. Nearly 250 healthcare professionals from around the region attended.

Photo: Symposium Director, Venkatesh Aiyagari, M.D., and Co-Director, Amanda Dirickson, MS, APRN, ANP-C, SCRN

Upcoming Events

**Neuroimaging is a Team Sport**
Focus on neuro-imaging research projects that have evolved between researchers at UT Southwestern and The University of Texas at Dallas.
**Date:** Jan. 26, 2018 7:30 a.m. - 4 p.m.
**Location:** T. Boone Pickens Auditorium, NG3.112
[More details and registration]

**Imaging Metabolism in Brain Disease: Symposium and Training**
The Advanced Imaging Research Center and The National Center for In Vivo Metabolism host a symposium on a topic relevant to work being carried out at the Center.
**Date:** Jan. 31- Feb. 1, 2018
**Location:** T. Boone Pickens Auditorium, NG3.112
[More details and registration]

**Carrell-Krusen Neuromuscular Symposium**
Learn protocols for treatment and management of neuromuscular disorders.
**Date:** Feb. 22-23, 2018
**Location:** Scottish Rite Hospital for Children
[More details and registration]

**Bass Neurosurgery Symposium: The Technologies of Neurorestoration**
New developments in neuromodulation, including brain machine interface devices, non-invasive modulation, and breakthroughs in genetics.
**Date:** March 2, 2018, Dinner/Keynote
**Location:** Belo Mansion
**Date:** March 3, 2018, Symposium
**Location:** T. Boone Pickens
[More details and registration]

Dr. Andrea Lowden recently traveled to the Dominican Republic with Mission Emanuel to deliver wheelchairs and provide education and medical care. Each year, a group of U.S. physicians, therapists, wheelchair techs, and missionaries spend a week in Santo Domingo working with medical staff and patients.

Dr. Lowden is Assistant Professor of Pediatrics and Neurology and Neurotherapeutics.

UT Southwestern took part in the **Walk for Brain Injury** on November 4th in Addison, TX. The walk is organized by the Brain Injury Association of America.