

CENTER TIMES

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CAMPUS EDITION

IN MEMORIAM

Peter O'Donnell Jr.: Visionary philanthropist, catalyst for progress

From Staff Reports

Peter O'Donnell Jr., whose vision, legendary generosity, and cherished friendship graced UT Southwestern for many decades, passed away Oct. 10 at the age of 97.

Throughout a lifetime of inspired philanthropy, Mr. O'Donnell and his late wife, Edith, along with the O'Donnell Foundation they established in 1957, contributed more than \$300 million to UT Southwestern, supporting some

of the most innovative and impactful programs at the Medical Center. The O'Donnells' gifts to UT Southwestern, almost all made anonymously and without public recognition at the time, transformed the Medical Center into an internationally recognized research leader.

"Excellence was a watchword for Mr. O'Donnell in everything he did and touched. He was a giant of our institution and a quiet driving force in advancing medical science," said Daniel K. Podolsky, M.D., President of UT Southwestern.

As Chairman of the O'Donnell Foundation, Mr. O'Donnell committed himself to developing and funding model programs designed to strengthen education, research, and clinical care.

"Peter O'Donnell helped foster an environment of innovation and discovery at UT Southwestern that has enabled transformative progress in biomedical research," said Dr. Podolsky. "As we mourn the passing of one of UT Southwestern's most stalwart supporters, we are grateful to have had the opportunity to publicly recognize Mr. O'Donnell's magnificent generosity for the first time in 2015 through the naming of the Peter O'Donnell Jr. Brain Institute at UT Southwestern."

Recognizing brain injury in its various forms as one of the greatest challenges of our time, Mr. O'Donnell committed \$36 million to create a new institute dedicated to unraveling

Please see O'DONNELL on page 6



Edith and Peter O'Donnell Jr.

UT Southwestern designated as founding Rare Disease Center of Excellence

By Patrick Wascovich

UT Southwestern has been selected as a Rare Disease Center of Excellence – charter members of an elite network of 31 centers nationally to expand access and advance care and research for rare disease patients in the United States.

Established by the National Organization for Rare Disorders (NORD), the network's goals foster national collaborations to share knowledge and findings, connect experts and patients across the country, and work to improve the pace of progress in clinical care, treatments, and research.

"UT Southwestern is an exceptional environment, in large part due to our multidisciplinary, team-based approach to care. Departments across our Medical Center – Pediatrics, Internal Medicine, Neurology, Ophthalmology, Urology, and others – are focused on innovative research and the highest quality care for those with rare disorders," said John Warner, M.D., Executive Vice President for Health System Affairs. "Close communication between Pediatrics and Internal Medicine translates into exceptional care for our patients, who seamlessly transition from childhood to adulthood with no interruption in clinical management. Our programs in cystic fibrosis, inborn errors of metabolism, neurofibromatosis, congenital heart disease, and von Hippel-Lindau disease are excellent examples."



Ralph DeBerardinis, M.D., Ph.D., a UTSW Professor of Pediatrics who also directs the Genetic and Metabolic Disease Program at the Children's Medical Center Research Institute at UT Southwestern, said the designation by NORD "is a sign of an institutionwide commitment by clinicians from many different departments to patients with these rare conditions."

There are about 7,000 known rare diseases, many of which disproportionately affect children, adolescents, and young adults. Although most rare diseases might individually affect only a few hundred to a few thousand people worldwide, rare diseases collectively are common, affecting an estimated 25 million to 30 million people in the U.S. alone.

People living with rare diseases face many challenges in finding a diagnosis and quality

clinical care. Many of these diseases have a genetic cause, are serious or life-threatening, and are challenging to diagnose and treat. In the U.S., only about 10% of identified rare diseases have an FDA-approved therapy available.

In establishing the Centers of Excellence program, NORD selected clinical centers across the country that provide exceptional rare disease care and have demonstrated a deep

commitment to serving rare disease patients and their families using a holistic, state-of-the-art approach. Centers were evaluated through a competitive application process requiring evidence of expertise across multiple specialties to meet the needs of rare disease patients and significant contributions to rare disease patient education, physician training, and research.

"This designation will let patients with rare diseases know that they can be cared for here through their life spans – from birth through old age – and it will attract trainees, clinicians, and researchers to join the UT Southwestern family," said Angela Scheuerle, M.D., Professor of Pediatrics and Pathology, who led the NORD application effort and will be Director of the Center at UT Southwestern.

"Our participation in the Centers of Excellence network will allow us to participate in harmonized, multicenter clinical trials and in developing new treatment guidelines, which will ultimately help us take the best care of our patients. It also provides a framework for clinical and laboratory research. Rigorous medical science requires an adequate number of participating patients. Having a broad network increases the chance for patients to participate in research projects and increases the useful data available to the researchers," noted Dr. Scheuerle, a member of the Eugene McDermott

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Roche honored with Regents' Outstanding Teaching Award



Dr. Vivienne Roche, M.D., conferring above with a colleague, is course director for UTSW's Frontiers in Aging class and also develops curriculum for the Medical School's geriatric medicine elective.

By Carol Marie Cropper

Vivienne Roche, M.D., Professor of Internal Medicine and a specialist in geriatric medicine at UT Southwestern, has been recognized with the UT System's highest honor for an educator – the Regents' Outstanding Teaching Award.

Dr. Roche is the 54th UT Southwestern faculty member to receive the Regents' Award, which recognizes outstanding teaching, mentoring, and personal commitment to students and the learning process.

"Dr. Roche is an exemplary scholar and educator, and we are truly delighted that the Board of Regents has recognized her commitment to our students and other learners," said Daniel K. Podolsky, M.D., President of UT Southwestern. "Her dedication and talent as a teacher

make it possible for UT Southwestern to prepare future physicians."

A UTSW Distinguished Teaching Professor, Dr. Roche was one of 14 educators from across the state system recognized Nov. 18 as Regents' Award winners. Honorees receive a certificate, medallion, and check for \$25,000 in appreciation for extraordinary dedication to teaching and students.

"The best way to ensure students get the full promise of a UT degree is to provide them with outstanding faculty," said Kevin P. Eltife, Chair of the Board of Regents, in announcing this year's honorees. "On behalf of the Board of Regents, I extend our profound appreciation to these educators for their commitment to teaching excellence and passion for serving students."

Born in Ireland, Dr. Roche graduated from UT Southwestern. Please see AWARD on page 2

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Six faculty members receive prestigious National Institutes of Health awards as part of the NIH's High-Risk, High-Reward grant program.

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Inaugural Dean of Basic Research Russell named Professor Emeritus

By Christen Brownlee

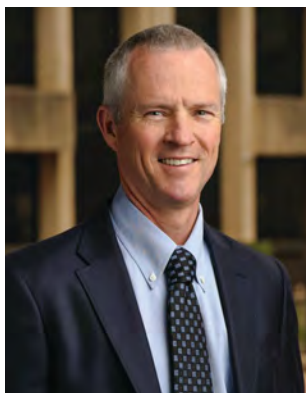
David W. Russell, Ph.D., whose four-decade career at UT Southwestern included serving as Dean of Basic Research for the last 11 years, has been appointed Professor Emeritus of Molecular Genetics in honor of his contributions. Recently retired, Dr. Russell also held the titles of Vice Provost and the Eugene McDermott Distinguished Chair in Molecular Genetics.

"In addition to being an accomplished researcher and scientist, Dr. Russell has been a great friend, mentor, and trusted colleague to hundreds of faculty members and learners throughout his 40-year career at UT Southwestern," said Daniel K. Podolsky, M.D., President of UT Southwestern.

Early collaborators with Dr. Russell were UTSW Nobel Laureates Michael Brown, M.D., and Joseph Goldstein, M.D., whose discoveries on the regulation of cholesterol metabolism jointly earned them the 1985 Nobel Prize in Physiology or Medicine.

"It has been an immense joy to witness the growth, development, and magnificent achievements of David Russell," said Drs. Brown and Goldstein in a joint statement. "David trained at the University of British Columbia with Michael Smith, the Nobel Laureate who developed the technology that permits the introduction of targeted mutations into DNA. David brought molecular biology to Dallas at a time when our campus was far behind the leader in this newly emerging field.

"After joining our Department in 1982, he soaked up the field of cholesterol metabolism



David W. Russell, Ph.D.

like a sponge clearing spilled ink. His deep understanding allowed him to become the world leader in the identification of genes that mediate the transformation of cholesterol into steroid hormones and bile acids. Along the way, he elucidated the genetic basis of several diseases. This work earned him election in 2006 to the National Academy of Sciences at a relatively young age," they added.

Hired initially as Assistant Professor of Molecular Genetics, Dr. Russell spent his entire academic career at UT Southwestern. With postdoctoral training at the University of

British Columbia in sequencing, mutating, and manipulating DNA, he arrived at UTSW ready to work and achieve a central goal with Drs. Brown and Goldstein: cloning the low-density lipoprotein (LDL) receptor, a cell surface receptor that shuttles the body's main cholesterol carrier from the bloodstream to the interior of cells.

After collaborating with Drs. Brown and Goldstein for another four years elucidating various aspects of LDL receptor function and the molecular genetics of a disease related to the LDL receptor called familial hypercholesterolemia, Dr. Russell launched an independent research career investigating the biochemical pathways that mammalian cells use to degrade cholesterol and other sterols.

In late 2010, Dr. Russell became the first Dean of Basic Research, a role created to champion basic science across UT Southwestern and ensure that the institution remained at the forefront of modern biomedical research. In recent years, Dr. Russell expanded UT Southwestern's research portfolio, starting several new departments including Biophysics, Bioinformatics, and Biomedical Engineering. His efforts have kept the institution abreast of available technology, implementing a significant investment in cryo-electron microscopy – an imaging technology that allows visualization of proteins at the atomic level by freezing them in place – and computing power, ushering in a new realm of discoveries made through computational biology and artificial intelligence.

Through the years, Dr. Russell has earned numerous awards and honors, including election

to the American Academy of Arts & Sciences in 2011. He has also served on the boards of several scientific journals.

Now retired, Dr. Russell said he plans to continue making contributions to science in a completely different field, collaborating with an archaeologist colleague at Southern Methodist University in Dallas to better understand the peopling of the Americas.

"I have no bucket list. I have accomplished everything I'd ever hoped to accomplish in science," Dr. Russell said. "But, I may still have more papers to publish yet."

Dr. Brown, a Regental Professor, is Director of the Erik Jonsson Center for Research in Molecular Genetics and Human Disease. He holds the W.A. (Monty) Moncrief Distinguished Chair in Cholesterol and Arteriosclerosis Research and the Paul J. Thomas Chair in Medicine.

Dr. Goldstein, a Regental Professor, is Chair of Molecular Genetics. He holds the Julie and Louis A. Beecherl, Jr. Distinguished Chair in Biomedical Research and the Paul J. Thomas Chair in Medicine.

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.

More online: Read the full story on *Center Times Plus* at utsouthwestern.edu/ctplus.

Award Continued from page 1

ated with honors from the Royal College of Surgeons in Dublin, then completed residencies in Ireland and Australia before moving to the U.S. and completing a fellowship in geriatric medicine at the University of Colorado Health Sciences Center in Denver (now the University of Colorado Anschutz Medical Campus). She completed a year of internal medicine residency at UT Southwestern and began her teaching career at UTSW in 1999 as an Assistant Professor.

Dr. Roche has been recognized as a member of the Southwestern Academy of Teachers (SWAT), an elite group of UTSW educators, of which she is President-elect. In 2019, she was inducted into the UT System's Kenneth I.

Shine, M.D., Academy of Health Science Education, an organization that promotes excellence in the field.

Dr. Roche is the course director for the Frontiers in Aging class at UT Southwestern, instructs and develops curriculum for the fourth-year Geriatric Medicine elective, is Director of the Geriatric Medicine Fellowship Program, Director of UT Southwestern's Geriatric Care Center Clinic, and the institution's faculty sponsor for the Medical Student Training in Aging Research (MSTAR) Program.

"It has been an immense honor to teach at UT Southwestern for more than 20 years," she said. "Our medical students, faculty, and team members are exceptionally gifted, talented,

and generous, and I continue to appreciate and learn from them. It is wonderful when a student sees a patient, learns a geriatric teaching pearl, and has the opportunity to make it happen for that patient. You can see it has just clicked for them when they say, 'Oh, that's great. I had no idea.' That's something that I'm going to keep with me.

"As an Irish immigrant, I appreciate Yeats succinctly expressing my principal teaching tenet with his education pearl, 'lighting of a fire,'" Dr. Roche said, referring to a quote often attributed to the Irish poet.



Vivienne Roche, M.D.

See the endowed titles held by Dr. Podolsky above.

NEWS MAKERS

Wu awarded \$1.5 million grant for stem cell research

Stem cell biologist Jun Wu, Ph.D., is one of three researchers recognized as a 2021 New York Stem Cell Foundation (NYSCF) – Robertson Stem Cell Investigator. The award will provide \$1.5 million over five years to further Dr. Wu's work to overcome barriers to growing replacement organs for transplant.

"This award will help me continue my efforts to unlock the full potential of stem cells," said Dr. Wu, an Assistant Professor of Molecular Biology and the first UTSW faculty member chosen for the award. "I am overwhelmed with gratitude to have my work recognized with the NYSCF – Robertson Stem Cell Investigator Award."

The Wu lab's research focuses on pluripotent stem cells, which are able to give rise to any cell or tissue of an adult organism. Dr. Wu and his colleagues recently generated a new type of stem cell and used those cells to create interspecies chimeras to study early development. One potential application of interspecies chimeras might someday be to grow the organs of one species within another, which could reduce reliance on human donors for patients awaiting replacement organs.

Currently, nearly 107,000 men, women,



Jun Wu, Ph.D.

and children are on the U.S. organ transplant waiting list, according to the federal Health Resources and Services Administration.

Although scientists have made great strides in interspecies organ growth in closely related animals such as mice and rats, Dr. Wu and his colleagues recently showed that cell competition – a quality control mechanism in the developing embryo – has thus far prevented human stem cells from growing in other species.

Dr. Wu said he will use the award to investigate the mechanisms underlying cell competition and ways to overcome it. The annual awards support early career scientists exploring the basic biology and translational potential of stem cells.

Dr. Wu is a Virginia Murchison Linthicum Scholar in Medical Research.



Ahamed H. Idris, M.D.

Idris receives ACEP award for resuscitation research

For almost four decades, Ahamed H. Idris, M.D., has been actively involved in research, primarily in the area of resuscitation from cardiac arrest and severe traumatic injury. For his efforts, Dr. Idris was recently awarded the 2021 American College of Emergency Physicians (ACEP) Award for Outstanding Contribution in Research, which honors an ACEP member for advances in emergency medicine research.

"The award recognizes the many high-value projects we have contributed to the field of emergency medicine and to the care of our patients," said Dr. Idris, Professor of Emergency Medicine and Internal Medicine.

Dr. Idris fell in love with medicine as a combat medic with the U.S. Army. He was awarded the Bronze Star Medal for his service with the 1st Air Cavalry in Vietnam. Following

his military service, he earned a bachelor's degree in biology from Northwestern University and his medical degree from Rush Medical College in Chicago. During his residency at Cook County Hospital, he co-authored a study on transfers to a public hospital that was published in *The New England Journal of Medicine* in 1986 and led to the Emergency Medical Treatment and Labor Act (EMTALA).

Dr. Idris joined UTSW in 2003. He served as the DFW Principal Investigator for the National Institutes of Health (NIH)-sponsored Resuscitation Outcomes Consortium that conducted large-scale clinical trials from 2004 to 2016.

A past National Chair of Basic Life Support for the American Heart Association, Dr. Idris has served as a consultant to the NIH, the U.S. Army, and NASA. From 1994 to 2003, he was Director of the NASA Human Space Flight Rescue Team for the space shuttle, and in 2008 he was inducted into the NASA Space Technology Hall of Fame for his work on the impedance threshold device, which is now onboard the International Space Station. He currently serves as Director of the DFW Center for Resuscitation Research.

At UTSW, Dr. Idris teaches emergency medicine and serves as Director of Emergency Medicine Research in the Department of Emergency Medicine. He also leads research at Parkland Memorial Hospital and William P. Clements Jr. University Hospital.

CENTERTIMES

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President: Dr. Daniel K. Podolsky

Executive Vice President for Institutional Advancement: Dr. Marc Nivet

Assistant Vice President, Strategic Communications and Outreach: Diane McGhee

Director, Institutional Communications: Debbie Bolles

Editor: Debbie Bolles

Writers: Christen Brownlee, Carol Marie Cropper, Catherine Gara, Jan Jarvis, Rachel Stowe Master, Patrick McGee, Sharon Reynolds, Patrick Wasco, Deborah Worsmer

Copy Editors: Denita Nash, Rachel Stowe Master

UTSW partners with Dallas ISD to open a new kind of school

From Staff Reports

Science starts here for the next generation of students entering a PK-8 biomedical school in the heart of Dallas' medical district. Dallas ISD and UT Southwestern together will launch a new transformation school slated to open its doors next fall.

The Medical District PK-8 Biomedical School will start by serving scholars in prekindergarten through first grade, expanding one grade level each year up to eighth grade.

The curriculum will immerse students in science, technology, engineering, and mathematics (STEM) by introducing real-world experiences in biomedical science. These daily explorations, centered on a STEM-based curriculum, will also provide firsthand exposure and direct access to innovative field trip opportunities.

The unique partnership is one of the first in the nation to focus on biomedical science for elementary students at a medical institution.

"This exciting endeavor under-



scores what it takes to build and inspire the next generation of physicians and scientists – instilling a love for science in children at an early age," said W. P. Andrew Lee, M.D., Executive Vice President for Academic Affairs, Provost, and Dean, UT South-

western Medical School. "Our hope is that the added hands-on experiences and education they will gain during their years at the Medical District PK-8 Biomedical School will be the beginning of a lifelong connection to math, science, and discovery."

"This school model is another game-changer for students as the district joins hands with an incredible partner to reimagine learning," said Michael Hinojosa, Superintendent of Dallas ISD. "It also highlights how science continues to evolve in a unique, relat-

able, and innovative way with students as young as 3 years old. This partnership will help connect students with cutting-edge resources that develop them into the next generation of scientists and medical professionals."

The Medical District PK-8 Biomedical School will have no academic requirements or attendance boundaries. Enrollment offers are generated at random, through a lottery system, based on the number of seats available in each grade coupled with the student's priority group. Half of the seats are reserved for economically disadvantaged students.

The school will be located on the UT Southwestern campus at 6516 Forest Park Road. Families may apply during the application period from Nov. 1 to Jan. 31, 2022. For more information, visit dallasisd.org/medicaldistrictschool.

Dr. Lee holds the Atticus James Gill, M.D. Chair in Medical Science.

Erin Sine promoted to Vice President for Legal Affairs

By Carol Marie Cropper

UT Southwestern has promoted Erin Sine, formerly a Director and Managing Attorney on its Legal Affairs team, to Vice President for Legal Affairs. In her new role, Ms. Sine will provide guidance to executive leaders, faculty, and staff to ensure UT Southwestern maintains the highest levels of public trust as a state institution, said President Daniel K. Podolsky, M.D., in making the announcement.

Ms. Sine, who joined UTSW as an attorney in 2010 and became Director and Managing Attorney for General Legal Services in 2015, was selected after an extensive national search.

"Ms. Sine's reputation as a talented, collaborative, solutions-oriented leader, deeply committed to providing thoughtful counsel to her clients across UT Southwestern made her an outstanding choice for this important leadership role," said Dr. Podolsky.

Before joining UT Southwestern, Ms. Sine worked as a commercial litigation associate at the Richmond, Virginia-based law firm McGuireWoods. She graduated magna cum laude from Clemson University, then earned her law degree cum laude from Tulane University Law School in New Orleans.

"It is truly an honor to be named Vice President for Legal Affairs," Ms. Sine said of her appointment, which took effect Sept. 1. "I feel energized and ready for the challenge. I am privileged to lead an amazing team of

experienced attorneys, risk managers, and staff who are committed to our collective success in support of UT Southwestern's missions."

Ms. Sine plans to focus on three core values for the Office of Legal Affairs: partnership, professionalism, and excellence. That will translate, she said, into being collaborative and conducting ourselves with integrity and a productive attitude.

"We will deliver quality legal work and excellent client service and always maintain the utmost in ethical standards," said Ms. Sine.

In her new role, Ms. Sine will serve as the University's chief legal officer, institutional ethics officer, and public information official.

The Office of Legal Affairs provides legal advice and counsel, faculty and staff training, and review of contracts and other legal documents. The Office also manages all litigation involving the University, assists in the development of UT Southwestern policies and procedures, provides legal advice regarding patient care and compliance, and advises on proposed collaborations with affiliated entities.

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.



Erin Sine, J.D., Vice President for Legal Affairs

UTSW's commitment to diversity recognized with HEED Award once again

By Patrick Wascovich

For the fourth consecutive year, UT Southwestern has been recognized for its outstanding commitment to diversity and inclusion with the Health Professions Higher Education Excellence in Diversity (HEED) Award – one of only 51 higher education institutions and centers to receive the national honor.

"A diversity of experiences and backgrounds and the inclusion of differing perspectives help to ensure that we succeed as an institution," said Marc Nivet, Ed.D., Executive Vice President for Institutional Advancement. "Our commitment to improving diversity remains critical to our abilities to successfully educate the next generation, achieve scientific success, and deliver quality patient care."

The President's Council on Diversity and Inclusion, chaired by Daniel K. Podolsky, M.D., President of UT Southwestern, is composed of senior leadership and executives. The Council guides efforts to identify, develop, and support strategies that foster a diverse and inclusive insti-



UT Southwestern's commitment to diversity spans all institutional missions and is embedded in student, faculty, and employee recruitment, retention, and advancement programs. Photo taken pre-pandemic.

tutional culture.

UT Southwestern's commitment spans all institutional missions – patient care, research, and education. It is embedded in dedicated student, faculty, and employee recruitment, retention, and advancement programs and reflected across voluntary employee business resource groups (BRGs): Women and Allies BRG, Asian-Pacific Islander BRG, African-American Employee BRG, Hispanic-Latino BRG, Veterans BRG, and LGBT and Allies BRG.

UT Southwestern's Offices of Student Diversity & Inclusion and Faculty Diversity & Development help recruit and retain top students and faculty to campus, while implementing strategies to promote the growth and presence of women and underrepresented groups. The Office of Institutional Equity & Access advances a diverse, equitable, and supportive campus culture for staff and visitors.

Supporting these efforts is UTSW's long-standing commitment to invest in the next

generation of physicians and scientists through internship programs that provide students a hands-on experience. Since 1993, UT Southwestern has been a collaborating partner in the Dr. Emmett J. Conrad Leadership Program, named in honor of the renowned African American physician and educational advocate from Dallas. The internship program helps UTSW hire historically underrepresented minority college students each summer to explore careers in the sciences and health professions. To engage the next generation of health care professionals, UT Southwestern additionally offers a five-week Health Professions Recruitment and Exposure Program (HPREP), which introduces DFW-area high school minority students to careers in science and medicine.

UT Southwestern also partners with diverse professional organizations within the community, including the National Association of Black Accountants, National Black MBA Association Inc., National Society of Hispanic MBAs, and the Association of Latino Professionals For America, to broaden awareness of employment opportunities at UTSW.

The HEED Award from *INSIGHT Into Diversity* magazine, the oldest and largest diversity-focused publication in higher education, reflects ongoing recognition for employment and diversity efforts at the Medical Center. *INSIGHT Into Diversity* featured UT Southwestern and other honorees in its November 2021 issue.

See the endowed titles held by Dr. Podolsky above.



UT Southwestern joins Human Genome Project consortium

By Patrick McGee

A genome engineering technique developed at UT Southwestern helped make our institution a research partner in a new \$185 million National Institutes of Health (NIH) initiative to build on findings of the Human Genome Project.

A team of UTSW faculty led by Gary Hon, Ph.D., Assistant Professor in the Cecil H. and Ida Green Center for Reproductive Biology Sciences, has been awarded a five-year, \$8.8 million grant to participate in the National Human Genome Research Institute's Impact of Genomic Variation on Function (IGVF) Consortium, which seeks to understand how developmental variants contribute to developmental diseases. The team, which also includes Principal Investigators Nikhil Munshi, M.D., Ph.D., Associate Professor of Internal Medicine and Molecular Biology, and W. Lee Kraus, Ph.D., Professor and Director of the Green Center, will combine molecular biology, genomics, high throughput screens, and computational analyses to focus specifically on potential disease-causing genetic variations in the cardiovascular, nervous, and placental systems.

Mosaic-seq, a technique used for this work, was developed by Dr. Hon, also Assistant Professor of Obstetrics and Gynecology and a Cancer Prevention and Research Institute of Texas Scholar.

Mosaic-seq allows high throughput analysis of the molecular events that occur during programming of embryonic stem cells into other cell types. This technique uses single-cell sequencing to study different regions of



From left: Gary Hon, Ph.D., W. Lee Kraus, Ph.D., and Nikhil Munshi, M.D., Ph.D., are UTSW team leaders involved in the Human Genome Project consortium.

the genome at the same time. Just one experiment can perturb thousands of regions in the genome to better understand their function. With Mosaic-seq, researchers no longer have to study one region at a time. Dr. Hon's laboratory received national attention in 2017 for this powerful advancement, part of his team's grant application.

Thirty research sites across the U.S. – including Harvard, Stanford, and Yale universities – will collaborate in the IGVF Consortium to study noncoding regions of the human genome that are known to contribute to genetic diseases, such as congenital heart disease, autoimmune disease, and blood disorders.

Dr. Hon, also a member of the Lyda Hill

Department of Bioinformatics and the Harold C. Simmons Comprehensive Cancer Center, said the IGVF Consortium is the National Human Genome Research Institute's next step to unveiling the genome's role in disease.

"The Human Genome Project informed us that most of the genome doesn't contain genes. One big surprise from genomewide association studies is that gene-poor regions contain many disease signatures," said Dr. Hon. "It turns out that the signatures largely overlap with DNA elements – found by the Encyclopedia of DNA Elements (ENCODE) Consortium – that control when genes turn on. The goal of this consortium is to fill in the gaps, linking DNA sequences to genes, cell phenotypes, and disease. Ultimately, this knowl-

edge will allow us to interpret the disease potential of any person's genome sequence."

Dr. Kraus, Professor of Obstetrics and Gynecology and Pharmacology, will use additional CRISPR-based technologies to study how genetic variation in noncoding RNAs originating from the regulatory elements impacts the development of the placenta, a key organ that supports the fetus as it grows, as well as the heart and central nervous system.

Dr. Munshi, who is especially interested in what light the project can shed on congenital heart disease, said the (IGVF) Consortium initiative potentially could fill in huge pieces of the puzzle for many diseases.

"If we can determine all of the noncoding elements in the genome that impact a particular developmental pathway, then those could become candidates for disease-associated mutations," he said. "By generating catalogs of tens of thousands of functional variants, we don't have to search the billions of base pairs to find where the disease-causing mutations might lie. We can really focus the search on these tens of thousands of variants. It really gives us an encyclopedia to narrow the search."

Dr. Kraus holds the Cecil H. and Ida Green Distinguished Chair in Reproductive Biology Sciences.

More online: To view a video and read the full story, go to the newsroom at utsouthwestern.edu/newsroom.

Study suggests strict lineage tracing crucial to nerve cell regeneration



Study authors include (from left) Carolina Serrano Garcia, Ph.D., Chun-Li Zhang, Ph.D., and Lei-Lei Wang, Ph.D.

By Deborah Wormser

UT Southwestern stem cell scientists have found that stringent lineage tracing is crucial for studies of nerve cell regeneration. Their results, published in *Cell*, show that this tracing is far from routine in the field and suggest that earlier studies reporting "striking" regeneration results must be reexamined.

Lineage tracing, which is a fundamental approach in developmental biology, refers to tests used to map

out the progeny – or descendants – of a given cell in an organism. This approach is central to the field of stem cell biology, so it was surprising to learn how often such testing had been omitted, the authors wrote. The two corresponding authors are Chun-Li Zhang, Ph.D., Professor of Molecular Biology, and Lei-Lei Wang, Ph.D., Instructor of Molecular Biology and a member of the Zhang lab, which studies nerve cell regeneration in the brain and spinal cord.

"We have from the start employed

the most stringent methods to analyze nerve cell regeneration. It was therefore astonishing to read a number of other papers – including some that make phenomenal claims – that failed to do careful analyses," said Dr. Zhang, also a member of the Hamon Center for Regenerative Science and Medicine.

After running dozens of experiments using a range of protocols, the researchers identified which specific lineage tracing assays appeared most robust and reliable – the so-called gold standard tests.

"We employed the currently available lineage tracing assays. No new ones were developed," said Dr. Zhang.

The scientists also identified tests that were less likely to provide precise results. The study concludes by listing reliable lineage tracing tests and strongly recommending these assays be used in all laboratories doing nerve cell regeneration research.

At UT Southwestern, Dr. Zhang's laboratory has reported several advances in neural stem cell biology, such as regeneration of the brain and spinal cord in mice following injury. *The Scientist* recognized his lab's work on cell fate reprogramming in live animals as one of 2014's Big Advances

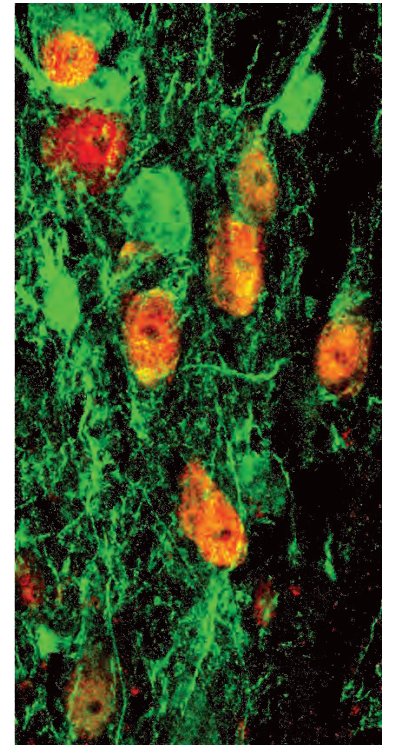
in Science. He won a prestigious National Institutes of Health Director's New Innovator Award in 2009.

Using rigorous lineage tracing, Drs. Wang and Zhang reported in 2018 that while attempting to transform a type of brain cell known as a glial cell into a neuron, they instead reprogrammed mature inhibitory neurons into a different type of neuron that produces the neurotransmitter lost in Parkinson's disease. Their study indicated that the brain's neurons were more malleable in adulthood than previously thought.

Earlier this year, they reported in *Cell Stem Cell* that the latent neurogenic potential of glial cells can be leveraged to produce new neurons and lead to functional recovery after spinal cord injury in mice.

Dr. Zhang is a W.W. Caruth, Jr. Scholar in Biomedical Research.

More online: Read the full story in the newsroom at utsouthwestern.edu/newsroom.



Using strict lineage tracing, UT Southwestern researchers showed that glial cells could be *in vivo* converted into functional mouse neurons (red).

NORD Continued from page 1

Center for Human Growth and Development/Center for Human Genetics.

"UT Southwestern's designation as a Center of Excellence by NORD is quite an honor. It's a sign of an institutionwide commitment by clinicians from many different departments to patients with these rare conditions," said Ralph DeBerardinis, M.D., Ph.D., Chief of Pediatric Genetics and Metabolism and Professor of Pediatrics in the Children's Medical Center Research Institute at UT Southwestern (CRI). Dr. DeBerardinis, who is also a member of the Eugene McDermott Center for Human Growth and Development and the Harold C. Simmons Comprehensive Cancer Center, directs the Genetic and Metabolic Disease Program at CRI.

Building rare disease expertise

UT Southwestern has received numerous national designations for rare disease care, has established high-level initiatives within its hospital and clinics as well as with affiliated institutions, and has ongoing educational and training programs for future generations of caregivers.

Researchers at UTSW have identified more than 25 rare Mendelian disease genes since Nobel Laureates Michael Brown, M.D., and



Angela Scheuerle, M.D.

Joseph Goldstein, M.D., discovered in 1983 that mutations in the *LDLR* gene caused familial hypercholesterolemia, a landmark finding that led to their winning the 1985 Nobel Prize and helped launch the development of statins, now

used by millions.

Other benchmark efforts include those by Helen Hobbs, M.D., Director of the Eugene McDermott Center for Human Growth and Development, whose characterization of the genomic determinants of cholesterol levels provided rationale for the development of PCSK9 inhibitors and whose structural studies of HIF-2 led to the development of a small molecule inhibitor of this transcription factor.

A recent study by the National Institutes of Health's National Center for Advancing Translational Sciences (NCATS) provides fresh evidence of the potential impact of rare diseases on public health. The findings in the *Orphanet Journal of Rare Diseases* drew from estimates over five years indicating costs ranging from \$4,859 to \$18,994 for treating rare disease patients compared with \$2,211 for those treated without a rare disease. The NCATS team reported that extrapolating those estimated costs for the approximately 25 million to 30 million individuals with rare diseases in the U.S. results in total yearly direct medical costs of approximately \$400 billion, which is similar to the combined annual direct medical costs for cancer, heart failure, and Alzheimer's disease.

For more information on the NORD Rare Disease Centers of Excellence program and the

full list of centers, visit the program website rare-diseases.org/centersofexcellence.

Dr. Brown, a Regental Professor, is Director of the Erik Jonsson Center for Research in Molecular Genetics and Human Disease and holds The W. A. (Monty) Moncrief Distinguished Chair in Cholesterol and Arteriosclerosis Research and the Paul J. Thomas Chair in Medicine.

Dr. DeBerardinis holds the Joel B. Steinberg, M.D. Distinguished Chair in Pediatrics and is a Sowell Family Scholar in Medical Research.

Dr. Goldstein, a Regental Professor, is Chair of Molecular Genetics and holds the Julie and Louis A. Beecher, Jr. Distinguished Chair in Biomedical Research and the Paul J. Thomas Chair in Medicine.

Dr. Hobbs holds the Eugene McDermott Distinguished Chair for the Study of Human Growth and Development, the Philip O'Bryan Montgomery, Jr., M.D. Distinguished Chair in Developmental Biology, and the 1995 Dallas Heart Ball Chair in Cardiology Research.

Dr. Warner holds the Jim and Norma Smith Distinguished Chair for Interventional Cardiology and the Nancy and Jeremy Halbreich, Susan and Theodore Strauss Professorship in Cardiology.

Six UTSW scientists awarded NIH grants in High-Risk, High-Reward program

From Staff Reports

Three UT Southwestern scientists – Lorena Saelices Gomez, Lu Sun, and Jian Zhou – have been awarded \$1.5 million each from the National Institutes of Health (NIH) as New Innovator Award winners. Additionally, the three-member UTSW research team of Todd Roberts, Joseph Takahashi, and Kent Hamra received a \$4.4 million Transformative Research Award grant from the NIH.

The grants are all part of nearly \$10 million in awards announced recently from the NIH Common Fund's High-Risk, High-Reward program that supports scientists pursuing highly innovative research with the potential to have a broad impact on biomedical, behavioral, or social sciences.

Lorena Saelices Gomez, Ph.D., Assistant Professor of Biophysics and in the Center for Alzheimer's and Neurodegenerative Diseases

The NIH grant funding will permit Dr. Saelices Gomez to determine the structure of amyloids, key proteins that have been tied to diseases including Alzheimer's and ATTR amyloidosis.

"Alzheimer's disease and ATTR amyloidosis, which are the main focus of my lab, are devastating conditions that are difficult to diagnose and have no effective treatments," she said. "By better understanding the fibril structures of amyloid diseases, we may be able to offer these patients hope."

Dr. Saelices Gomez will use the award to focus on fibrils responsible for ATTR amyloidosis, a disease that manifests in a variety of symptoms affecting the heart and nerves and that can differ greatly from patient to patient. Hypothesizing that these variations stem from differences in fibril structure, the researchers plan to use cryo-electron microscopy to determine fibril structures from patient samples.

Using this structural information, the team will then design structure-specific peptides for detecting and inhibiting amyloid fibril formation in cells, mice, and patient-derived samples. If successful, the research could serve as a platform for developing personalized structure-based diagnostics and therapeutics for ATTR amyloidosis and



Lorena Saelices Gomez, Ph.D.



Todd Roberts, Ph.D.

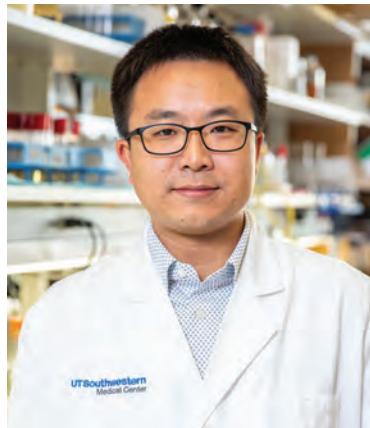
Lu Sun, Ph.D., Assistant Professor of Molecular Biology

Dr. Sun's grant will allow him to study interactions between neurons and glial cells in the brain that could provide insight into the causes of neurological disorders.

"People often think of the nervous system as a whole bunch of neurons talking to each other, but the more we learn about glia, the more we see their important roles in keeping the brain healthy or triggering diseases such as Alzheimer's, autism spectrum disorder, or multiple sclerosis," explained Dr. Sun. "To really understand how the nervous system operates in health and disease, we need a good understanding of these supporting cells."

Although numerous studies have scrutinized the inner workings of either neurons or glia, said Dr. Sun, little is known about the molecular

potentially other amyloid diseases.



Lu Sun, Ph.D.



Joseph Takahashi, Ph.D.

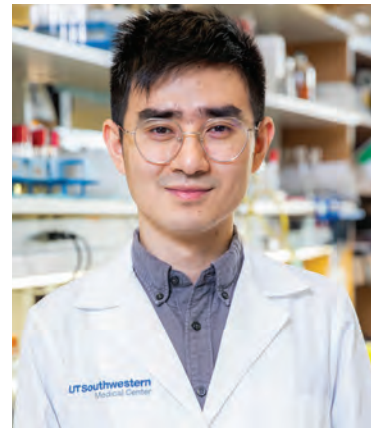
mechanisms these cells use to communicate with each other.

His research will continue work to tease out these interactions, concentrating on a subset of glia called oligodendrocytes. These cells are the sole producers of myelin, the fatty sheaths that cover the extensions of neurons called axons. Myelin provides insulation for the electrical signals that travel down axons and trigger the release of messages that neurons send to each other and other types of cells.

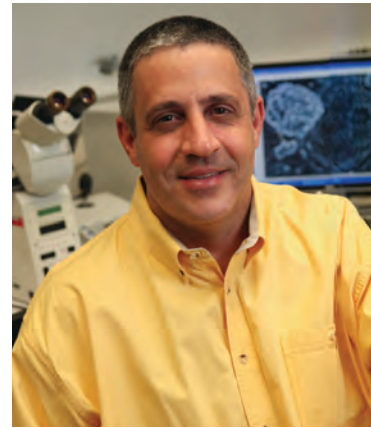
Jian Zhou, Ph.D., Assistant Professor in the Lyda Hill Department of Bioinformatics

Using artificial intelligence, Dr. Zhou plans to investigate the three-dimensional structure of DNA and its impact on health with his grant funding.

"I'm very grateful that I was chosen for this award," said Dr. Zhou, who joined UTSW in 2019. "It's a significant investment in furthering our understanding of the genomic sequence."



Jian Zhou, Ph.D.



Kent Hamra, Ph.D.

Rather than a flat string of base pairs, DNA is a three-dimensional structure that interacts with itself and various proteins. Normal variations and pathological mutations on this structure can vastly change these interactions in ways that scientists have only just started to understand. Dr. Zhou has developed computational tools to better understand the interactions that underlie the organization of chromatin – the three-dimensional complex that forms when chromosomal DNA is wrapped around protein spools called histones. More recently, he developed additional computational tools to analyze changes in gene expression at the single-cell level that may contribute to kidney disease.

The groundbreaking work Dr. Zhou has undertaken at UTSW – inventing entirely new ways to computationally analyze large biological datasets – isn't

often funded by the NIH because the research has little precedent, making it a perfect fit for the New Innovator Award.

Todd Roberts, Ph.D., Associate Professor of Neuroscience; Joseph Takahashi, Ph.D., Professor and Chair of Neuroscience; and Kent Hamra, Ph.D., Senior Research Associate in Obstetrics and Gynecology

This UT Southwestern research team received a Transformative Research Award to study zebra finches related to the genetic basis of vocal imitation abilities. The grant provides \$4.4 million over five years.

"Zebra finches are a vocal learning species that provides the only practical platform for systematically identifying the genes involved in this important social behavior. Like speech, zebra finch song is a culturally transmitted behavior learned via imitation," said Dr. Roberts, the Principal Investigator on this award. "We think a forward genetic screen for mutations that affect vocal imitation, followed by the detailed genetic mapping and manipulations developed through this proposal, will identify genetic signatures for this polygenic trait."

The scientists are seeking to establish the first mutagenesis screen in a vocal learning species and the genetic tools to independently test the function of identified genes by developing novel transgenic zebra finches using germline gene-targeting technologies. The research may shed new light on speech and language deficits associated with autism spectrum disorder.

Previous research by Dr. Roberts, published in *Science Advances*, found that inactivating a gene closely associated with autism prevents songbirds from replicating their fathers' songs.

Dr. Roberts is a Thomas O. Hicks Scholar in Medical Research.

Dr. Sun is a Southwestern Medical Foundation Scholar in Biomedical Research.

Dr. Takahashi holds the Loyd B. Sands Distinguished Chair in Neuroscience.

Dr. Zhou is a Lupe Murchison Foundation Scholar in Medical Research.

Addressing the most-feared kidney cancer complication

From Staff Reports

One of the most challenging complications of kidney cancer is tumor thrombus, which impacts 15% of patients. It occurs when the tumor grows beyond the kidney into the body's largest vein, sometimes extending all the way into the heart.

Surgery is the only treatment. But as a highly complex and challenging procedure, surgery comes with significant risk. Further, half of patients who survive go on to develop metastatic disease.

A team from the Kidney Cancer Program (KCP) at UT Southwestern's Harold C. Simmons Comprehensive Cancer Center set out to change that. UTSW researchers pioneered the use of stereotactic ablative radiation (SABR), reporting the first case in the literature in 2015.

"This involves deploying highly targeted radiation to the tumor inside the vein," explained Raquibul Hannan, M.D., Ph.D., Associate Professor of Radiation Oncology and Immunology and co-leader of the KCP. The results were quite promising, and other institutions started to incorporate SABR for tumor thrombi, in particular for inoperable cases. The team has also embarked on a prospective clinical trial to more rigorously assess the safety and potential of SABR for tumor thrombus.

"When kidney cancer expands into the venous system and reaches the heart, it becomes quite challenging to treat," said Vitaly Margulis, M.D., Professor of Urology. "Surgery requires not only opening the abdomen but often the chest, as well, and placing patients on cardiopulmonary bypass circulation."

Kidney cancer is the No. 8 cancer in the United States. Each year, more than 75,000 cases are diagnosed, with nearly 14,000 deaths. Many cases are caught early, but in about 40% of cases, kidney cancer has invaded or spread at the time of diagnosis.

The KCP is one of two programs in the country

developing new treatment strategies recognized by a Specialized Program of Research Excellence (SPoRE) award from the National Cancer Institute.

"The first thing to do was to establish that SABR was safe," said Robert Timmerman, M.D., Interim Chair of Radiation Oncology and a pioneer of SABR for many cancers.

Involving half a dozen patients, the initial stage of the clinical trial established that SABR didn't increase complication rates. Each patient received five SABR treatments to the tumor extension in the vein prior to surgery. Not one patient had serious complications, and at a median follow-up of two years, all patients were alive.

"There have been no improvements in outcomes for these patients in the past 50 years," said Dr. Margulis. "This new combination of radiation with surgery could offer new hope."

By irradiating the tumor inside the vein, SABR has the potential to reduce metastases from fragments that break off during surgery, added Dr. Hannan.

KCP investigators weren't content with just exploring new treatments, however. They also wanted to unravel its biology. Because of its unique ability to invade large veins, tumor thrombus can easily lead to metastatic disease. Yet, it doesn't always metastasize.

Recent findings published in *Nature Communications* from a decadelong prospective study examined the mechanisms that drive tumor thrombus invasion, providing new insights on how the disease spreads.

Led by Srinivas Malladi, Ph.D., Assistant Professor of Pathology, researchers assembled a cohort of 83 ethnically diverse patients diagnosed with tumor thrombus, of whom 41 developed metastatic disease. To dissect the factors contributing to invasion, they performed next-generation sequencing from different areas of the tumor and thrombus, including the thrombus-leading edge.

Results showed that invasion involves the transient activation of a gene program that enables cancer cells to survive within blood vessels. Unexpectedly, this was not always accomplished by the most aggressive cells within the tumor.

"We found that less aggressive cancer cells could invade and travel along the vein," said Dr. Malladi. "These data explain why not all tumors that invade go on to metastasize. While some cells may have the ability to invade, they haven't yet acquired the ability to survive in the bloodstream or thrive in other organs."

In clinical practice, the likelihood of metastases is determined based on the most evolved and aggressive cells in the tumor. However, KCP investigators found that metastasis could be more accurately predicted based on the level of aggressiveness of the invading cancer cell in the thrombus. After matching for aggressiveness in the tumor, patients with less aggressive tumor extensions had a fourfold lower risk of metastases.

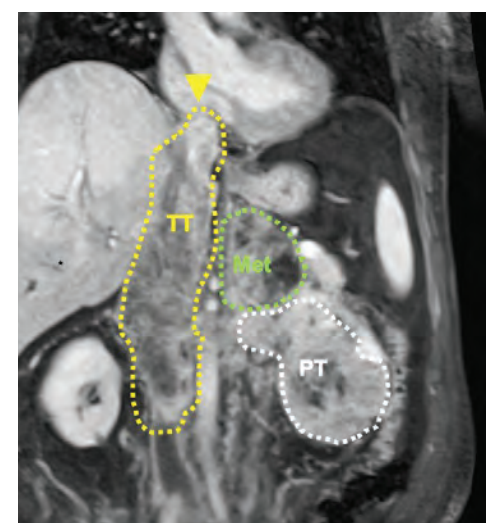
According to Payal Kapur, M.D., Professor of Pathology and Urology and co-leader of the KCP, more attention should be paid to grading tumor extensions, as they may give patients a more accurate assessment of their likelihood to develop metastases.

"If validated, this could change clinical practice," added Dr. Kapur.

Dr. Malladi hopes these findings will one day help patients.

"By defining determinants of invasion and metastatic competence, we might be able to prevent tumor cells from invading in the first place and from initiating metastasis," he said.

"Going from the biology to new treatment paradigms, the KCP has developed one of the most advanced programs for tumor thrombus patients globally," said James Brugarolas, M.D., Ph.D., Director of the Kidney Cancer Program. "This was only possible by assembling a team of



MRI of patient with a kidney primary tumor (PT), a tumor thrombus extension into the largest vein of the body (TT), and a metastasis (Met). As shown by the arrowhead, the tumor reached the heart.

experts across different disciplines."

Drs. Brugarolas, Kapur, Hannan, Margulis, Malladi, and Timmerman are members of the Simmons Cancer Center.

Dr. Brugarolas holds The Sherry Wigley Crow Cancer Research Endowed Chair in Honor of Robert Lewis Kirby, M.D.

Dr. Kapur holds the Jan and Bob Pickens Distinguished Professorship in Medical Science, in Memory of Jerry Knight Rymer and Annette Brannon Rymer, and Mr. and Mrs. W.L. Pickens.

Dr. Margulis holds the Paul C. Peters, M.D. Chair in Urology.

Dr. Timmerman holds the Effie Marie Cain Distinguished Chair in Cancer Therapy Research.

Renowned clinician-scientist returns to Dallas as new Chair of Ophthalmology

By Catherine Gara

As a native of Dallas, J. William Harbour, M.D., has watched UT Southwestern grow over the years into one of the nation's premier academic medical centers. Now he is playing a role in shaping its future as the new Chair of Ophthalmology, succeeding Professor Emeritus James McCulley, M.D., who led the Department for 40 years before retiring June 30 as Chair.

Dr. Harbour joined UT Southwestern Nov. 1 from the University of Miami Miller School of Medicine, where he served as the Vice Chair for Translational Research at the Bascom Palmer Eye Institute and as Associate Director for Basic Science at the Sylvester Comprehensive Cancer Center.

He received his undergraduate degree from Texas A&M University in College Station and earned his medical degree from The Johns Hopkins School of Medicine. Dr. Harbour completed his residency at the Wills Eye Hospital in Philadelphia, followed by fellowships in retinal surgery at the Bascom Palmer Eye Institute and in ocular oncology at the University of California, San Francisco. He then pursued a postdoctoral fellowship in cancer research at Washington University in St. Louis, rising to the rank of Distinguished Professor.

Dr. Harbour is a clinician-scientist with a busy clinical/surgical practice and an active and well-funded laboratory, which he will continue here. Much of his research has focused on uveal melanoma and retinoblastoma, the most common eye cancers in adults and children,



J. William Harbour, M.D.

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. He also has trained more than 100 students, residents, and clinical and research fellows, several of whom are now

experts in their fields.

"The strong interdisciplinary research experience and established collaborative initiatives that Dr. Harbour brings will further elevate UT Southwestern as a national hub for excellence in ophthalmology discovery and clinical care," said W. P. Andrew Lee, M.D., Executive Vice President for Academic Affairs, Provost, and Dean of UT Southwestern Medical School. "We are excited to have him join us."

In an interview for *Center Times*, Dr. Harbour shared why he chose to join UTSW and what he hopes to accomplish.

What drew you to UT Southwestern?

A big reason was the exciting growth happening here. I grew up in Dallas, and I can remember when the Medical School was just the South Campus. The North Campus was just 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 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 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 good researchers. My goal is to take advantage of those strengths and the growth in the region to take it to the next level.

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 aspects of your background make you a good fit for this position?

I've been at top institutions around the country for my whole career. I've seen many successful strategies that leading institutions use to advance. I've also witnessed the skills of great leaders. I plan to apply what I've learned.

What are you most looking forward to in returning to Texas?

To return to my roots and be close to family.

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

Dr. Lee holds the Atticus James Gill, M.D. Chair in Medical Science.

Gattineni appointed Chief of Pediatric Nephrology Division

From Staff Reports

Jyothisna Gattineni, M.D., has been appointed Chief of Pediatric Nephrology for UT Southwestern and Children's Health after serving as the Division's Interim Chief since early 2019.

Under her leadership, the Division within the UTSW Department of Pediatrics has grown to include 10 full-time pediatric nephrologists.

"Dr. Gattineni's extensive clinical experience combined with her leadership skills made her the perfect choice to build upon the Division's legacy while fostering a culture of excellence, innovation, teamwork, and compassion," said Stephen Skapek, M.D., Interim Chair of Pediatrics.

One of the largest pediatric nephrology programs nationwide, the Division is the main provider of clinical and testing services for children

with kidney disease, bone disease, and hypertension at Children's Medical Center Dallas and Children's Medical Center Plano. Currently, Nephrology physicians care for 60 to 70 patients with end-stage renal disease, placing the program among the three largest providers of such care for children in the country. *U.S. News & World Report's* annual Best Hospitals listing consistently ranks the Division among the top pediatric nephrology programs nationwide.

The Division is also home to multiple research labs and remains one of a handful of fellowship programs funded by a National Institutes of Health (NIH) T32 grant to train pediatric nephrologists.

"I appreciate the confidence entrusted in me to lead this Division, which has a storied past and growing footprint in North Texas," said Dr.

Gattineni, named a *D Magazine* Best Pediatric Specialist since 2017.

Dr. Gattineni first joined the UT Southwestern faculty in July 2009 and serves as Associate Professor of Pediatrics. Her clinical interests include phosphate homeostasis and disorders of phosphate metabolism, chronic kidney disease, hemolytic uremic syndrome, dialysis, and transplantation.

As an NIH-funded scientist, Dr. Gattineni aims to better understand kidney disease and open the door to new treatments. Her research focuses on understanding the fibroblast growth factor 23 (FGF23) hormone and how it impacts patients with chronic kidney disease. Her lab has characterized the receptors for this hormone, and in doing so, generated a mouse model with a 25- to 50-fold increase in FGF23 levels. Dr. Gattineni is using this model to



Jyothisna Gattineni, M.D.

determine if elevated FGF23 contributes to the bone, vascular, and cardiac disease seen in patients with chronic kidney disease.

Dr. Gattineni received her medical degree from Stanley Medical College and Hospital in Chennai, India, and completed an internship in internal medicine, surgery, and pediatrics at Government Stanley Medical College Hospital. She subsequently completed residencies in pediatrics at The Royal Bolton Hospital in England and at Driscoll Children's Hospital in Corpus Christi, Texas. Dr. Gattineni then completed a pediatric nephrology fellowship at UT Southwestern/Children's Medical Center.

Dr. Skapek holds the Distinguished Chair in Pediatric Oncology Research.

O'Donnell Continued from page 1

the mysteries of the brain – from the molecular level of brain function to the root causes of diseases and damage that occur with such conditions as traumatic brain injury and Alzheimer's.

Decades of support

The establishment of the O'Donnell Brain Institute was the capstone of a remarkable 40-year partnership between Mr. O'Donnell and UT Southwestern, which was set in motion in 1981 when he founded the Friends of the Center for Human Nutrition. His investments in the Center for Human Nutrition for more than three decades enabled UT Southwestern investigators to make key discoveries that have expanded our understanding of the role nutrition plays in the prevention and treatment of chronic conditions, such as heart disease, hypertension, diabetes, and cancer.

"Thanks to Peter's ongoing support, the Center was able to conduct some of the first tests on the effectiveness of statin medications to lower cholesterol levels, as well as influence the development of numerous national guidelines, notably the determination of safe and unsafe dietary fats and the importance of weight loss and exercise for reducing cardiovascular risk," said Scott Grundy, M.D., Ph.D., the Center's longtime former Director and a close friend of Mr. O'Donnell.

In addition to his support for the Center for Human Nutrition, Mr. O'Donnell made significant contributions to support research in the Department of Molecular Genetics. This support helped propel the work of Nobel Laureates Michael Brown, M.D., and Joseph Goldstein, M.D., whose research served as the foundation for the development of statin drugs now used to control cholesterol.

"Peter O'Donnell was not only a wise and

generous philanthropist – he was an inventor. When he saw a need, he invented a program to meet it. He challenged us to make it work, and then he followed it closely to make certain that we were living up to his vision. He was a true hero of UT Southwestern," said Dr. Goldstein, Chair of Molecular Genetics, and Dr. Brown, Director of the Erik Jonsson Center for Research in Molecular Genetics and Human Disease, in a joint statement.

In addition to the unwavering support he provided to Dr. Brown and Dr. Goldstein, many of Mr. O'Donnell's gifts helped UT Southwestern recruit, retain, and support the work of some of the most brilliant minds in biomedical research, including Nobel Laureate Bruce Beutler, M.D., who has advanced medical science's collective understanding of the genetics of the immune system.

Mr. O'Donnell provided a challenge grant in 1997 to UT Southwestern that was the impetus for the Endowed Scholars Program in Medical Science. Armed with the knowledge that more than half of all scientists awarded the Nobel Prize began their work under the guidance of current Nobel Laureates, Mr. O'Donnell worked to ensure UT Southwestern would stand apart from other institutions in the nurturing of scientific protégés. To encourage the careers of scientists and engineers more broadly across the state of Texas, he established the annual Edith and Peter O'Donnell Awards, presented by The Academy of Medicine, Engineering & Science of Texas (TAMEST) to honor and help fund outstanding early career researchers in science, medicine, and engineering.

Support crossed all missions

Although Mr. O'Donnell's impact on UT Southwestern was most expansive in advancing its research programs, his efforts extended to all

dimensions of UT Southwestern's mission. It was his challenge and support that led UT Southwestern to be among the first institutions to implement an electronic medical record for both inpatient and outpatient care. The O'Donnell Foundation also provided a lead gift to help launch UT Southwestern's Clinical Services Initiative.

In higher education outside of UT Southwestern, the O'Donnell Foundation provided a challenge grant of \$32 million for the creation of science and engineering chairs at UT Austin and developed a plan that created the Oden Institute for Computational Engineering and Sciences.

On a national level, Mr. O'Donnell served as a member of the Presidents' Circle of the National Academies of Sciences, Engineering, and Medicine and on President Ronald Reagan's Foreign Intelligence Advisory Board. In Texas, he served as Commissioner of the Texas National Research Laboratory Commission; as a member of the Texas Select Committee on Higher Education; and as a founding member of TAMEST.

Along with Edith, Mr. O'Donnell was a major supporter of arts organizations in Dallas, the state, and the nation. In 2008, Mr. O'Donnell was elected as a Fellow of the American Academy of Arts and Sciences for his outstanding philanthropic leadership. That same year, Edith and Peter O'Donnell together received honorary Doctor of Humane Letters degrees from Southern Methodist University for their pivotal roles in advancing the arts and education, and they were presented the College Board's Lifetime Achievement Award for excellence in education. In 2013, Mr. O'Donnell was awarded the UT Austin Presidential Citation and the Cooper Institute Legacy Award, both in honor of his visionary leadership and extraordinary contributions to transforming lives.

A Dallas native who pursued careers in investments and philanthropy, Mr. O'Donnell received a Bachelor of Science degree in mathematics from

The University of the South and a Master of Business Administration degree from the Wharton School at the University of Pennsylvania.

The contributions cited are just some of the many ways in which Peter O'Donnell, together with Edith, supported UT Southwestern.

"With his determination to stay out of the spotlight, the full extent of Mr. O'Donnell's impact on society is likely not known by many of those who have benefited from his vision and generosity," said Dr. Podolsky. "He touched legions with compassion, an uncommon generosity, and an earnest love of mankind. The scope and depth of ways in which he advanced the work of the Medical Center is truly remarkable. He will be deeply missed."

Dr. Beutler, Director of the Center for the Genetics of Host Defense and a Regental Professor, holds the Raymond and Ellen Willie Distinguished Chair in Cancer Research, in Honor of Laverne and Raymond Willie, Sr.

Dr. Brown, a Regental Professor, holds The W.A. (Monty) Moncrief Distinguished Chair in Cholesterol and Arteriosclerosis Research and the Paul J. Thomas Chair in Medicine.

Dr. Goldstein, a Regental Professor, holds the Julie and Louis A. Beecher, Jr. Distinguished Chair in Biomedical Research and the Paul J. Thomas Chair in Medicine.

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.

More online: Read the full story in the newsroom at utsouthwestern.edu/newsroom.

UTSW alumna gives back to honor mother's life

By Sharon Reynolds

As a young woman, Sneha Patel, M.P.A.S., PA-C, discovered strength in the human spirit through the kindness of others. Her personal struggles led her to the UT Southwestern School of Health Professions, where she excelled in her studies to become a physician assistant, or PA.

Her remarkable story began in Leicester, England, where she was born to Ramesh and Ramila Patel. When she was 5 years old, her family immigrated to the U.S. in search of a better life.

"My grandmother was widowed at a young age and had six children that she raised on her own with very little money," said Ms. Patel. "My family migrated from India to England, and then to Enid, Oklahoma, where we lived and worked in a small motel that became our family business. All the kids cleaned rooms and did laundry. My parents and extended family taught me that through hard work, anything is possible."

Although her parents, aunts, and uncles never attended college, they encouraged their children to get an education. Ms. Patel had just begun her freshman year at the University of Oklahoma when her mother was involved in a serious car accident, suffering a traumatic brain injury before slipping into a coma.

"I remember hundreds of people sitting in the waiting room for days," she said. "People we didn't even know heard about the accident and came to show their support."

Her mother would remain in a persistent vegetative state for 24 years before passing away. Ms. Patel cherishes the short time she was able to spend with her before



UT Southwestern School of Health Professions alumna Sneha Patel, M.P.A.S., PA-C, is a successful physician assistant who is also passionate about community service.

her accident and is grateful for the lessons she learned from her mother about selflessness, helping others, and giving back.

Opening a door to the future

After graduating from the University of Oklahoma, Ms. Patel enrolled in UT Southwestern's nationally ranked Physician Assistant Studies Program in the School of Health Professions.

"I wanted to learn from the best," she said. "UT Southwestern continues to educate medical and PA students who really are the best in their field. By learning at academic institutions like UT Southwestern and Parkland Memorial Hospital, students can rotate through every specialty and do everything from intubating patients to assisting in surgery. I was guided by great educators and mentors, and I took advantage of the strong support systems that were available to students."

In 2001, Ms. Patel graduated



Ms. Patel (right) with her husband, Ritesh, and children, Anjali and Adi (center).

from UTSW. She began her career as a PA at Metroplex Medical Centres in Dallas, an internal medicine practice that provides primary care services. She worked for 12 years for the owner, Manuel Griego, D.O., who became her mentor. Then in 2014, an exciting opportunity presented itself – she acquired two medical practices from Dr. Griego. Although caring for patients is what she enjoys most, Ms. Patel has put much of her energy into expanding her company's footprint in North Texas. She currently owns five clinics and will open two more in January 2022.

Ms. Patel also earned a Master of Physician Assistant Studies from the University of Nebraska in 2003. She serves as a clinical preceptor for UTSW students and has held an Assistant Professor position in the School of Health Professions, where she enjoys

teaching the next generation of physician assistants.

She was the first person in her family to go to college, and all 13 of her cousins have completed college and graduate school.

"We have doctors, attorneys, engineers, physician assistants, accountants, and doctorates in psychology in our family now," she said. "We were taught to always do everything with integrity, honesty, and hard work. Because of what we went through, we learned to always give back."

Ms. Patel describes her journey as one of sadness, tragedy, courage, determination, hard work, and service to the community. Her management company, Ramila and Associates, is named after her beloved mother.

"It's just a reminder that even though it was tragic, there was some good that came from it as well," she said.

Changing the world through kindness

Throughout her life, Sneha Patel has been inspired to help others and teach future generations to do the same. Each year, she and a team of volunteers travel to Honduras on a medical mission trip, providing free medical, dental, and pharmacy care to more than 1,000 people in one week.

"I love mentoring students who come with us on our mission trips. It inspires them to have more compassion and give to others less fortunate. We are humbled by our experiences and come back with more appreciation for what we have," she said.

Ms. Patel dreams of providing health care to people in underserved Dallas communities through free clinics or a mobile van. She hopes to educate more patients about the importance of preventive medicine, which will reduce the cost of health care and keep patients out of the hospital.

Her personal legacy, she said, is what she teaches her children, Anjali and Adi, so they can leave their own legacy and help change the world for the better.

Ms. Patel and her husband, Ritesh, have taken their children to developing countries, volunteering at orphanages in India, and even enlisted their help in COVID-19 drive-thru testing at her medical office.

"Ritesh and I keep showing them how fortunate they are and that their education can help them have so much power to give back to help others. It's been a long journey to say the least, but it's been a positive one," she said.



Ms. Patel volunteers annually for medical mission trips to Honduras, providing free health care to more than 1,000 people in one week.

Advanced sinus surgery relieves nasal polyp symptoms

By Jan Jarvis

For those with nasal polyps, advances in technology promise to make breathing easier, including a minimally invasive procedure called functional endoscopic sinus surgery (FESS) performed at UT Southwestern that removes polyps and is more effective than other procedures such as balloon sinus dilatation.

For the 4% of adults who have nasal polyps, the surgery offers relief from congestion and nasal obstruction, may restore the sense of smell, and reduces snoring and other symptoms, said Matthew Ryan, M.D., Professor of Otolaryngology – Head and Neck Surgery, who with his colleagues performs more than 700 advanced sinus surgeries a year.

"Historically, sinus surgery has been an ordeal for patients," said Dr.

Ryan. "Outdated techniques such as minimal polyp removal and sinus stripping with placement of nasal packing after surgery produced only short-term results, if any, and often required weeks of painful recovery. Some techniques highly promoted in the media like balloon sinus dilatation accomplish almost nothing for the treatment of nasal polyps."

By comparison, today's advanced sinus surgery is vastly different. Real-time stereotactic computer-aided navigation permits safe, complete surgery. Patients are asleep under general anesthesia, and the surgeon uses an endoscope – a thin tube with a camera – and specialized small tools inserted via the nostrils. There is no swelling, bruising, or other external sign that surgery has been performed.

"We pair sophisticated computer guidance with our surgical expertise



Dr. Ryan and his surgical team use stereotactic computer-aided navigation to assist in the minimally invasive endoscopic procedure.

to navigate more precisely within the sinuses and remove polyps," said Dr. Ryan. "The technology adds an additional layer of safety to the surgery, making patients and surgeons more confident in getting positive results."

Patients usually go home the same day. Most do not feel much pain, he said, but might have some discomfort, congestion, or spotty nose bleeds for a few days.

Although nasal polyps can occur in anyone, about 25% of patients with chronic rhinosinusitis develop them, said Dr. Ryan. Small nasal polyps might not cause any symptoms, but if they grow large enough that they block the nasal passages, they can make breathing difficult and take away the sense of smell, he added.

"Polyps are the result of chronic inflammation, though we don't yet understand what triggers their development in some people and not others," said Dr. Ryan. "Certain conditions such as allergies, cystic fibrosis, aspirin sensitivity, and frequent sinus infection have been shown to increase the risk of developing nasal polyps. But in most instances, there is no single treatment that constitutes a 'cure' for the disease."

While polyps can be removed, there is a chance they can return. For patients suffering now, surgery can make a significant difference, he said.

"They can breathe easier and sleep better, which means they can get back to enjoying their lives – and we are honored to be a part of making that happen," said Dr. Ryan.



Matthew Ryan, M.D., and his colleagues are experts in functional endoscopic sinus surgery (FESS), which combines their knowledge of the delicate sinus cavities and nearby structures with the latest technology to remove nasal polyps.

CLASS

NOTES

IN MEMORIAM

MEDICAL SCHOOL

- Kenneth Roy Adams, M.D. ('77)
- Ralph V. Bailey, M.D. ('49)
- Jerry W. Bane, M.D. ('68)
- Jeptha T. Boone, M.D. ('58)
- Suzanne Corrigan, M.D. ('76)
- Joseph R. Garza, M.D. ('77)
- Donald Carl Harper, M.D. ('77)
- Robert G. Howell, M.D. ('60)
- James K. McNatt, M.D. ('56)
- Jere H. Mitchell, M.D. ('54)
- Thomas H. Moore, M.D. ('60)
- Daniel E. Polter, M.D. ('59)
- Rebecca J. Shoden, M.D. ('79)
- Charles M. Sloan Sr., M.D. ('49)
- Jackie D. Stephenson, M.D. ('62)
- Billie Strother, M.D. ('58)
- Peggy Whalley, M.D. ('56)
- Jean Wilson, M.D. ('55)

HOUSESTAFF

- Donald R. Brieger, M.D.
- Ivan E. Danhoff, M.D.
- Phil S. Davis, M.D.
- Clifton W. Hooser, M.D.
- James N. Martin Jr. M.D.
- Steven M. Weinberg, M.D.
- Buerk Williams, M.D.

SCHOOL OF HEALTH PROFESSIONS

- Vivian A. Barroon ('77)
- Larry W. Blackburn, M.D. ('79)
- Mario C. Guerra ('05)
- Jack A. Price ('92)

GRADUATE SCHOOL

- George W. Cearley Jr. ('71)

JAMP gives economically disadvantaged students a pathway to medical school



Olivia Russell, M.D., completed the JAMP program and graduated from UT Southwestern Medical School in 2018. Here, Dr. Russell (left) participates in training for a fellowship in neonatal-perinatal medicine.

By Jan Jarvis

Applying to and then completing four years of medical school is challenging enough without the added burdens that students from economically disadvantaged families often face. Minus mentors or financial support, preparation for entrance exams and interviews can be daunting, said Keonnie Parrilla, who moved from Guatemala to Texas with his mother when he was 5 years old.

"I had been interested in medicine for years because I wanted to give back to rural communities that lack access to health care," said Mr. Parrilla, a third-year UT Southwestern Medical School student. "But I had no idea what applying for medical school would entail or even how to do it."

The 2019 UT Austin graduate found the guidance he needed through the Joint Admission Medical Program (JAMP), a state-funded initiative that provides support and encourages economically disadvantaged students to matriculate into medical school.

"Coming from a third-world country has influenced me to want to work with a Spanish-speaking population, which luckily is abundant in Dallas," said Mr. Parrilla, who is leaning toward family medicine as a specialty.

Established by the Texas Legislature in 2003, JAMP provides a pathway to medical school for economically disadvantaged students. Through a vigorous selection process with assistance from participating Texas medical schools, eligible applicants are interviewed, and then 100 are accepted statewide into the program

each year, based on criteria established by the Legislature. Students apply during their freshman year of college.

"JAMP helps students acquire the skills and knowledge to be successful future physicians by providing mentoring, summer enrichment programs, and guaranteed acceptance to one of 13 participating Texas medical schools," said Benjamin Nguyen, M.D., Professor of Physical Medicine Rehabilitation at UT Southwestern and current Chair of the JAMP Council.

UT Southwestern is among the original nine medical schools in Texas to join the program. Those interested in learning more about JAMP can go to texasjamp.org.



Limi Jamma

Once accepted, JAMP students are eligible for mentorship and support at one of the 68 participating public and private undergraduate institutions in Texas. Between their sophomore and junior undergraduate years, JAMP students take classes in critical thinking mastery, biology, and chemistry in preparation for the Medical College Admission Test, or MCAT. Then the following summer, JAMP

students participate in an internship focused on team building and interview skills while taking medical school-level courses. Students have an opportunity to shadow a physician, as well as attend clinics involving patient encounters under the supervision of physician/clinician providers. During these summer internships, students interact with and are mentored by current medical students.

Limi Jamma, the daughter of Ethiopian immigrants, said JAMP helped her navigate the educational system. She is a fourth-year UTSW medical student who graduated from UT Austin with a biochemistry degree.

"JAMP offered an MCAT prep course, a network of pre-med JAMP students, and two summer internships where I was able to get a glimpse of the medical school curriculum and have medical student mentors to help guide me in my journey," said Ms. Jamma. "During these internships, I was able to check out many more specialties that I had struggled on getting the opportunity to explore beforehand."

Nguyen Tran, who at age 15 moved with her family from Vietnam to Texas and faced financial hardships, discovered JAMP during college orientation. Ms. Tran knew instantly it was what she needed.

"The program provided me with mentorships from physicians and



Keonnie Parrilla

medical students, as well as MCAT preparation courses that together helped me become the best candidate I could be for medical school," said the fourth-year UTSW medical student. Ms. Tran, who also graduated from UT Arlington, noted that JAMP members all share a burning passion for reducing health disparities and for serving vulnerable communities, which is one of the main reasons for

Paying it forward

Dr. Nguyen moved to the U.S. at age 9 with his parents and eight siblings. As someone who received government assistance and had to work all through high school and college, Dr. Nguyen can relate to the challenges faced by JAMP students as they navigate an atypical path to medicine.

"I have received mentorships and encouragement to pursue my dreams, and therefore feel the need to pay it forward and motivate students to pursue careers in which they can be servant leaders in under-represented communities where patients often have difficulty accessing health care," he said.

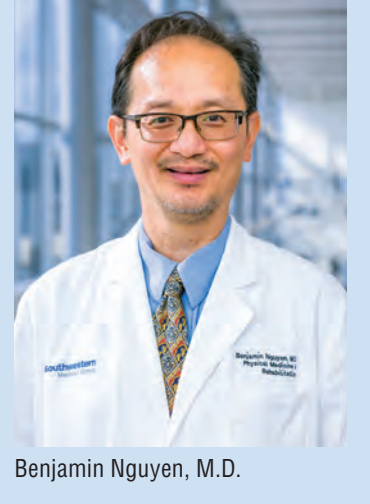
Dr. Nguyen became involved with JAMP at UTSW in 2010 as a volunteer faculty member, and since 2015 has served as a UTSW JAMP Council member. He was named JAMP Council Chair in July 2020.

As current Chair of the JAMP Council, Dr. Nguyen is committed about helping students achieve their goals of attending medical school and ultimately becoming physicians.

"Many of these students don't have the opportunities that their peers do," he said. "They don't have mentors in their communities, and they may have to work to support their families. Many are among the first generation in their family to pursue a higher education."

Coming from this background, students in JAMP are highly motivated to help others when they become physicians.

"It's important to help those who come after you and encourage others to pay it forward," said Dr. Nguyen. "I would not be where I am today without the help I have received."



Benjamin Nguyen, M.D.

After graduating from medical school, JAMP students can apply to any residency program in the country, although many stay in Texas. Since 2010, 95 JAMP participants have graduated from UT Southwestern Medical School, with 44% choosing primary care.

Olivia Russell, M.D., who grew up in a single-parent home in Houston and worked summers since the age of 16 years to help support her family and save for education, said JAMP was invaluable in helping her become a physician. The 2018 UTSW Medical School graduate is currently completing a fellowship in neonatal-perinatal medicine at UT Houston, with plans to work as an attending neonatologist.

"I don't think I'd be where I am today if it wasn't for JAMP," said Dr. Russell. "I think serving as a JAMP summer mentor and instructor helped fuel my passion for teaching and academic medicine, taught me how to be a better teacher, and now, as a fellow, I'm able to use those skills when I work with medical students and residents."



Nguyen Tran

her pursuit of medicine.

"All JAMP members come from socioeconomically disadvantaged backgrounds and have firsthand experience in how health care disparities affect our communities and family members," said Ms. Tran. "Through talking to my fellow JAMPers, I have gained insight into the unique challenges that their respective communities face in obtaining quality health care."

UT Southwestern SACNAS chapter honored with national award

By Rachel Stowe Master

The challenges of the pandemic this past year did not hinder the UT Southwestern SACNAS chapter's commitment to service, diversity, and inclusivity. The group remained steadfast in its mission to inspire underrepresented minority students to pursue careers in STEM, launching outreach efforts to alleviate COVID-19 vaccination concerns and creating videos to thank clinical workers.

In October, the chapter received a 2021 SACNAS Chapter Award in recognition of its dedication to science, education, and professional development. UTSW was one of seven chapters honored with the national award.

SACNAS, or the Society for Advancement of Chicanos/Hispanics and Native Americans in Science, is an inclusive organization of college students and professionals dedicated to fostering the success of Chicanos/Hispanics and Native Americans in attaining advanced degrees, careers, and positions of leadership in STEM. The UTSW chapter, founded in 2014, has 12 officers and 20 active members.

"Our SACNAS chapter continues to work tirelessly to support one another during students' Ph.D. journeys and to encourage the scientists



Members of the UT Southwestern SACNAS chapter participate in the Dallas ISD STEM Expo in 2019. Photo taken pre-pandemic.

of the future through their substantial outreach efforts," said Nancy Street, Ph.D., Associate Dean, Graduate School of Biomedical Sciences and co-adviser of the UTSW chapter. "Receiving the 2021 National SACNAS award is a great honor and signifies that the efforts of our SACNAS members are promoting change and inspiring those who will follow in their footsteps."

Collaborating with the Postdoctoral Association, the chapter created videos – in numerous languages – thanking UTSW and Parkland Memorial Hospital clinical workers for their efforts during

the pandemic. Working with the United to Serve medical student organization, SACNAS members helped create an informational video to put people at ease about COVID-19 vaccines.

Hoping to inspire STEM careers among underrepresented minorities, members participated in panel discussions for high school and undergraduate students, sharing about their personal journeys. They also helped parents and students with fun science experiments through a virtual booth at the Dallas ISD STEM Expo.

In addition, the UTSW chapter presented a seminar at the virtual

SACNAS National Conference on how to organize outreach events.

"This award represents the hard work and dedication of our members and officers," said UTSW SACNAS chapter president Jesus Vega-Lugo, a Ph.D. candidate in molecular biophysics. "In a year where everything was challenging and happening virtually, we were able to accomplish our mission. The award is a recognition that reaffirms that we were able to impact the community during challenging times."

"I am very excited that our chapter is awarded for its work," said Natalia Rodríguez-Sosa, a Ph.D. candidate in neuroscience, who served as chapter president during the prior academic year. "We put in time for the love of service and outreach, but it always feels good to be recognized. Recognition strengthens our desire to continue and makes us realize we are on the right path. Hopefully, we can inspire younger students to join our organization to continue spreading our values of fraternity and service."

The UTSW SACNAS chapter was founded by six Hispanic graduate students with goals to bolster the confidence of young researchers in order to retain underrepresented minority Ph.D. students in science, build a UTSW community that

supports minority students' Ph.D. education, and develop outreach efforts to increase representation of minority groups in STEM. It registered as a chapter with the national SACNAS organization in 2015 and was recognized as Chapter of the Year in Professional Development in 2017 and Chapter of the Year in Community Outreach in 2019 and 2020.

Arnaldo Díaz Vázquez, Ph.D., Assistant Dean for Diversity and Inclusion in the Graduate School and co-adviser of the UTSW chapter, is an alumnus of the Linton-Poodry SACNAS Leadership Institute and has attended the SACNAS National Conference for more than 12 years.

"SACNAS celebrates science and culture in a welcoming and inclusive environment. As a member of a group historically underrepresented in science and medicine, I know firsthand the value that our SACNAS chapter brings to our community and the importance of creating a sense of belonging in its members' well-being and professional development," said Dr. Díaz Vázquez. "Ensuring our students have that sense of community and support network is a priority for me as a first-gen mentor. I am very excited and proud of the accomplishment of our SACNAS chapter here at UT Southwestern."