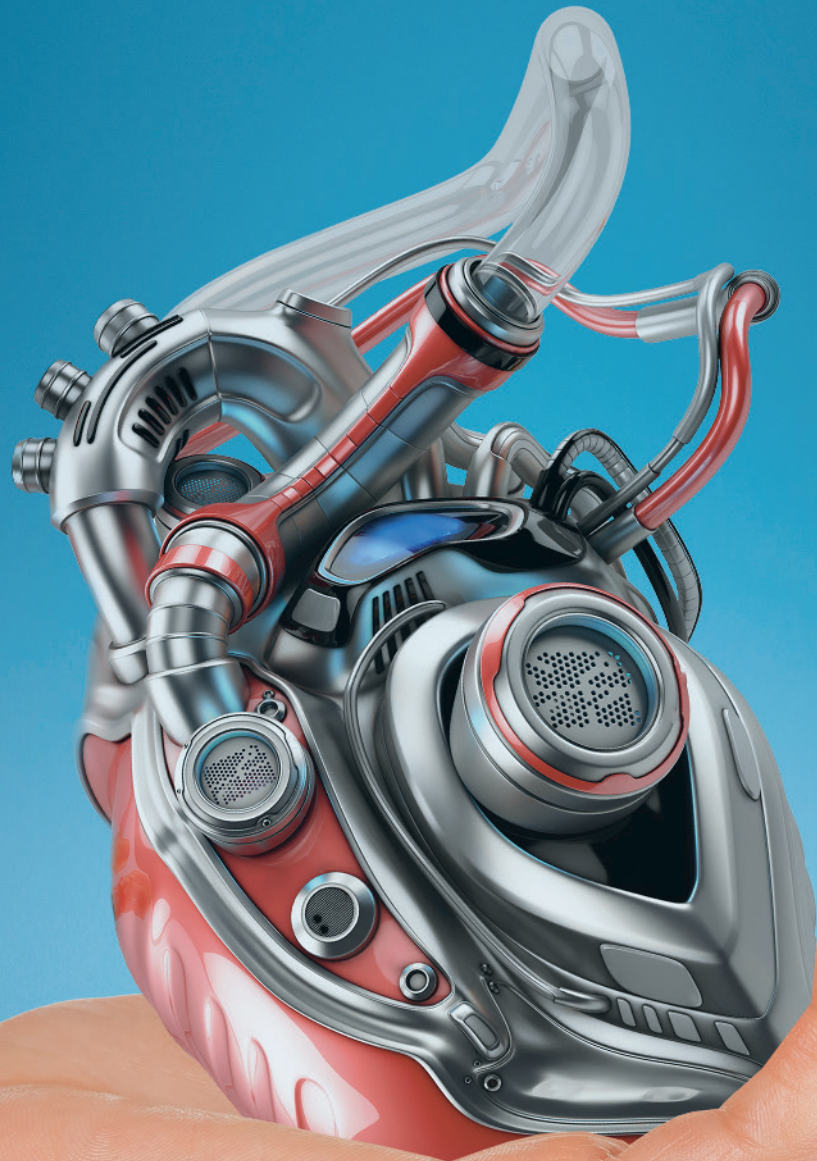


Pathways

THE POWER OF PHILANTHROPY

UT Southwestern
Medical Center

Spring 2022



Wholehearted

Gift from Texas Instruments kicks off construction
for UT Southwestern's new biomedical partnership

Campus Paths

The rising sun brings a glow to William P. Clements Jr. University Hospital at UT Southwestern. Rated the No. 1 hospital in North Texas for five consecutive years, the patient-centered building was named in honor of a landmark gift from former Texas Gov. William P. Clements Jr.



UT Southwestern William P. Clements Jr. University Hospital

6201

6201

UT Southwestern
William P. Clements Jr.
University Hospital



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Confronting Mental Illness

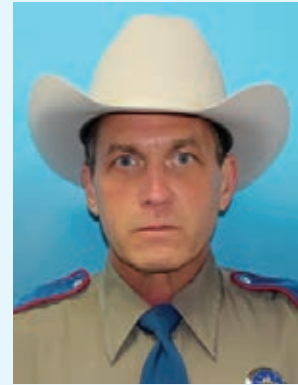
Addressing a growing need for inpatient mental health care, the state of Texas is partnering with UT Southwestern to develop North Texas' first state-funded psychiatric hospital.



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Where Medicine and Engineering Intersect

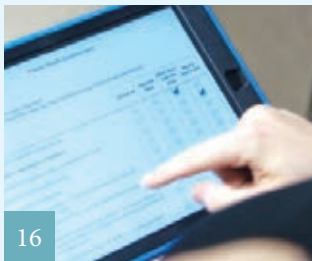
Catalyzing a unique research partnership, the groundbreaking for the new Texas Instruments Biomedical Engineering and Sciences Building marks a new chapter of research innovation.



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The Power of Care

When the time came for a Texas state trooper to make a final trip to the mountains of West Texas, UT Southwestern's palliative care team helped make sure he was ready.



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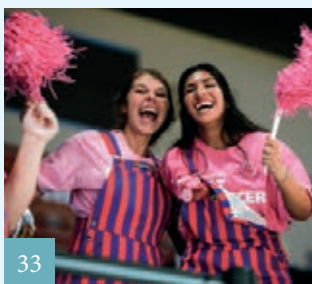
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THE POWER OF PHILANTHROPY
Pathways

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UT Southwestern is an Affirmative Action/Equal Opportunity Employer. Women, minorities, veterans, and individuals with disabilities are encouraged to apply.

Focused on Improving Health and Moving Forward

As the pandemic enters its third year, the UT Southwestern commitment to solving the challenges of COVID-19 continues alongside ongoing research and medical innovation in numerous other areas. It is gratifying to witness the many exciting breakthroughs taking place at UTSW, and I appreciate your ongoing support, which makes these efforts possible.

Last November, a groundbreaking for the Texas Instruments Biomedical Engineering and Sciences Building ushered in a new era for biomedical research and technology in North Texas. This facility, a joint effort of UTSW and UT Dallas, will also serve as the home of a new Department of Biomedical Engineering at UT Southwestern. Leading the Department is Samuel Achilefu, Ph.D., who joined UT Southwestern Feb. 1 from the Mallinckrodt Institute of Radiology at Washington University School of Medicine in St. Louis. His research interests include nanotechnology and image-guided cancer surgery. You can read more about the potential of this collaboration, the new Department, and Dr. Achilefu in this issue of *Pathways*. Generous gifts from Texas Instruments, Lyda Hill Philanthropies, the Hillcrest Foundation, and Sara and David Martineau have led the way in making this project a reality.

Another major initiative underway is the planning and design of a new state psychiatric hospital in Dallas, which UT Southwestern was asked to lead at the request of the Texas Health and Human Services Commission. Last year, the Texas Legislature appropriated more than \$282 million for the project, which will bring the first state-funded psychiatric hospital to Dallas-Fort Worth. When completed, as early as 2025, UT Southwestern will also operate the hospital, which will expand opportunities to advance research into the causes of mental illnesses, improve treatments, expand the mental health workforce, and fill a critical need for inpatient mental health care in our region.

In education, UT Southwestern remains focused on strengthening its commitment to diversity and inclusion, with one of the latest efforts involving the launch of a Postbaccalaureate to PhD Program to help prepare students from underrepresented communities pursue doctorates in biomedical science. This project is being supported by the Communities Foundation of Texas, a longtime advocate of our work.

I hope you will find that these stories and others reinforce your support of and dedication to the educational, clinical, and investigative efforts here at UT Southwestern. We are grateful for your steadfastness as we navigate these challenging times and continue to move forward in our mission.



Marc A. Nivet, Ed.D., MBA
Executive Vice President for Institutional Advancement
UT Southwestern Medical Center

Around Campus

UTSW Welcomes New Leaders



Samuel Achilefu, Ph.D.

Samuel Achilefu, Ph.D., joined the UTSW faculty in January as the inaugural Chair of the Department of Biomedical Engineering. Along with his demonstrated success in innovative research and clinical impact, he brings exceptional leadership and vision to strengthen the collaboration between UTSW and UT Dallas that will advance bioengineering innovation and transform patient care. Previously, he served as Director, Optical Radiology Laboratory, and Professor of Radiology, Biomedical Engineering, and Biochemistry & Molecular Biophysics at the Mallinckrodt Institute of Radiology at Washington University School of Medicine in St. Louis. His research interests include image-guided cancer surgery, portable imaging devices, and nanotechnology. Last year, he was elected to the prestigious National Academy of Medicine, considered one of the highest honors in the fields of health and medicine.



J. William Harbour, M.D.

On Nov. 1, 2021, **J. William Harbour, M.D.**, joined the UTSW faculty as Chair of the Department of Ophthalmology. As holder of The David Bruton, Jr. Chair in Ophthalmology, he hopes to take advantage of the Department's strengths and the growth in the region to take it to the next level. Specializing in ocular oncology, Dr. Harbour has pioneered new surgical methods in fine needle biopsy, laser treatment, and brachytherapy of ocular tumors. His research interests include the use of genetic and genomic technologies to better understand, diagnose, and treat eye cancers. Previously, he served as Vice Chair for Translational Research at the Bascom Palmer Eye Institute and Associate Director for Basic Science at the Sylvester Comprehensive Cancer Center at the University of Miami.



Catherine Y. Spong, M.D.

On Sept. 1, 2021, **Catherine Y. Spong, M.D.**, began her appointment as Chair of the Department of Obstetrics and Gynecology at UTSW. Holder of the Paul C. MacDonald Distinguished Chair in Obstetrics and Gynecology, she specializes in prematurity, fetal complications, and improving outcomes in children. Her research interests include development of the fetus, improving the understanding of stillbirth, fetal surgery, Zika virus, COVID-19, and the placenta. Before joining UTSW in 2018, Dr. Spong served as Deputy Director of the National Institute of Child Health and Human Development, a division of the National Institutes of Health, where she spent 23 years in numerous capacities, including Acting Director, Director of Extramural Research, and Chief of the Pregnancy and Perinatology Research Branch.

Two UTSW Researchers Named Howard Hughes Medical Institute Investigators

Vincent Tagliabracci, Ph.D., Associate Professor of Molecular Biology, and Benjamin Tu, Ph.D., Professor of Biochemistry, both members of UTSW's Harold C. Simmons Comprehensive Cancer Center, were among 33 distinguished scientists nationwide – and the only Texas scientists – named in 2021 as Howard Hughes Medical Institute (HHMI) Investigators. Dr. Tagliabracci is working to unravel the mysteries of a novel family of enzymes called pseudokinases and their relevance to human health. Dr. Tu's work linking cellular metabolism to critical cell functions is leading to a better understanding of a variety of diseases, including cancer. Each investigator will receive about \$9 million over a seven-year term, which is renewable pending a scientific review by HHMI, a philanthropic organization created to advance basic biomedical research and science education for the benefit of humanity.

Dr. Tagliabracci is a Michael L. Rosenberg Scholar in Medical Research.

Dr. Tu holds the Martha Steiner Professorship in Medical Research and is a UT Southwestern Presidential Scholar and W.W. Caruth, Jr. Scholar in Biomedical Research.



Vincent Tagliabracci, Ph.D.



Benjamin Tu, Ph.D.



School of Health Professions Holds In-Person Commencement

On Dec. 12, 2021, UTSW's School of Health Professions honored candidates for 132 degrees at its first in-person commencement since the COVID-19 pandemic began. Graduates shared in one another's accomplishments and celebrated the culmination of their years of academic work. The School's faculty also serve as clinicians, and students benefit by learning from educators who integrate their clinical knowledge into their teaching. This unique advantage in medical education will impact students' future roles in health care. We wish them well as they go on to pursue their dreams.

UTSW Earns Redesignation as a Magnet Organization

On Sept. 15, 2021, UTSW nurses were once again honored for excellence as the Medical Center earned redesignation as a Magnet organization from the American Nurses Credentialing Center (ANCC). UTSW first achieved Magnet status in 2016. Considered the ANCC's highest honor, the recognition is given to health care organizations that design nursing goals to improve patient outcomes. According to the ANCC's Commission on Magnet, fewer than 9% of U.S. hospitals have earned Magnet designation. Congratulations to our nursing team colleagues for the outstanding work they carry out every day at UTSW.

CPRIT Award Enhances Access to and Diversity in Cancer Clinical Trials

The Cancer Prevention and Research Institute of Texas has awarded a \$1.5 million grant to David Gerber, M.D., Professor of Internal Medicine and Population and Data Sciences and Associate Director of Clinical Research, to increase access to cancer clinical trials for



David Gerber, M.D.

underrepresented minorities. People from underserved communities face barriers in gaining access to promising new cancer treatments because participation requires an increasing number of procedures and clinic visits. Dr. Gerber's project is an outreach program that will reimburse 350 patients

from underserved groups to participate in clinical trials and increase the number and diversity of patients. Through surveys and interviews, he will study factors that promote and hinder program success and will demonstrate the feasibility and impact of his intervention to health care systems and clinical trial sponsors, supporting the development of similar programs throughout Texas and nationwide.

Academic Endowment Appointments

Congratulations to UT Southwestern's newly named endowment holders for their outstanding leadership on campus and in their fields. We celebrate their extraordinary achievements and their commitment to the UTSW mission to educate, discover, and heal.



Samuel Achilefu, Ph.D.
Lyda Hill Distinguished University Chair
in Biomedical Engineering



J. William Harbour, M.D.
The David Bruton, Jr. Chair in Ophthalmology



Emina Huang, M.D.
Doyle L. Sharp, M.D. Distinguished Chair
in Surgical Research



Genevieve Konopka, Ph.D.
Townsend Distinguished Chair in Research on Autism
Spectrum Disorders



Nicolas Madsen, M.D., M.P.H.
Pogue Family Distinguished Chair in Pediatric Cardiology



Heather McArthur, M.D., M.P.H.
Komen Distinguished Chair in Clinical Breast Cancer Research



Joshua Mendell, M.D., Ph.D.
Charles Cameron Sprague, M.D. Chair in Medical Science



Samir Parikh, M.D.
Robert Tucker Hayes Distinguished Chair in Nephrology,
in Honor of Dr. Floyd C. Rector, Jr.
Ruth W. and Milton P. Levy, Sr. Chair in Molecular Nephrology



Trish Perl, M.D., M.Sc.
H. Ben and Isabelle T. Decherd Chair in Internal Medicine
in Honor of Henry M. Winans, Sr., M.D.



Joseph Ready, Ph.D.
Ronald W. Estabrook, Ph.D. Distinguished University
Chair in Biomedical Science



Catherine Spong, M.D.
Paul C. MacDonald Distinguished Chair
in Obstetrics and Gynecology



Uttam Tambar, Ph.D.
Bonnie Bell Harding Professorship in Biochemistry



Andrew Wang, M.D.
A. Kenneth Pye Professorship in Cancer Research

These faculty appointments were made from August to November 2021.

LEADERSHIP

Q&A

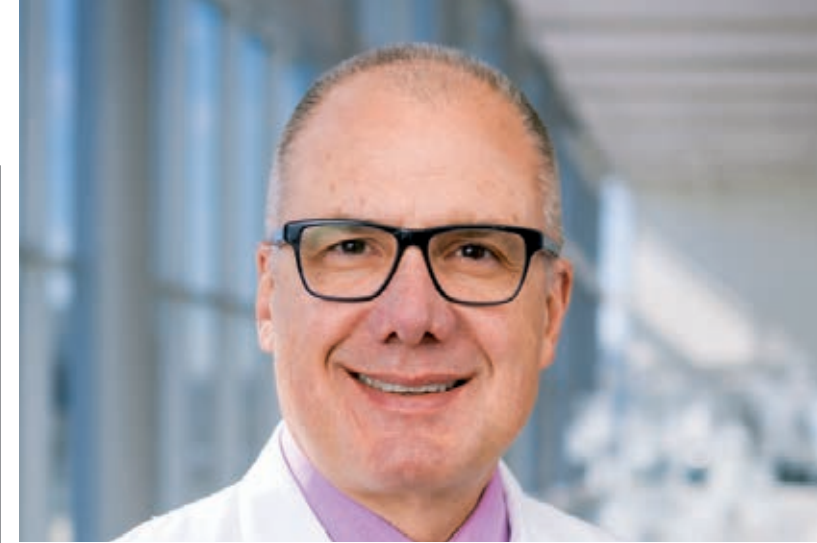
J. William Harbour, M.D., joined UT Southwestern in November 2021 as the new Chair of Ophthalmology. He succeeds Professor Emeritus James McCulley, M.D., who led the Department for 40 years before retiring June 30, 2021, as Chair. A Dallas native, Dr. Harbour is happy to return to his roots to play a role in shaping the future of medicine at UTSW. A clinician-scientist with a busy clinical/surgical practice and an active laboratory, Dr. Harbour was recruited from the University of Miami Miller School of Medicine, where he served as Vice Chair for Translational Research at the Bascom Palmer Eye Institute and as Associate Director for Basic Science at the Sylvester Comprehensive Cancer Center. Much of his research has focused on uveal melanoma and retinoblastoma, the most common eye cancers in adults and children, respectively. His work has led to the discovery of several genetic events associated with tumor progression and metastasis. He has developed new surgical methods for intraocular biopsy, radioactive plaque surgery, and vitrectomy in eyes with intraocular tumors.

What is your vision for the Department?

I'm fortunate to be starting with a large, vibrant Department with a strong foundation, which is a tribute to Dr. McCulley's leadership. We have a strong, busy clinical faculty, very good clinical facilities, a strong training program, and great researchers. My goal is to take advantage of those strengths and the growth in the region to take it to the next level.

Why did you decide to join the faculty of UTSW?

A big reason was the exciting growth happening here. I grew up in Dallas, and I can remember when the Medical School was just at the South Campus. The North Campus was only open fields. When I came back to visit my family, it was exciting to see a vibrant medical center there. With the growth of the area's population, there's a real opportunity in my field to make



J. William Harbour, M.D.

UT Southwestern into a major referral center for hundreds of miles around. I am also looking forward to developing collaborations with world-class experts at UT Southwestern in several fields to develop synergy with my own.

What is exciting in the field of ophthalmology now?

There's been a revolution in care in the last decade. Many diseases, like macular degeneration, used to inevitably lead to blindness but can now be treated. Many of these advances have been spurred by cutting-edge research in proteomics, genetics, and pharmacology. My passion is turning advances in the lab into advances in patient care. I think UT Southwestern is really poised to lead in a lot of these areas.

What role does philanthropy play in achieving your departmental goals?

Philanthropy is critical to my goal for the Department of Ophthalmology to become a preeminent destination for ophthalmic care, education, and research in Texas and nationally. Philanthropy allows us to recruit leading scientists and surgeons, offer exceptional training opportunities, and procure resources that in turn allow us to provide unsurpassed medical care to our patients. No person in Texas with an eye or vision problem, no matter how serious or complex, should have to travel beyond UTSW to find the best ophthalmic care available anywhere.

Dr. Harbour holds The David Bruton, Jr. Chair in Ophthalmology.



school band and valedictorian of her class. She graduated summa cum laude from Texas A&M University and attended medical school at UT Southwestern Medical Center. After graduation, **Dr. Deidi Bergestuen completed the first two years of an internal medicine residency at UT Southwestern** before marrying Dr. Trond Bergestuen and moving to Syracuse, New York. There, she completed her residency at State University of New York, where she also served as Chief Resident.

In 2001, the Bergestuens moved to Oslo, Norway, where Dr. Deidi Bergestuen worked as an attending physician and research fellow at Oslo University Hospital and completed a Ph.D. in gastroenterology. Along the way, the couple had two daughters.

In 2011, Dr. Deidi Bergestuen, a nonsmoker, was diagnosed with stage 4 lung cancer. The family moved back



Trond Bergestuen, Ph.D., and his daughters in the mountains of Norway

L O N G - D I S T A N C E L E G A C Y

Bergestuen family's cancer battle leads to lasting benefit for medical students

By Andrew Marton

A runner and outdoors enthusiast, Trond Bergestuen, Ph.D., has always loved long distances. So, it's fitting that the Norwegian married a doctor who hailed from the plains of West Texas. More fitting, still, is that the couple met in Spain, while attending the University of Santiago de Compostela, located in a city at the finish line of a 500-mile medieval pilgrimage route.

The woman he fell in love with was **Deidi Strickland Bergestuen, M.D., Ph.D., a natural-born leader from Plainview, Texas**, who was drum major of her high



Deidi Strickland Bergestuen, M.D., Ph.D.

to the United States, where she received excellent care at UT Southwestern and the University of Colorado. In 2015, she finished a fellowship in gastroenterology at UT Southwestern before being hired as Director of the Clinical Skills Program at the Texas Christian University & University of North Texas Health Science Center Medical School at Fort Worth.

Steadfast in her Christian faith until her cancer battle came to an end, she died in 2020. **To honor her memory, her medical school classmates established the Deidi Strickland Bergestuen Class of 1994 Scholarship to be awarded to deserving medical school students.** With contributions from classmates, colleagues, and the Bergestuen and Strickland families, the scholarship endowment reached its \$20,000 goal, creating a permanent tribute to Dr. Deidi Bergestuen and a perpetual impact on future UT Southwestern students.

Unfortunately, her fight with cancer wasn't the family's only battle with the disease.

"The funeral for my wife was on July 24, and I was diagnosed with bladder cancer just a month later," Dr. Trond Bergestuen said. "That was quite a shock."

Following a couple of months of chemotherapy at UT Southwestern Harold C. Simmons Comprehensive Cancer Center at Moncrief Cancer Institute in Fort Worth, Trond underwent surgery at UT Southwestern's William P. Clements Jr. University Hospital to remove his bladder and prostate. Since his surgery, all of his scans have been normal, and he is now cancer-free.

After a lengthy rehab, he has once again returned to running his favorite trails. He has completed several 5K races following his recovery and is looking forward to running longer distances again.

This summer, he plans to get a few more miles under his belt – this time hiking in the Norwegian mountains.

"Spending summers in the mountains with my daughters is something dear to my heart, and I so look forward to that again." ■



CONFRONTING MENTAL ILLNESS

UT Southwestern, Texas Health and Human Services Commission partner on new state psychiatric hospital for Dallas-Fort Worth

By Andrew Marton

Texas ranks No. 33 out of 51 states and the District of Columbia in access to mental health care, according to a recent report published by the nonprofit Mental Health America. This is particularly evident in the lack of capacity for inpatient psychiatric care in North Texas.

Until now, a state-supported psychiatric hospital has been noticeably missing in Dallas-Fort Worth, the nation's fourth most populous metropolitan area. People in need of care sometimes wait days or even weeks for a bed to become available, remaining in an emergency department or non-specialty health facility without receiving the comprehensive specialized care they need.



UT Southwestern has stepped forward to help meet this need. Together with the Texas Health and Human Services Commission (HHSC), the Medical Center is developing D-FW's first state-funded psychiatric hospital, a critical step in satisfying the considerable and growing demand for inpatient mental health services in North Texas.

Last year the Texas Legislature appropriated more than \$282 million to plan and construct a state psychiatric hospital in North Texas. As part of the interagency agreement with HHSC, UT Southwestern will take responsibility to lead the planning and design process, oversee construction, and ultimately operate the new facility.

“As a public institution, this commitment to help build the first state psychiatric facility in the Dallas-Fort Worth Metroplex represents a critical step in efforts to address the acute and growing need for inpatient mental health services,” said Daniel K. Podolsky, M.D., President of UT Southwestern.

UT Southwestern is uniquely positioned and committed to confronting the growing mental health needs of our community and beyond.

“We are grateful for the trust and confidence that the state of Texas and the Texas Health and Human Services Commission have placed in us to help develop and operate this new hospital. Our faculty, researchers, and staff are looking forward to working with the region’s stakeholders to leverage the state’s investment in order to increase the availability of mental health care, advance the research needed to develop the next generation of treatments, and expand the mental health workforce.”

While details may evolve during the planning process, the hospital is currently envisioned as a 200-bed facility to be located on the UT Southwestern campus. The new facility will serve adults with serious, acute mental health problems as well as people being evaluated on behalf of the criminal justice system.

Beyond the exceptional care that psychiatric patients will receive, UT Southwestern’s leadership as a top academic medical center provides other important benefits. The hospital will afford researchers at UTSW an opportunity to interact with a large patient population that can advance voluntary studies to understand the causes of mental illnesses and improve treatments for conditions that can only be treated symptomatically today. In addition, UTSW researchers will examine current treatments to develop best-in-class protocols and collaborate with other mental health facilities to share those guidelines.

The hospital, in partnership with UT Southwestern Medical School, will enable more future psychiatrists, psychologists, nurses, social workers, and other professionals to be trained, promoting workforce development in Texas and lessening a statewide shortage of mental health providers. Once construction is completed – as early as 2025 – Dallas will join other major cities, including Houston, San Antonio, and Austin, in what is currently an 11-facility network of state psychiatric hospitals across Texas.

UT Southwestern is uniquely positioned and committed to confronting the growing mental health needs of our community and beyond. **The institution’s research advances – including the discovery of a biomarker for**



Hicham Ibrahim, M.D.

early psychosis and biomarkers that help predict the efficacy of antidepressants – will be game changers in the treatment of mental illness. But more discovery is still needed, and the new state psychiatric hospital will provide critical opportunities to advance new and improved therapies, as UT Southwestern trains future innovators in the area of mental health.

While hospital operations will be state funded, there will be philanthropic opportunities to support training and research activities as well as continuum of care services that aid transitions from inpatient to outpatient care.

“This represents such a huge win for the community,” said Hicham Ibrahim, M.D., Professor of Psychiatry and Associate Vice President and Chief Medical Officer of Ambulatory Services at UT Southwestern, who will lead project management for the initiative. **“We’re proud that UT Southwestern has been entrusted with this new venture, and we will do everything we can to ensure a facility that delivers on all its promises – namely, great care for an underserved patient population.”** ■

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





Empowered by philanthropy, UT Southwestern continues to pursue advances for genetic diseases

Since establishing its gene therapy program four years ago, UT Southwestern Medical Center has made great strides, hiring researchers, unlocking insights, and developing new therapeutics for clinical trials.

“Our vision has been ambitious. We want to get these treatments out of the lab and into the clinic,” said Steven Gray, Ph.D., an Associate Professor in UT Southwestern’s Department of Pediatrics.

Out of about 30 diseases that scientists are studying at the Medical Center for potential gene therapy treatment, six have been approved for clinical trials. Another six are expected to be approved this year.

Working with Berge Minassian, M.D., Division Chief of Pediatric Neurology, Dr. Gray has seen marked growth in gene therapy research at the institution thanks to philanthropic and institutional support.

The duo’s team has grown to 70 researchers and six independent research labs. Together, they’re pursuing possible gene therapy solutions for more than 30 diseases, including giant axonal neuropathy, which can be thought of as a childhood version of Lou Gehrig’s disease.

“One of our primary goals is to develop a way to use gene therapy to treat one disease and then reconfigure that approach to treat hundreds of other diseases,” Dr. Gray said.

A harmless virus is used to deliver a gene into a patient’s cell, kind of like a biological version of a mail truck. Once scientists have a working delivery method, they hope to use it to deliver genetic therapies for a range of other conditions, such as Tay-Sachs disease, by simply loading the truck with a different genetic package.

Rachel Bailey, Ph.D., Assistant Professor of Pediatrics, is pursuing gene therapies for a trio of pediatric disorders with intimidating names: multiple sulfatase deficiency, SLC13A5 deficiency, and ECHS1 deficiency.

Patients with these diseases have changes in their DNA that prevent their bodies from producing specific proteins that allow cells to function properly.

Dr. Bailey is developing genetic instructions that can help patients’ bodies produce the missing protein with the hope of one day helping them live healthier lives.

“If we can successfully give a patient a copy of that blueprint, then their cells can make the protein they need,” said Dr. Bailey, who is also an Assistant Professor with UT Southwestern’s Center for Alzheimer’s and Neurodegenerative Diseases.

Before qualifying for federal research grants or undertaking clinical trials, researchers often rely on philanthropic support from patient advocacy groups and private foundations to fund initial stages of gene therapy research and demonstrate the potential of a therapy.

“Research on many of these genetic disorders was supported by the philanthropic vision of patient families,” Dr. Bailey said. “It would have been impossible to do this work without their support.”

Dr. Gray also acknowledges philanthropy’s impact on early gene therapy research. **“My biggest gratitude goes to those who believed in and supported our research at a time when nobody else would,”** he said. “Even when the science makes sense, it often can’t move forward without investment.” ■

Dr. Minassian holds the Jimmy Elizabeth Westcott Distinguished Chair in Pediatric Neurology.



Rachel Bailey, Ph.D.



Steven Gray, Ph.D.



Building on a long tradition of funding mental health initiatives, The Meadows Foundation has been an integral partner of the Center for Depression Research and Clinical Care at UT Southwestern Medical Center. With its most recent gift of \$750,000, the Dallas-based, private family foundation is helping the Center address gaps in identifying and treating depression and other mood disorders.

Evidence suggests 10%-14% of primary care patients have major depression. While these people regularly see a physician, less than half are diagnosed due to a lack of diagnostic training and screening capabilities.

“The high-quality standard of mental health care that patients deserve is often missing,” said Madhukar Trivedi, M.D., Director of the Center for



Madhukar Trivedi, M.D.

Depression Research and Clinical Care.

Dr. Trivedi, who is also a Professor of Psychiatry and Chief of the Division of Mood Disorders, created the Mood Disorders Network to address that gap.

When patients visit their primary care doctor, it is common for them to have their vital signs measured.

Blood pressure, pulse rate, respiration rate, pain, and temperature are the five most common measurements. In 2014, Dr. Trivedi decided it was time to add a sixth.

Through a program called VitalSign6, the Center has encouraged primary care physicians to make depression screening the sixth vital sign and a regular part of routine patient visits. Using web-based mental health questionnaires, a physician can make an initial diagnosis and access resources to support measurement-based care that include systematic assessment of depressive symptoms, treatment side effects, and treatment adherence.

Currently, **48 partner clinics across North Texas use VitalSign6. More than 63,000 patients have used the tool to date.** According to the Center, patients who screen positive for depression and engage in follow-up visits with a physician experience a 38% remission rate, more than six times higher than the national rate of 6%.

“This new technology makes depression care available to more people by making it part of a routine medical exam,” Dr. Trivedi said.

Since the Center’s inception five years ago, The Meadows Foundation has supported Dr. Trivedi and UT Southwestern’s advances in offering mental health diagnostics to primary care clinics as well as to a wider network of hospitals.

“Funding practical, seamless ways to integrate mental and physical health care and scale it to benefit more Texans is a priority of the Foundation,” said Peter M. Miller, President and CEO of The Meadows Foundation.

For Bruce H. Esterline, the Foundation’s Senior Vice President for Strategy, the Mood Disorders Network’s development of breakthrough diagnostic tools such as VitalSign6 “makes UT Southwestern a leader in blending mental health care into the broader health care community.”

The Foundation has partnered with UT Southwestern to bring even more hospitals into the Mood Disorders Network.

“We were supporting the extraordinary mental health research and technological advances made by UT Southwestern – achievements you could not find anywhere else,” Mr. Miller said.

The significance of the Meadows Foundation’s ongoing support is not lost on the Center’s leader.

“The biggest impact from the Meadows gift,” Dr. Trivedi said, “is their clear support for expanding this technology to more primary care practices and major health systems across our state. This makes The Meadows Foundation’s goals and ours a very nice marriage, indeed.” ■



A patient completes their depression screening using VitalSign6 on a tablet computer.

The National Suicide Prevention Lifeline is a hotline for individuals in crisis or for those looking to help someone else. To speak with a certified listener, call 1-800-273-8255.

Dr. Trivedi holds the Julie K. Hersh Chair for Depression Research and Clinical Care, and the Betty Jo Hay Distinguished Chair in Mental Health.



Kelli Triplett, Ph.D.

Opening New Doors

VitalSign6’s greatest asset is identifying patients with early signs of depression – people who often go undiagnosed.

“These are patients who could have easily flown under the radar,” said Kelli Triplett, Ph.D., a licensed Clinical Psychologist for the Solid Organ Transplant Team at Children’s Medical Center Dallas.

Since she began using VitalSign6, Dr. Triplett estimates 215 organ transplant patients between the ages of 11 and 21 have completed mental health screenings as part of their medical appointments – four times more than the number of patients screened prior to using the technology.

“With adolescent suicide rates skyrocketing, we are trying to normalize the discussion of mental health, and VitalSign6 makes it a key part of a patient’s medical workup,” said Dr. Triplett, who is also an Assistant Professor in UT Southwestern’s Department of Psychiatry.

VitalSign6 uses a nine-item depression survey that patients fill out on a tablet computer. Psychologists and physicians then use the patients’ responses to evaluate their current mental health and whether they are showing signs of depression or anxiety. The program’s diagnostic value comes from the opportunity to check in with patients at every visit, giving them a chance to describe their feelings.

“Before VitalSign6 came along, our team might ask a typical adolescent how they were doing, and they might smile and say they were fine,” Dr. Triplett said. “But when they complete the VitalSign6 program, we see they are able to more honestly select answers admitting they are not doing very well. VitalSign6 allows our team to identify patients who were not openly reporting depression but were experiencing symptoms. It opens the door to an infinitely more honest conversation with a patient.”

Who's lehearted

By Sharon Reynolds



Transformational gift from Texas Instruments

helps create a shared space for biomedical

engineering innovation through joint project

of UT Southwestern and UT Dallas



An architectural rendering depicts the Texas Instruments Biomedical Engineering and Sciences Building, now under construction on UT Southwestern's East Campus.

The potential for biomedical engineering to advance health care was underscored during the Nov. 15, 2021, groundbreaking of the new Texas Instruments Biomedical Engineering and Sciences (BMES) Building on UT Southwestern's East Campus.



Rich K. Templeton, Chairman, President, and CEO of Texas Instruments, addresses guests at the groundbreaking for the Texas Instruments Biomedical Engineering and Sciences Building on Nov. 15, 2021.

Catalyzing a unique partnership between UT Southwestern Medical Center and UT Dallas, the building will bring the two institutions' biomedical engineering programs together to foster innovative solutions for unmet medical needs. As a longtime supporter of both UT Dallas and UTSW, Texas Instruments' generous gift will help create an extraordinary environment for technological innovation.

The collaboration holds great promise for the development of new therapies that will advance clinical care and reduce the burden of disease and injury. Recent advances have begun to show how previously unimaginable bioengineering approaches – such as tissue engineering,

Biomedical Engineers Spark Innovation



Neuroprosthetics

Enable people with motor or sensory disabilities to move, hear, see, and touch by integrating the human brain and computers with devices such as cochlear implants and spinal cord stimulators.



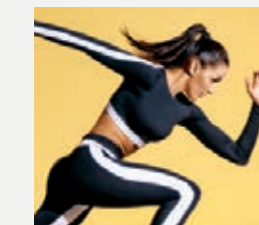
Medical Imaging

Use machine learning and computational imagery to generate images that help physicians diagnose and treat disease using minimally or completely noninvasive procedures.



Tissue Engineering

Design and fabricate tissues and organs such as artificial kidneys and hearts using special plastics and natural materials that act as a scaffolding upon which living cells can be grown.



Biomechanics

Assess human performance and ergonomics to understand patterns of injury, increase sports performance, and develop physical therapy programs to increase strength.



From left, patient representative Edward Ahnert; UT Dallas Dean of the Erik Jonsson School of Engineering and Computer Science Stephanie G. Adams, Ph.D.; UT Southwestern School of Biomedical Engineering and Sciences President Daniel K. Podolsky, M.D.; Texas Instruments CEO Rich K. Templeton; UT Dallas President Richard C. Benson, Ph.D.; UT Southwestern Chair of Biomedical Engineering Samuel Achilefu, Ph.D.; and UT Dallas Graduate Student Assembly President Kara Peak break ground during a ceremony on Nov. 15, 2021.

organ fabrication, and neuroprosthetics – could restore function to damaged tissues and organs.

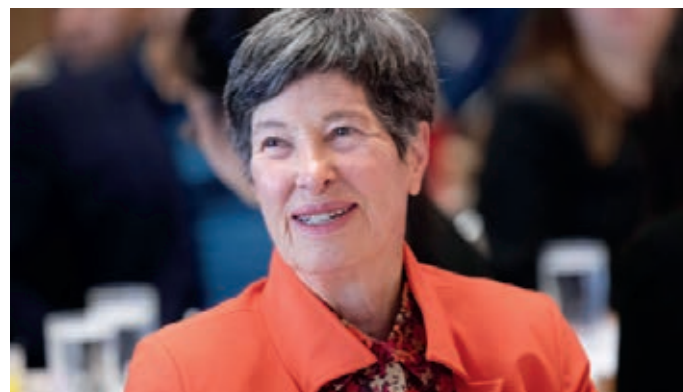
Scheduled for completion in 2023, the five-story building will house biomedical engineering and related science faculty from both institutions, creating an environment that furthers their educational missions and helps accelerate the advancement and translation of medical technologies into clinical applications.

The 150,000-square-foot facility will bring together physicians, engineers, and researchers in close proximity to clinical problems and environments, providing access to a robust patient population and state-of-the-art research facilities.



An architectural rendering envisions the open plan research and learning spaces designed to foster collaboration.

“Biomedical engineering opens the door to solving some of the greatest challenges in medicine, from brain disease to the shortage of organs available for transplant. Dr. Samuel Achilefu brings the expertise and vision needed to build a world-class Department of Biomedical Engineering at UT Southwestern uniquely focused on a translational approach to improve human health. What once seemed like science fiction is within reach in the coming years. I’m excited to be part of this next great chapter of innovation at UT Southwestern.” —Lyda Hill



Lyda Hill

In addition, UTSW will benefit from access to UT Dallas engineers, mathematicians, physicists, and computer scientists. The new facility will provide research and support spaces for dozens of faculty, graduate students, and undergraduate students.

Central to this effort, UTSW’s Office for Technology Development will increase its collaboration with the BMES facility to ensure that promising biomedical technologies are moved through the commercialization process in an effective and efficient manner.

Gifts from Texas Instruments, Lyda Hill Philanthropies, the Hillcrest Foundation, and Sara and David Martineau are supporting construction of the Texas Instruments Biomedical Engineering and Sciences Building. Philanthropist Lyda Hill also established and endowed the **Lyda Hill Distinguished University Chair in Biomedical Engineering**, held by the inaugural Chair of UT Southwestern’s new Department of Biomedical Engineering, Samuel Achilefu, Ph.D. ■

Dr. Achilefu holds the Lyda Hill Distinguished University Chair in Biomedical Engineering.

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.



Samuel Achilefu, Ph.D.

Envisioning Innovation

In February, Samuel Achilefu, Ph.D., joined the UTSW faculty as the inaugural Chair of Biomedical Engineering. He is eager to strengthen the collaboration between UT Dallas and UTSW that will unleash the potential of biomedical engineering in developing highly technical solutions to medical conditions.

“I look forward with excitement to working alongside the incredible team of students, staff, investigators, and senior leadership at UT Southwestern to build the new Biomedical Engineering Department,” he said.

Dr. Achilefu was recruited to UTSW from the Mallinckrodt Institute of Radiology at Washington University School of Medicine in St. Louis, where he served as Director of the Optical Radiology Laboratory, and Professor of Radiology, Biomedical Engineering, and Biochemistry & Molecular Biophysics. His research interests include image-guided cancer surgery, portable imaging devices, and nanotechnology. He pioneered the design and use of innovative fluorescent materials for cancer imaging, and his seminal work resulted in the clinical translation of a method to identify and treat most cancer types, especially breast tumors. He also developed a wearable cancer-imaging goggle system that highlights cancer cells, providing real-time guidance to surgeons in the operating room and ensuring the complete removal of cancerous tissue.

In 2021, Dr. Achilefu was elected to the National Academy of Medicine, considered one of the highest honors in the fields of health and medicine.

I look forward with excitement to working alongside the incredible team of students, staff, investigators, and senior leadership at UT Southwestern to build the new Biomedical Engineering Department.

SEEING WITH THE MIND'S EYE

Supported by philanthropy,
innovative microscope
technology is unlocking new
views of the brain

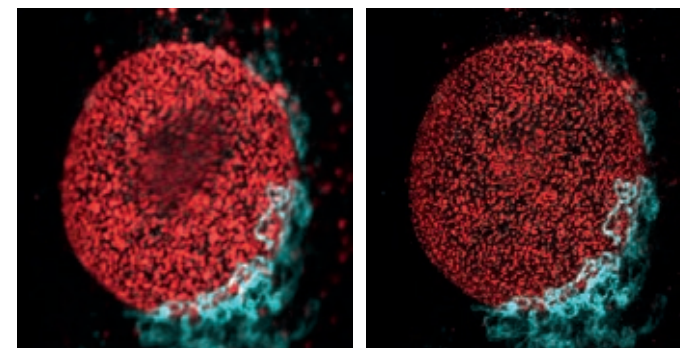
By Andrew Marton

DEDICATED TO THE PURSUIT OF DISCOVERY AND INNOVATION, JoAnn “Jodi” and Kent Foster’s generosity has long supported the advancement of biomedical knowledge at UT Southwestern Medical Center. Their latest gift ensures researchers who are doing big things to advance our understanding of the human brain can focus on even tinier details of how the brain works.

With a \$5 million contribution from their Kent and JoAnn Foster Family Foundation, the couple supported the Peter O’Donnell Jr. Brain Institute’s purchase of a stimulated emission depletion (STED) microscope. The tool enables scientists to study the billions of cells, connections, and signals that make up the brain’s inner workings. Made possible by gifts from multiple foundations, the technology gives scientists new capabilities to study brain diseases, potentially unlocking new information about conditions such as Alzheimer’s and Parkinson’s diseases.

The couple was inspired to give in support of the Campaign for the Brain, UT Southwestern’s fundraising initiative that surpassed its goal of investing \$1 billion in the O’Donnell Brain Institute.

“We are deeply grateful for Jodi and Kent Foster’s remarkable generosity over many years,” said Daniel K. Podolsky, M.D., President of UT Southwestern. **“This most recent gift has brought to UT Southwestern a powerful new tool for understanding brain structure and function. Insights made possible by this special microscope will advance our ultimate goal of better means of treatment and prevention of brain diseases.”**



Compared with a confocal microscope image, left, the improved resolution of an image taken with UT Southwestern’s STED microscope, right, reveals structural details inside a kidney cell. The light aqua structure is the Golgi complex, which processes and packages the molecules to be secreted by the cell. Shown in red, the nuclear pore complex is the gatekeeper for communication through the nuclear wall. Each red dot is an individual nuclear pore with a diameter more than 1,000 times smaller than the width of a human hair.

STED microscopy is considered one of the newest super-resolution microscope technologies. Using dual-laser beams, scientists can visualize the brain with a vivid level of detail, looking at specimens that are 20 to 50 nanometers in size. It’s a shockingly small distance – imagine something 2,000 times smaller than a human hair or about 20 times larger than a single strand of human DNA. At this scale, scientists can see individual molecules that make up brain synapses – the junctions between nerve cells – as well as other structures and features of neurons, the building blocks of the nervous system.

Through their philanthropy, the Fosters have provided UT Southwestern scientists and clinicians with leading-edge research tools while modeling the value of community giving for future generations of their family.

The couple met in Japan while both were serving in the U.S. Air Force. Mr. Foster later joined GTE Corp.

and spent 29 years in various positions before becoming the company’s President. After retiring, he joined Ingram Micro, a global technology and supply chain services company, where he served as Chairman and CEO until he retired again.

In addition to supporting diabetes and genetics research, the couple has established endowed faculty positions in internal medicine, medical ethics, and endocrinology at UTSW, including the Kent and Jodi Foster Distinguished Chair in Endocrinology, in Honor of Daniel Foster, M.D. They have also committed a planned gift from their estate to support the O’Donnell Brain Institute. ■

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.



Kent and JoAnn “Jodi” Foster



Grant Supports New Postbaccalaureate to PhD Program

Sharon Reynolds

By Sharon Reynolds

UT Southwestern announces a new Postbaccalaureate to PhD (PB2PHD) Program that will prepare recent college graduates for success as they pursue graduate research training in the biomedical sciences.



Funded by a generous grant from the Communities Foundation of Texas, the award will support an important and innovative diversity, equity, and inclusion program focused on mentoring underrepresented students to prepare them to pursue a doctorate in biomedical science.

"We're thrilled to be a part of diversifying the biomedical research field by investing in UT Southwestern's Postbaccalaureate to PhD Program," said Sarah Cotton Nelson, the Communities Foundation of Texas' Chief Philanthropy Officer. "We know that supporting the development of medical professionals from all backgrounds helps to decrease health disparities and build thriving communities for all."

The PB2PHD Program, launching this summer, is led by Arnaldo Díaz Vázquez, Ph.D., and will provide scholars a yearlong, faculty-mentored research experience and an academic and professional development plan to strengthen their skills and prepare them for the rigors of Ph.D. training.

"The program targets students who need more experience in doing research to strengthen their skills and increase their competitiveness for admission to graduate school," said Dr. Díaz Vázquez, Program Director and Assistant Dean for Diversity and Inclusion in UT Southwestern's Graduate School of Biomedical Sciences. **"Many such individuals are members of underrepresented and/or socioeconomically disadvantaged groups. The goal is to help these students move into a Ph.D. or M.D./Ph.D. program and ultimately make the transition into the biomedical science workforce."**

All students are welcome to apply to the program, and five students will be recruited for the first cohort. Each student will receive a stipend or research assistantship of \$35,000 per year, allowing them to focus on their research training rather than outside employment. They will also receive individual health insurance, support to attend a scientific conference, tuition, and fees. Students may apply for a second year in the program, contingent on first-year performance and funding availability.

Awardees will work in a UTSW laboratory on research that matches their scientific interests, take graduate-level courses, and receive formal training in responsible research conduct. Students will receive academic and professional development activities tailored to their individual needs, such as scientific seminars, scientific writing, and interview skills. At the culmination of the program, students will present their work to faculty mentors and colleagues at UT Southwestern as well as at a national scientific conference.



Arnaldo Díaz Vázquez, Ph.D.

"The addition of a postbaccalaureate training program will aim to expand our reach and capture talent that is being lost due to limited training opportunities, awareness of careers in STEM, lack of mentoring programs, and a clear acknowledgment and understanding of the many challenges faced by students from underrepresented populations," said Dr. Díaz Vázquez. ■

THE POWER OF CARE

By Andrew Marton

How UT Southwestern's palliative care team supported a Texas state trooper's final journey



Everyone knew Michael L. Schulze as “Mike.” Those closest to him called him “Mountain Man.” An officer with the Texas Department of Public Safety for more than 27 years, Mr. Schulze’s nickname stemmed from a life spent

near Guadalupe Mountains National Park, close to Van Horn, Texas, where he made his home in the shadows of the Lone Star State’s four highest peaks. He was only 58 when he died last year, leaving behind his parents and brother as well as a wife and family that included 16 children, stepchildren, grandchildren, and stepgrandchildren.



Lisa and Michael Schulze



Michael Schulze's family, friends, and co-workers gather to pick up litter along U.S. Highway 62/180 in Guadalupe Mountains National Park as part of the state of Texas' Adopt-a-Highway program.

When Mr. Schulze was diagnosed with stage 4 pancreatic cancer at UT Southwestern Medical Center, his doctors assigned a palliative care team to help manage the severity of his disease.

Palliative care focuses on improving a patient's quality of life. A care team often includes doctors, pharmacists, and other health care professionals who help treat the discomfort, symptoms, and stress of serious illness.

It can also include people like the Rev. Gina Biddle, a Supportive Palliative Care Staff Chaplain, who forged a bond with Mr. Schulze, offering words of encouragement and sharing small reminders of his faith, including a crocheted prayer shawl that helped keep him warm in his hospital bed.

Rev. Biddle recalled how Mr. Schulze was emotional nearly every time she visited "to listen to him, to love him, and to help him live the best life." As his time grew short, she anointed him with oil.

When staff wheeled Mr. Schulze out of the hospital for his final trip home, Rev. Biddle told him she would be praying for him.

"Those were my last words to him, and then I cried," she said.

Rev. Biddle's spiritual care was a special source of comfort for Mr. Schulze and his entire family.

"Gina provided the most powerful spiritual healing Mike could have asked for," said Lisa Schulze,



Rev. Gina Biddle



Blue Origin Ranch employees wait along the highway with a sign welcoming Michael Schulze back home from the hospital.

Mr. Schulze's widow. "He used that prayer shawl until his last breath. For me, Gina was my shoulder to cry on."

The Schulze family was so touched by Mr. Schulze's care that they made a philanthropic gift to UT Southwestern's Supportive and Palliative Care Clinic to help ensure future families benefit from the same compassion and support they received.

"We were particularly indebted to UT Southwestern for having someone like Gina able to offer such highly personal care for Mike's spiritual health," said Gaynelle Schulze, Mr. Schulze's mother.

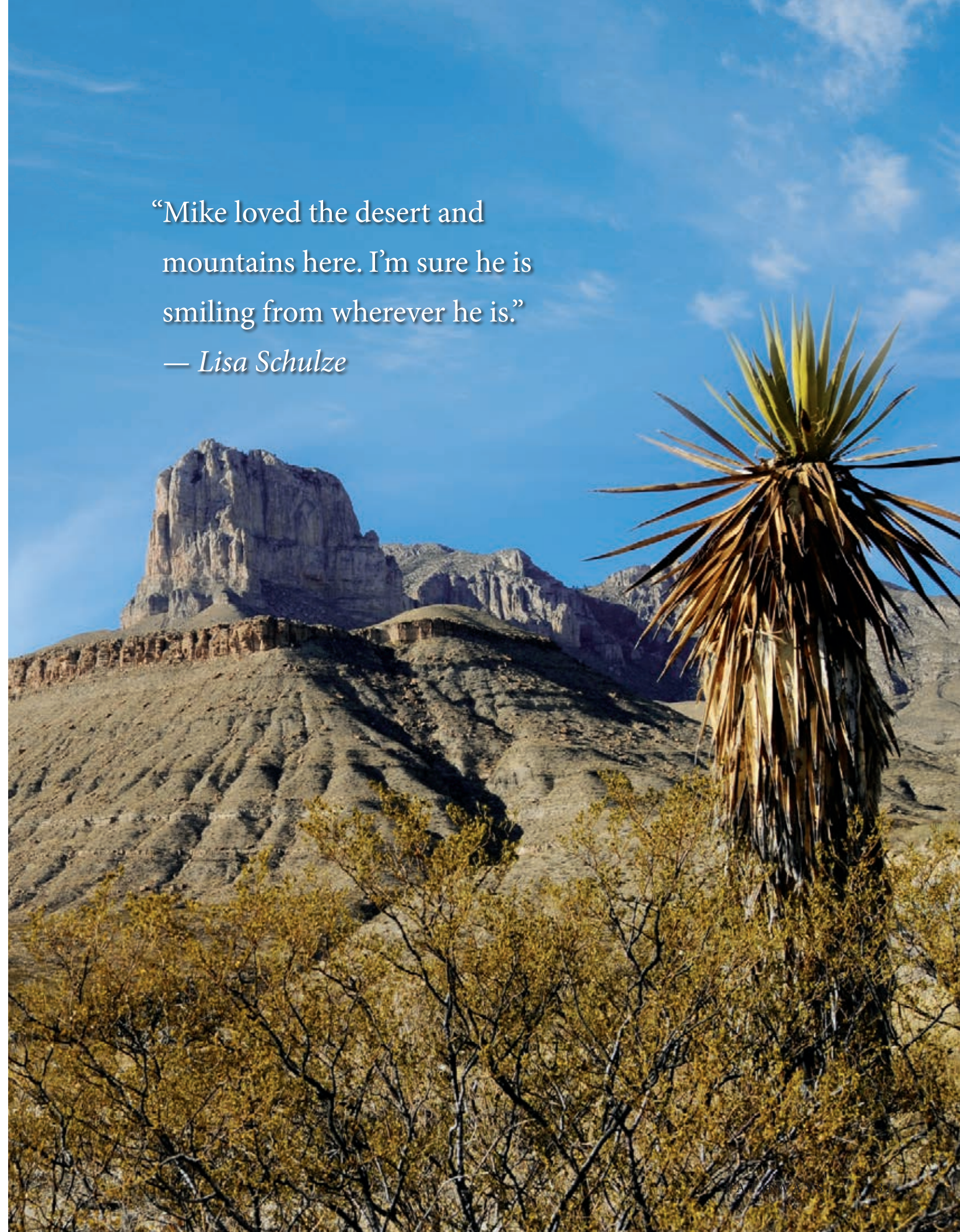
The UT Southwestern palliative care team coordinated with a nearby hospital to ensure Mr. Schulze spent his final days at home in Guadalupe Mountains National Park. He was buried facing one of his favorite vistas.

"Mike loved the desert and mountains here," said Mrs. Lisa Schulze. "I'm sure he is smiling from wherever he is." ■

LEARN MORE AT utswmed.org/conditions-treatments/palliative-care/

"Mike loved the desert and mountains here. I'm sure he is smiling from wherever he is."

— *Lisa Schulze*



Donor Pulse



Shaida Khan, D.O.

Fichtenbaum Charitable Trust Fuels Myasthenia Gravis Research

Fichtenbaum Charitable Trust is funding research to improve care for underserved patients with myasthenia gravis (MG),

a chronic, debilitating disease that requires comprehensive and consistent care throughout a patient's lifetime. **The research is led by Shaida Khan, D.O., Medical Director of Neurology at Parkland Memorial Hospital and Assistant Professor of Neurology at UTSW**, who has clinical and research interests in MG and leads three MG clinical trials at UTSW.

At Parkland, Dallas' public health system and primary clinic for the underserved, MG patients experience different outcomes for a variety of reasons, including lower socioeconomic status, language barriers, drug costs, and health literacy. Additionally, at-risk MG patients do not have consistent access to neuromuscular specialists. The Fichtenbaum Charitable Trust's gift enables Dr. Khan to develop and maintain a dedicated MG clinic at Parkland, led by a board-certified neuromuscular specialist who will implement standardized measures of care for patients.

By evaluating how this model improves patient outcomes, Dr. Khan hopes to increase clinical trial enrollment rates of underserved patients and create a model for other institutions.

Helping Bridge the Gap in Mental Health Care for Young Adults

Watching her grandsons, Michael and Cliff, grow up on the autism spectrum, Marcia Bankhead quickly realized there was a gap in mental health services between childhood and adulthood.

"My daughter, Liz, had a difficult time finding answers because there are few experts on autism and even fewer programs for young adults," Mrs. Bankhead said.

UTSW's Transitional Age Youth (TAY) Program helps teens and young adults struggling with mental health disorders to thrive. Led by Jessica Moore, M.D., Assistant Professor of Psychiatry and a Dedman Family Scholar in Clinical Care, the program helps meet the unique needs of patients with a wide range of health issues, including eating disorders, psychosis, autism, substance abuse, and other developmental disorders.

Mrs. Bankhead recently made a generous gift to support clinical research on adolescent and young adult mental health and the TAY Program's psychiatric care clinic that serves patients aged 16-27.

It's a way to help children like her grandsons, who are now young adults attending college. Both intellectually gifted, Cliff enjoys writing, ecology, and math. Michael is a cellist studying commercial music.

"Today they can live independently and pursue their dreams," she said. "I hope my gift will help other families address their challenges."



Marcia Bankhead's grandsons, Michael, left, and Cliff

With Gratitude for the Little Things

Michael Linn's gift to UT Southwestern honors those who understand that with a cancer diagnosis, sometimes the smallest details become the most important.

"After my wife, Pat, was diagnosed with leukemia in August 2019, we traveled to UT Southwestern from our home in Fort Worth at least twice a week," wrote Mr. Linn in a note to UT Southwestern. "In 2020 alone, we drove about 10,000 miles to Dallas for visits and treatment. The valet staff were the first people we encountered upon arriving at the Harold C. Simmons Comprehensive Cancer Center, and they took time to get to know us. The smiles, the hugs, the assistance in physical transfer, and parking my two-seat sports vehicle close to the Center all made life easier for us.

"Pat was an RN for 50 years and held various management positions around the country. She loved her work and touched many lives. After undergoing a bone marrow transplant, we did not get the results that we hoped for. She felt her treatments were just prolonging her life, and it was not a quality of life she wanted. She decided to stop treatment, and in January 2021, she passed away in Clements University Hospital with me by her side. The warmth, care, concern, and positive attitudes of the entire Simmons Cancer Center staff – from valet to nursing, lab assistants, and physicians – were most impressive and comforting even in the darkest days. It was the little things that helped us through, and I couldn't be more grateful."

North Texas Gives Back

On Sept. 23, Moncrief Cancer Institute (MCI) celebrated the spirit of giving by participating in the Communities Foundation of Texas' North Texas Giving Day. **Thanks to a generous matching gift, MCI raised \$15,762 during this 18-hour online giving event.** Funds supported MCI programs that provide education, prevention, and screening to underserved populations so that these vulnerable patients and their families can stay healthy, strong, and hopeful.



UT Arlington volleyball fans wave pink pom-poms during the "pink out" game versus University of Louisiana Monroe on Oct. 2, 2021, at College Park Center in Arlington.

UT Arlington Partners with Moncrief Cancer Institute to Beat Cancer

For the 10th year, the UT Arlington Athletics Department teamed up with Moncrief Cancer Institute (MCI) to help bring cancer screening programs to the medically underserved in the Arlington community.

Five UTA athletic teams are fundraising to raise a collective \$11,000, including baseball for colorectal cancer; men's basketball for melanoma; and volleyball, softball, and women's basketball for breast cancer.

On Oct. 2, members of the UTA volleyball team held a "pink out" game to raise awareness for breast cancer. The MCI Mobile Screening Clinic parked on campus that day, and provided 24 mammograms prior to the game.

"We know the importance of early detection – it saves lives, and we are proud to help our community through the lifesaving mission of the Moncrief Cancer Institute," said Russell Warren, Deputy Director of UTA Athletics. "Our student athletes, staff, and fans have come together to fight cancer, and we hope others will join our team in the fight."



— *The* —
**HERITAGE
SOCIETY**

SOUTHWESTERN MEDICAL FOUNDATION
UT SOUTHWESTERN MEDICAL CENTER

Future focused

After more than 30 years catalyzing support for research at UT Southwestern, Cece and Ford Lacy joined The Heritage Society by making a gift from their will to support the future of the President's Research Council.



Scan to read their story or visit
engage.utsouthwestern.edu/lacy