

UT Southwestern

Medical Center

Peter O'Donnell Jr.

Brain Institute



Christopher Madden, M.D.
Executive Clinical Director
O'Donnell Brain Institute

Spring Issue

Dear Colleagues,

In the first of our 2018 newsletters, we note some of the many accomplishments achieved by individuals and programs in the **O'Donnell Brain Institute**.

We are planning for another O'Donnell Town Hall on June 7, at 4 p.m. You will be receiving further information by email. Please mark your calendars and plan to attend if you can.

Also, continue to notify us of news items at obinews@utsouthwestern.edu.

Sincerely,

Chris Madden

What's Inside

- 2 Epilepsy Program receives highest level of accreditation
- 3 Eating disorders researcher recognized
- 4 Sleep Program awarded NIH training grant
- 5 UTSW acquires upgraded MEG
- 6 Stroke Program re-accredited
- 7 Awards and Recognition
- 8 Upcoming Events

Our Mission

Trusted care, informed by next generation brain research, delivered by leading experts while teaching tomorrow's leaders

UTSW Epilepsy Program receives top level accreditation from National Association of Epilepsy Centers

The **National Association of Epilepsy Centers (NAEC)** announced on March 22, 2018, that UT Southwestern's Epilepsy Program had achieved Level 4 accreditation.

UT Southwestern employs a comprehensive team of epilepsy experts, consisting of epileptologists, neurosurgeons, neuropsychologists, advanced practice providers, nurse specialists, EEG technologists, and others with training and experience in epilepsy care.

Level 4 accreditation from NAEC is the highest level attainable, and demonstrates that UT Southwestern has "the professional expertise and facilities to provide the highest level medical and surgical evaluation and treatment for patients with complex epilepsy." A level-4 program provides inpatient and outpatient evaluation and treatment options for the most complex forms of uncontrolled seizure disorders (i.e., intractable, refractory, or drug-resistant epilepsy), including the possibility of placement of intracranial electrodes in selected cases and a broad range of surgical procedures for the treatment of epilepsy.



Dr. Ryan Hays



Linda and Milledge Hart (left) made a generous donation to UTSW in honor of Dr. Bruce Mickey that made the unit possible.

One important component of the UT Southwestern epilepsy program is the state-of-the-art inpatient Epilepsy Monitoring Unit (EMU) at Zale Lipshy University Hospital, which opened in May 2017. The 8-bed EMU is equipped with the latest technology including continuous digital video recording using dual cameras in each patient room.

A generous \$1 million gift from Linda and Milledge (Mitch) W. Hart III helped to build and equip the new EMU, as well as to purchase the ROSA® robot which is deployed in specialized neurosurgery techniques for the diagnosis and treatment of epilepsy. The EMU is named in honor of neurosurgeon Bruce Mickey, M.D., who has been an integral part of UTSW's Epilepsy Program for more than 30 years and has performed hundreds of epilepsy surgeries to reduce patients' seizures.

"Attaining Level 4 accreditation from the NAEC is an important distinction for our program, and we are proud that we were able to reach this milestone in less than one year from the launch of our new EMU at Zale Lipshy University Hospital," said [Dr. Ryan Hays](#), Medical Director of the EMU.

"We are committed to providing the most advanced care available for our patients with epilepsy. In order to do that, our program has tremendously expanded in the last year. We are very grateful for the generosity of Mr. and Mrs. Hart, as well as for the dedication and skills of everyone on the epilepsy team that make our mission possible."

The UTSW Epilepsy Programs at Zale Lipshy, Parkland Hospital and Children's Health are now all Level 4 programs.

Carrie J. McAdams, M.D., Ph.D., develops treatment to reduce the risk of relapsing in eating disorder patients

For more than a decade, [Carrie McAdams, M.D., Ph.D.](#), has explored the connections between the biological and psychological aspects of eating disorders. Her research focuses on how the brain differs in healthy patients versus those with anorexia nervosa and bulimia nervosa.

Dr. McAdams, Assistant Professor of Psychiatry, uses functional neuroimaging and genetics to investigate the neurodevelopmental changes related to identity formation and social cognition.

“I was a neuroscientist by training and believed that these illnesses had neurological causes,” said Dr. McAdams. “The stories among patients have the same theme—they feel a lot of social pressure about fitting into the world.”

50 to 70 percent of adults with eating disorders who attend intensive treatment programs will relapse because achieving nutritional rehabilitation only is insufficient treatment for these illnesses.

“**I want to know what enables those who are successful in recovery to fight the disease.**”

In her most recent paper published February 2018 in [European Eating Disorders Review](#), Dr. McAdams shows that the insula, a part of the brain commonly implicated in psychopathology, is activated differently during self-evaluations based on one's pre-existing biases about oneself.

“We used fMRI scans to see how blood flow to different parts of the brain changes when people think about themselves or how other people think about them,” she said. “We also measured interpersonal biases outside the scanner to determine each person's tendency to think positively or negatively about themselves.”

Women with anorexia nervosa had a tendency for negative self attributions, a problem associated with



(l-r) Dr. Xiaosi Gu, UT Dallas; Dr. Brooks Brodrick, UT Southwestern; Dr. Carrie McAdams and Shaun McAdams at The Elisa Project Life Lessons event.

increased engagement of the insula during self-evaluations, and persistence of the disease.

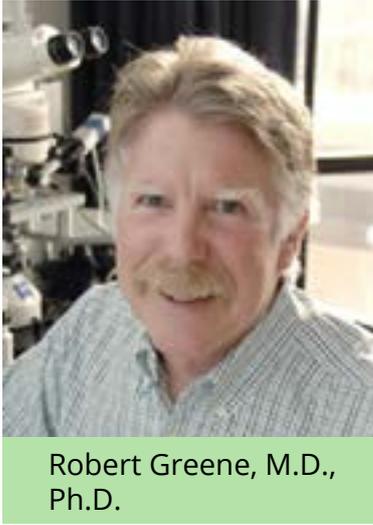
The findings have led to a novel treatment approach that is underway at UT Southwestern. Dr. McAdams has developed a group therapy program that includes psychoeducation about attributions, and art therapy tasks designed to target the neurocognitive differences present in patients currently ill with eating disorders, but not in those that have recovered. In order to be in the group, the patient needs to be medically stable and appropriate for outpatient eating disorder treatment.

Dr. McAdams was recognized in February by [The Elisa Project](#), a non-profit advocacy group for those with eating disorders. She received the LEARN EMPOWER ACCEPT DISCOVER (L.E.A.D) award for her commitment to finding new discoveries about the biological processes involved in eating disorders.

Dr. McAdams and her team are currently mapping the neural circuitry of patients in an effort to find the similarities in those who succeed.

In addition to her translational research program and outpatient psychiatric care at UT Southwestern, Dr. McAdams works closely with the adult Eating Disorder Program at Texas Health Presbyterian Hospital of Dallas and the Children's Medical Center Eating Disorders program.

NIH Training Grant will give boost to sleep and circadian rhythms research



The National Institutes of Health has awarded [Robert Greene, M.D., Ph.D.](#), a T32 training grant that will support five additional trainees at UT Southwestern in the fields of sleep and circadian rhythms.

Dr. Greene, Professor of Psychiatry and Neuroscience, and [Dr. Joseph Takahashi](#), Chairman of Neuroscience, are collaborating to integrate research training and clinical efforts related to sleep and circadian rhythms.

“We currently have people across campus in many different departments who are working on different pieces of research in these areas,” said Dr. Greene. “This grant is a big step toward bringing together all this research to answer the big questions we still have.”

Welcome to our New Faculty and Advanced Practice Providers

Neurosurgery

Mary Huang, PA-C
Vascular Program

Psychiatry

Cherise Chin Fatt, Ph.D.
Sr. Research Associate

Dr. Helen Lai receives 2018 Rita Allen Foundation Award in Pain Scholars



The **Rita Allen Foundation** has named [Helen Lai, Ph.D.](#), one of two 2018 **Award in Pain Scholars**. The award recognizes emerging leaders in basic pain research whose work holds high potential for uncovering new pathways to improve the treatment of chronic pain.

“My lab is focused on trying to understand the underlying mechanisms that cause painlessness (congenital insensitivity to pain or CIP) in the hope that it will lead to identifying new molecular targets for analgesics,” said Dr. Lai, Assistant Professor of Neuroscience. “While we normally think of pain as something undesirable, sensing painful stimuli actually protects us from harming ourselves.”

Lai was nominated for the award by the American Pain Society and will receive a grant of \$50,000 annually for a period of up to three years.

“We are currently making a mouse model of Prdm12 CIP in collaboration with Dr. Chen Liu in the UT Southwestern Center for Hypothalamic Research. Using this mouse model, we hope to understand how a painless condition develops,” said Dr. Lai.

The Award in Pain is part of the Rita Allen Foundation Scholars Program, which has awarded millions of dollars in grants since 1976 to early-career biomedical scholars studying cancer, immunology, and neuroscience.

“The idea is to be able to open up a whole new area of pain research in the sensory neurons.”

O'Donnell Brain Institute is first site in U.S. for newly-developed MEG

UT Southwestern's Department of Radiology will soon be home to a first-of-its-kind magnetoencephalography (MEG) instrument. The newly-developed MEG system maps brain activity by recording magnetic fields produced by electrical currents occurring naturally in neurons of the brain.

"As the first in the U.S. with the MEGSCAN™ instrument, we will use this technology at the O'Donnell Brain Institute to further innovative research into sports-related, mild traumatic brain injury, and other brain disorders," said [Dr. Joseph Maldjian](#), Chief of the Neuroradiology Division, and Director of the Advanced Neuroscience Imaging Research Lab.

The MEG will also be utilized for pre-surgical mapping of patients suffering from epilepsy and other debilitating illnesses. The imaging device will be housed on North Campus in NE2.728 which will be designated an outpatient radiology clinic. It is expected to be up and running by August 2018.

Researchers at UT Southwestern are welcome to use the MEG at the hourly rate (similar to research MRI scans).



Prototype of new MEG
Image courtesy of York Instruments

"We can provide researchers with training and help with developing a protocol on the new technology," said Elizabeth Davenport, Ph.D., "We want this to be a widely used resource that will, hopefully, provide new insights."



Architectural illustration of new MEG suite

Benefits of new MEG

- **More ecofriendly and less expensive** to operate since it does not require liquid helium
- **40x more sensitive** Partially due to lower noise from the electronics and partially due to the advanced technology of the actual sensor that provides a better signal-to-noise ratio
- **320 sensors** compared to 307 Plus, 32 reference channels

UT Southwestern Stroke Program re-accredited by The Joint Commission

UT Southwestern's Stroke Program has earned re-certification by The Joint Commission as a Comprehensive Stroke Center. The certification recognizes the significant resources, staff, and training necessary for the treatment of complex stroke cases.

The effort to prepare for the survey visit was led by **Shelley Brown**, Director of Neuroscience Services, with assistance from **Suzanne Stone**, Stroke Program Manager.



UTSW Stroke Team

The stroke team's preparation is multidisciplinary with all team members involved. At UT Southwestern, preparations require extra attention since the stroke team spans two hospitals -- Zale-Lipshy University Hospital and William Clements University Hospital.

"Two hospitals, one stroke center -- we need to make sure that all of our processes are in alignment between the two facilities and show that we are working together for the patient," said Stone. "That means regular staff education year-round and constant communication."

The surveyors spent two days at Zale and Clements, interviewing a wide range of team members, examining patient records, and learning about the stroke team's outcomes and research.

"Having our comprehensive certification is critical because UT Southwestern is where other facilities throughout the region send their toughest cases," said Stone.



(l-r) Kimberly Oas, Assistant Director, Advanced Practice Providers; Kimberley Sandlin, BSN, RN, Stroke Coordinator, City Hospital at White Rock; and Dr. Mark Johnson

Stroke team provides education for Telestroke Program partner

Members of the UT Southwestern stroke team recently paid a visit to City Hospital at White Rock in Dallas, one of UTSW's telestroke partners.

Mark Johnson, M.D., demonstrated the use of the robot that connects UT Southwestern stroke experts with City Hospital's emergency department.

The Telestroke Program provides two-way video examination of stroke patients and review of the cranial CT.

Awards and Recognition

The Cancer Prevention and Research Institute of Texas (CPRIT) awarded [Robert Bachoo, M.D., Ph.D.](#), Associate Professor of Neurology & Neurotherapeutics and Internal Medicine, a \$1.2 million grant. The award will support Dr. Bachoo's study of metabolic regulation of pediatric glioma.



O'Donnell Headlines

MedBlog

[Tightening the stroke treatment timeline: A plan for North Texas](#)

[Dr. Elizabeth Maher: Through the Lens of 2HG](#)

[Dr. Madhukar Trivedi: The Depression Initiative](#)

[Dr. Marc Diamond: On the trail of tau](#)

[Epilepsy surgery advancements can eliminate seizures, improve patients' memories](#)

[Shirley Williams – The Joy of Discovery](#)

Newsroom

[Could organ transplant drugs protect against Alzheimer's?](#)

[Symposium presents latest in imaging applications, opportunities](#)

[Altering songbird brain signaling provides insight into human behavior](#)

[Brain injury may boost risk of Alzheimer's earlier in life](#)

[DaiWai Olson, Ph.D., R.N., FNCS](#), Associate Professor of Neurology & Neurotherapeutics, and Director of the [Neuroscience Nursing Research Center](#), was appointed to two leadership roles with the Neurocritical Care Society (NCS).

Dr. Olson is the new co-chair of the Neurocritical Care Research Network Operations Subcommittee. In 2020, he will

serve as co-executive director for the Neurocritical Care Research Central Committee, which establishes NSC's research priorities and coordinates all research activities.



[Claudio Morales-Perez, Ph.D.](#), a researcher in the [Hibbs Lab](#), was awarded the [Fred Hutchinson-Cancer Research Center's](#) Harold M. Weintraub Graduate Student Award which recognizes outstanding achievement during graduate studies in the biological sciences.



O'Donnell Outreach and Events

Stroll for Epilepsy Awareness

UTSW's Jennifer Griffin is heading up the team for the Epilepsy Stroll at the Dallas Zoo. This is a family-friendly event and everyone is invited. The event is \$35 and includes zoo admission, a t-shirt, vendors with giveaways, food, and drinks. Parking is \$10.

[Join the team or donate.](#)

Date and Time: Saturday, April 7, 2018 - 9 a.m. (registration begins at 7:45 a.m.)

Location: The Dallas Zoo at 650 South R.L. Thornton Freeway

Walk MS: Dallas 2018

Nurse Practitioner [Crystal Wright](#) is leading the [UTSW Remyelinators Team](#) for this year's Walk. Join Crystal and her co-workers from the Multiple Sclerosis Clinic to support MS research.

Date and Time: Saturday, April 14, 2018 - Site opens at 7:30 a.m.; Walk begins at 8:30 a.m.

Start/Finish Location: Addison Circle Park - 4970 Addison Cir., Addison, Texas 75001

Register or donate: [UTSW Remyelinators Team](#)

Neuroscience Department Retreat

The retreat will feature talks from faculty, students, postdocs, and a keynote by Dr. Nelson Spruston as well as a poster session. Breakfast will be served prior to the start of the retreat with lunch at noon providing time to view the art in the sculpture center.

Date and Time: Tuesday, April 24, 2018

Location: Nasher Sculpture Center

[Registration required](#)

The Jean and Bill Booziotis Distinguished Lecture

Presented by The University of Texas at Dallas Center for Vital Longevity

Speaker: Adam Gazzaley, M.D., Ph.D., University of California, San Francisco

"Technology meets Neuroscience - a Vision of the Future of Brain Optimization"

Date and Time: Tuesday, April 24, 2018 - 7 p.m.

Location: Communities Foundation of Texas, 5500 Caruth Haven Lane, Dallas, TX

[Register](#) for this free event as seating is limited.

2018 North Texas Head for the Cure 5k Run/Walk

The O'Donnell Brain Institute is once again fielding a team for The Head for the Cure Run/Walk. Funds raised support the Brain Tumor Trials Collaborative and UT Southwestern is a local beneficiary. Join your co-workers at the walk or donate to defeat brain cancer [UTSW Peter O'Donnell Jr. Brain Institute Team Page](#)

Date and Time: Saturday, May 5, 2018 - Registration begins at 7 a.m.; 5k run/walk begins at 8 a.m.

Location: Oak Point Park Amphitheater - 2801 E. Spring Creek Pkwy., Plano, Texas 75074

Bonus: Team members receive an O'Donnell t-shirt!

SOLUNA International Music & Arts Festival - Music and the Brain

Presented by the Dallas Symphony Association and UT Southwestern

World-renowned brain scientists and clinicians discuss music and art's incredible power to shape young minds and influence early childhood learning. Moderated by Dr. Mark Goldberg, Professor and Chair of Department of Neurology and Neurotherapeutics. The UT Southwestern community can receive discounted tickets with the promo code **UTSW**. Go to the [event page](#) to purchase tickets.

Date and Time: Saturday, May 12, 2018 - 1 p.m.

Location: Moody Performance Hall, 2520 Flora Street, Dallas, TX