

UT Southwestern campaign infuses \$1B into Peter O'Donnell Jr. Brain Institute

February 16, 2022

O'Donnell Brain Institute philanthropic campaign among largest neuro-focused investments by U.S. academic medical center

DALLAS – Feb. 16, 2022 – UT Southwestern Medical Center has completed a five-year, \$1 billion campaign to fuel its commitment to advance brain research and clinical care at its Peter O'Donnell Jr. Brain Institute (<https://odonnellbraininstitute.utswestern.edu/>), making it one of the largest brain-focused investments at a U.S. academic medical center.

The campaign yielded in excess of \$500 million in community philanthropic support for research, technology enhancements, and faculty recruitment, combined with \$500 million in investments in facilities and programs from UT Southwestern to further translational and basic research, training, and leading-edge care in the fields of Neurology, Neurosurgery, Psychiatry, Physical Medicine and Rehabilitation, and basic Neuroscience underlying brain disease and injury.

"This billion-dollar investment reflects UT Southwestern's commitment to work at the vanguard of basic scientific and clinical research aimed at understanding brain function, and to uncovering transformational insights for diagnosis and treatment of disorders affecting the brain. Our hope is that one day no patient diagnosed with brain disease will ever hear the words 'there is no cure,'" said Daniel K. Podolsky, M.D.

(<https://www.utswestern.edu/about-us/office-of-the-president/about-daniel-podolsky/>), President of UT Southwestern.

"We want to thank everyone who contributed to this campaign," said Robert B. "Bob" Rowling, Chair of the Campaign for the Brain Steering Committee. "The funds that have been raised will ensure that the O'Donnell Brain Institute is an epicenter for brain research. There's no telling what kind of discoveries are going to come out of this."

The support is enabling the O'Donnell Brain Institute to:

- Advance research on the underlying mechanisms of brain disease in order to develop more effective therapies.
- Enroll more people in clinical trials to quickly move research discoveries to patients.
- Expand UT Southwestern's research and clinical expertise by recruiting rising stars across the spectrum of relevant disciplines.
- Provide state-of-the-art facilities to carry out the Institute's mission including a nine-story research tower – the Peter O'Donnell Jr. Biomedical Research Building – that will open later this year to significantly expand research space for the O'Donnell Brain Institute's 2,100-plus faculty members, additional recruits, and staff, as well as the Third Tower of William P. Clements Jr. University Hospital opened last year as the inpatient home of the Institute to provide the very best environment of care for our patients suffering from brain disease.
- Broaden the computational and analytical support (<https://odonnellbraininstitute.utswestern.edu/about-us/bioinformatics.html>) needed to effectively analyze large numbers of proteins, genes, neurons, and other potential therapeutic targets.
- Acquire enhanced imaging and other advanced technology such as the most sensitive magnetoencephalography, or MEG (<https://utswmed.org/conditions-treatments/magnetoencephalography-meg/>) in the country, which maps brain activity to assess everything from concussions to dementia.
- Provide breakthrough treatments such as high-intensity focused ultrasound (HIFU) (<https://www.utswestern.edu/ctplus/stories/2021/hifu-procedure.html>) for patients with essential tremors (ET) and tremor-predominant Parkinson's disease (TPPD).



A new nine-story research tower – the Peter O'Donnell Jr. Biomedical Research Building – opens this year to significantly expand laboratory space on campus for brain research.

Learn More

- NeuroSphere 360®: An Immersive Voyage Into the Brain (<https://utswmed.org/odonnell/experience-neurosphere-360/>)
- Meet Some of Our Researchers (<https://odonnellbraininstitute.utswestern.edu/researchers/>)
- Watch Videos Explaining Our Research (<https://utswmed.org/odonnell/understanding-becomes-healing/>)
- Discovery through Collaboration (<https://odonnellbraininstitute.utswestern.edu/giving/>)
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"I consider the brain the next frontier in medicine," said the late Mr. O'Donnell when making an initial gift to launch the Institute. Over the years, Mr. O'Donnell, along with his late wife, Edith, and the O'Donnell Foundation they established, contributed more than \$300 million to UT Southwestern, supporting some of the most innovative and impactful programs at the Medical Center. "We need discovery, and that's going to be done by the most talented people we can find and support. It can't be done just wishing it's going to happen. You've got to make it happen."

Epilepsy and neurosurgery specialists at the O'Donnell Brain Institute helped SMU student Hope Anderson get her life back on track after being diagnosed with a glioma. Watch her inspirational story.

O'Donnell Brain Institute collaborations are key

Collaboration is a foundational hallmark of the O'Donnell Brain Institute. These include the Center for Alzheimer's and Neurodegenerative Diseases

(<https://www.utsouthwestern.edu/education/medical-school/departments/alzheimers/>), Center for Translational Neurodegeneration Research (<https://www.utsouthwestern.edu/education/medical-school/departments/molecular-genetics/research/alzheimers/>), Texas Institute for Brain Injury and Repair (http://www.utsouthwestern.edu/research/brain-injury/index.html?_ga=2.91141018.1292630319.1644264381-1350726491.1643983124), Mobility Foundation Center for Rehabilitation Research (<https://www.utsouthwestern.edu/education/medical-school/departments/mobility/>), Annette G. Strauss Center for Neuro-Oncology (http://www.utsouthwestern.edu/education/medical-school/departments/neurological-surgery/strauss-center.html?_ga=2.125688074.1292630319.1644264381-1350726491.1643983124), Center for Depression Research and Clinical Care (<https://www.utsouthwestern.edu/education/medical-school/departments/psychiatry/research/center/>), and the Advanced Imaging Research Center (<https://www.utsouthwestern.edu/education/medical-school/departments/neurology/research/microscopy-facility/>), supported by the Texas Institute for Brain Injury and Repair, is particularly well-suited to advance the study of traumatic brain injury, utilizing cutting-edge microscopy strategies.

"Solving brain disease is going to take everyone working together – the person studying molecules in the lab, the clinician understanding a patient's symptoms, the staff caring for the patient, and everyone in between," said William Dauer, M.D., the inaugural Director of the Peter O'Donnell Jr. Brain Institute (https://profiles.utsouthwestern.edu/profile/160934/william-dauer.html?_ga=2.131552527.1292630319.1644264381-1350726491.1643983124) and a Professor of Neurology and Neuroscience acclaimed for his research into dystonia and Parkinson's disease.

Discoveries Under Way

Already, O'Donnell Brain Institute scientists are attempting medical feats not feasible a decade or two ago, from treating depression with brain electrodes, to correcting fatal genetic mutations, to detecting processes underlying Alzheimer's through neuron analysis. The O'Donnell Brain Institute is leading national discoveries in several areas. Examples include:

- Biomarkers differentiating types of psychosis (<https://www.nih.gov/news-events/news-releases/biomarkers-outperform-symptoms-parsing-psychosis-subgroups>) to better understand the pathophysiology of schizophrenia and related disorders and to explore how the brain makes a hallucination or a delusion, providing insight at the cellular and synaptic levels.
- A Depression Initiative (<https://utswmed.org/medblog/dr-madhukar-trivedi-depression-initiative/>) to identify pharmacological, psychosocial, and nonpharmacological treatments for depression, including MRI brain-imaging biomarkers that bring new levels of precision for prescribing the most effective antidepressants, as well as national collaborations to expand detection and treatment for depression and other disorders through UTSW's Center for Depression Research and Clinical Care (<https://www.utsouthwestern.edu/education/medical-school/departments/psychiatry/research/center/>).
- Development of a single-cut gene-editing technique using CRISPR technologies that has halted Duchenne muscular dystrophy (<https://www.science.org/doi/full/10.1126/science.aau1549>) in animal models.
- A gene therapy program (<https://www.utsouthwestern.edu/newsroom/articles/year-2018/children-of-hope.html>) focused on developing treatments for rare, deadly neurological diseases in children, leading to the launch of the first clinical trials last year that have attracted patients across the globe.
- Use of direct recordings of stereo EEG to locate the origin of epileptic seizures (<https://www.utsouthwestern.edu/labs/tcm/>) in the brain and develop strategies that can improve memory function and restore memory for patients with brain injuries or tumors.
- Investigation of molecular pathways important for human brain evolution (<https://www.konopkalab.org/>) that are also at risk in cognitive disorders such as autism and Alzheimer's disease to uncover disease-relevant patterns of gene expression.

- Pioneering the use of forward genetics and positional cloning in mouse models as a tool for discovering genes underlying neurobiology and behavior, including description of a conserved circadian clock mechanism (<https://www.utsouthwestern.edu/labs/takahashi-joseph/>) in animals.
- Investments in cryo-electron microscopy (cryo-EM) – an imaging system that allows visualization of proteins at the atomic level to reveal the structure and function of receptors on the surface of brain cells and how they interact with drugs.

“Understanding the complexity of normal brain function in the human brain, and how it is altered in brain injury and disease, is an imposing challenge,” noted Dr. Podolsky. “We needed help to meet this challenge. Our community of supporters and friends at Southwestern Medical Foundation responded with extraordinary generosity during extraordinary times. We are deeply appreciative of the confidence and partnership represented by every contributor – our philanthropists, our patients, our scientists, our caregivers, and our collaborators – to solve the puzzle of brain function and alleviate the suffering of so many patients and their families impacted by brain disease and injuries.”

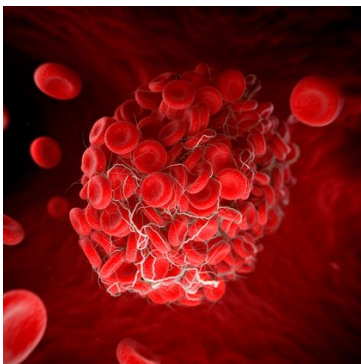
Dr. Dauer holds the Lois C.A. and Darwin E. Smith Distinguished Chair in Neurological Mobility Research.

Dr. Podolsky holds the Philip O'Bryan Montgomery, Jr., M.D. Distinguished Presidential Chair in Academic Administration, and the Doris and Bryan Wildenthal Distinguished Chair in Medical Science.

About UT Southwestern Medical Center

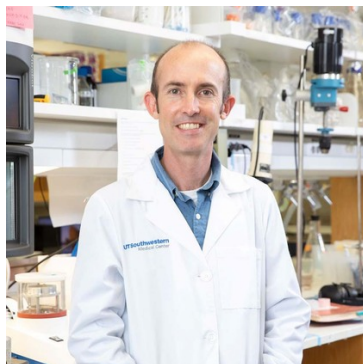
UT Southwestern, one of the nation’s premier academic medical centers, integrates pioneering biomedical research with exceptional clinical care and education. The institution’s faculty has received six Nobel Prizes and includes 25 members of the National Academy of Sciences, 17 members of the National Academy of Medicine, and 14 Howard Hughes Medical Institute Investigators. The full-time faculty of more than 2,800 is responsible for groundbreaking medical advances and is committed to translating science-driven research quickly to new clinical treatments. UT Southwestern physicians provide care in about 80 specialties to more than 117,000 hospitalized patients, more than 360,000 emergency room cases, and oversee nearly 3 million outpatient visits a year.

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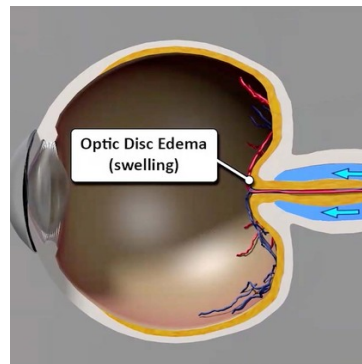
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