

CENTER TIMES

APRIL 2022

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CAMPUS EDITION

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

Philanthropic campaign is among largest neuro-focused investments by a U.S. academic medical center



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

From Staff Reports

UT Southwestern has completed a five-year, \$1 billion campaign goal to fuel its commitment to advance brain research and clinical care at its Peter O'Donnell Jr. Brain Institute, making it one of the largest brain-focused investments at a U.S. academic medical center.

The campaign yielded in excess of \$500 million in community philanthropic support for research, technology enhancements, and faculty recruitment. Combined with \$500 million in investments in facilities and programs from UT Southwestern, the effort will further translational and basic research, training, and leading-edge care in the fields of neurology, neurosurgery, psychiatry, physical medicine and

Please see CAMPAIGN on page 7

Transformative \$100M gift from O'Donnell Foundation supports new School of Public Health



Edith and Peter O'Donnell Jr.

From Staff Reports

UT Southwestern has received a \$100 million gift from the O'Donnell Foundation to endow and support its new School of Public Health. This investment is the largest gift to a School of Public Health at a public university in the U.S. and matches the third largest gift supporting any School of Public Health.

The O'Donnell Foundation, established by visionary philanthropist Peter O'Donnell Jr., who died last year, and his late wife, Edith, made this gift for its unprecedented potential to accelerate the momentum of the recently established school. In recognition of this gift, UT Southwestern has named the new school the Peter O'Donnell Jr. School of Public Health. As the first new school established at UTSW in more than 50 years, it joins UT Southwestern's

Medical School, School of Health Professions, and Graduate School of Biomedical Sciences.

"Peter and Edith O'Donnell understood the vital role of academic medicine in addressing the health challenges facing society," said Daniel K. Podolsky, M.D., President of UT Southwestern. "No one has been more generous in their support of UT Southwestern than the O'Donnells and their Foundation, funding many of the Medical Center's most innovative and impactful initiatives over more than four decades."

In total, they have given in excess of \$400 million to support UT Southwestern. The majority of the funds of this latest gift will create an endowment to provide stable support for the new school's research and educational programs. The balance of the gift funds will be used to support recruitment of new faculty and the

Please see O'DONNELL on page 2

Match Day 2022: Together again



UT Southwestern Medical School students celebrated at 11 a.m. CDT on Friday, March 18, to discover where they matched for residencies. The event was especially poignant as it marked the first live Match Day event since before the pandemic. See pages 4-5 for additional coverage, including photos and Match Day list.

UTSW ranked among top 10 large employers in U.S., top five health care employers

By Patrick Wascovich

UT Southwestern is one of the 10 best large employers in the United States and among the top five health care employers, according to the America's Best Employers 2022 list compiled by *Forbes* and Statista.

The America's Best Employers 2022 recognition is based on an independent survey of approximately 60,000 U.S. employees at companies with more than 1,000 workers who were asked to rate their willingness to recommend their own employer to friends and family. Their evaluations also included other employers in their respective industries that stood out either positively or negatively. Work-related topics – like working conditions, salary, potential for development, and company image – were



UT Southwestern is committed to offering opportunity as well as innovative support that allows employees across the enterprise to perform at their best and grow their careers. Photo taken pre-pandemic.

also included in the survey and taken into consideration.

With a workforce of roughly 28,400, UTSW previously ranked No. 3 in the nation on *Forbes'* list of Ameri-

ca's Best Employers for New Graduates, placing it in the top 1% and highest among academic medical centers. UT Southwestern placed among the

Please see BEST EMPLOYER on page 6

Study finds it safe to give clot-busting drug to stroke patients on blood thinners

By Patrick McGee

Stroke patients on long-term blood thinners who were given the clot-busting drug alteplase experienced better recoveries than those who did not receive the drug and had no increased risk of bleeding, a UT Southwestern study shows. The results run counter to the common practice of avoiding use of the clot-busting drug for these patients due to concerns over complications from bleeding.

Many patients at risk of heart attack or stroke from nonvalvular atrial fibrillation take blood thinners known as non-vitamin K antagonist oral anticoagulants (NOACs) to reduce their stroke risk.



Ying Xian, M.D., Ph.D.

But clinicians have been hesitant to give alteplase – the only approved medical therapy for acute ischemic stroke – to stroke patients on blood thinners, believing it would cause excess bleeding, such as a brain hemorrhage.

Please see DRUG on page 6

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Visit our website at utsouthwestern.edu/ctplus

CARE AT HAND

UT Southwestern launches a new app called UTSWMyCare to enhance patient communications.

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MATCH DAY 2022

Residency match moments are captured in stories and photos from the first live event on campus since 2019.

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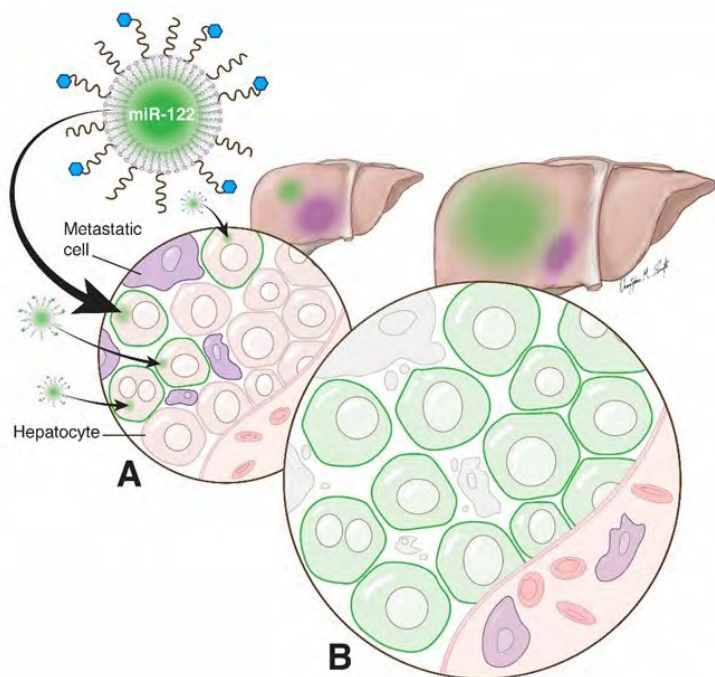
SEARCHING FOR A CURE

A fourth-year graduate student earns the William F. and Grace H. Kirkpatrick Award to further prostate cancer research.

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FOCUS: METASTATIC CANCER INSIGHTS

UT Southwestern develops nanotherapeutic to ward off liver cancer



The engineered nanoparticle encapsulates miR-122 in the core and targets hepatocytes using Gal (blue dots). It delivers the miR-122 into hepatocytes, which makes them "healthier."

By Patrick McGee

UT Southwestern physician-scientists have developed an innovative nanotherapeutic drug that, in mouse models, prevents cancer from spreading to the liver.

The new liver-specific microRNA drug, developed by a team under the direction of Andrew Wang, M.D., is a promising candidate for drug companies that created messenger RNA (mRNA) vaccines for COVID-19 because of the similarities in these RNA agents.

"This might be one ray of hope that comes out of the pandemic," said Dr. Wang, Professor of Radiation Oncology and author of the study that was published recently in *Cancer Research*.

"It takes major funding and resources to develop nanoparticles that can deliver nucleic acids such as mRNA and miRNA. Before the development of COVID-19 vaccines, the cost was prohibitive. But now that several platforms have been developed and approved, these platforms/nanoparticles can be utilized for other applications such as what we developed in mice models in my lab," explained Dr. Wang, the Department of Radiation Oncology's Associate Vice Chair for Research.

With strong interest in the development of therapeutics to prevent liver metastasis, or spread, one potential strategy is to utilize molecules that have broad effects on the liver microenvironment, such as miR-122, a liver-specific miRNA that is a key regulator of diverse hepatic

functions. The study reports the successful development of a nanoformulation miR-122 as a drug to prevent liver metastasis.

The drug's core was made by complexing miR-122 with calcium phosphate, and lipids were wrapped around the core to make the nanoparticle. The drug delivers the miR-122 into liver cells called hepatocytes, which makes them "healthier" by helping prevent cancer cells from establishing in the liver. Although the drug has only been tested in mice, it is a valued advance in the fight against cancer, as up to 70% of people with conditions like colorectal cancer eventually develop liver metastasis.

"Liver metastases are second only to lung metastases, so new therapeutics in this area are an urgent need in oncology. Dr. Wang's study is promising because it showed minimal toxicity," said Carlos L. Arteaga, M.D., Director of the Harold C. Simmons Comprehensive Cancer Center.

Funding for the study and initial drug development was provided by National Cancer Institute/National Institutes of Health U54CA198999, NIH T32CA196589, and the University of North Carolina Research Opportunity Initiative.

Dr. Arteaga holds The Lisa K. Simmons Distinguished Chair in Comprehensive Oncology.

Dr. Wang holds the A. Kenneth Pye Professorship in Cancer Research.

Metabolic vulnerabilities could be new targets for metastatic breast cancer

By Christen Brownlee

Metabolic differences could explain why some metastatic breast cancer cells rapidly generate tumors after migrating from primary tumors to the brain, while others linger for months or years before forming these secondary tumors, UT Southwestern scientists report.

The findings, published in *Cell Metabolism*, highlight metabolic vulnerabilities in malignant cells that could eventually lead to new cancer therapies.

"Brain metastasis is a major problem for breast cancer patients, and most of the treatments that we have are not that effective. We have identified unique features of metastatic breast cancer cells that could serve as new targets," said Srinivas Malladi, Ph.D., Assistant Professor of Pathology, who co-led the study with Pravat Kumar Parida, Ph.D., a post-doctoral fellow in the Malladi lab.

The brain is a common site for breast cancer metastasis, particularly for patients with a subtype of this disease known as HER2+. About half

of patients with HER2+ breast cancers develop secondary tumors at some point after their primary tumor is diagnosed, Dr. Malladi explained, a phenomenon known as metachronous brain metastasis (M-BM). Synchronous brain metastasis (S-BM), when secondary brain tumors are diagnosed at the same time as the primary breast tumor, are rarer – but patients with S-BM have a far worse prognosis, with a median overall survival of just six months after diagnosis. HER2+ breast cancer patients with latent brain metastatic cells (Lat) are asymptomatic and likely to develop M-BM over variable lengths of time.

Using an animal model developed in the Malladi lab, the researchers found significant differences in the metabolism of these different types of brain metastatic cells. For example, while S-BM cells used glucose as a primary fuel source, M-BM and Lat cells used a related sugar called glutamine. Also, Lat cells secreted less lactate, a form of lactic acid, than M-BM and S-BM cells. Lactate helps M-BM and S-BM cells to evade innate immune surveillance and hence can promote tumor survival.



Srinivas Malladi, Ph.D.

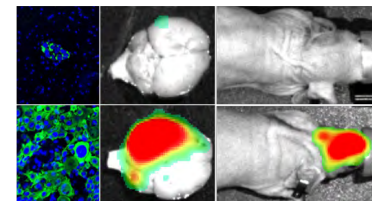
Additionally, the researchers discovered higher amounts of a protein known as xCT, which mediates oxidative stress, in the M-BM and Lat cells compared with S-BM. Stemming the activity of this protein using genetic techniques and chemical inhibitors significantly reduced the metastatic activity of M-BM and



Pravat Kumar Parida, Ph.D.

Lat cells and made them more vulnerable to drugs that target HER2+ cells.

Dr. Malladi, a member of the Harold C. Simmons Comprehensive Cancer Center, noted that the differences identified in the study suggest potential targets to attack brain metastasis in breast cancers and potentially other types of malignancies. Because



Bioluminescent images of mice with latent and overt brain metastasis

an xCT inhibitor is already being tested in clinical trials for multiple myeloma, he added, its use could represent a particularly promising strategy for attacking metabolic vulnerabilities of brain metastases.

The research was funded by grants from the Cancer Prevention and Research Institute of Texas (RP210041 and RR170003), the National Science Foundation (2019281049), the National Cancer Institute, (R35CA22044901), the American Cancer Society (RSG-20-47-01-CSM), and METAvivor (GAA202106-0027).

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

O'Donnell Continued from page 1

school's programmatic initiatives.

"Peter and Edith O'Donnell cared deeply about UT Southwestern and making a difference in the greater Dallas community," said William T. Solomon, President and CEO of the O'Donnell Foundation. "These two passions are inextricably linked in the Peter O'Donnell Jr. School of Public Health. We are proud to share a gift that honors the O'Donnells' immeasurable legacy and makes a lasting impact on UT Southwestern and the communities of North Texas."

The new school was launched to both advance public health broadly through research and meet the need for an expanded expert public health workforce. It will leverage the research strengths and experience of UT Southwestern's three existing schools as well as previous investments by UT Southwestern in public health research and interventions. The latter is exemplified by the long-standing Dallas Heart Study (now the Dallas Hearts and Minds Study) exploring variation in cardiovascular disease risk among diverse populations, research to improve cancer screening in our large health systems – especially

among the underserved – and recent studies on the differential impact of COVID-19 across communities. The new school will also benefit from alignment with the Medical Center's own growing University Health System and an extensive network of collaborative partnerships with other health systems, including Parkland Health, Children's Health, Texas Health Resources, and the Dallas Veterans Affairs Medical Center, as well as with other institutions.

Since formation of the new school was approved by the UT System Board of Regents in 2021, the state of Texas in the 87th regular session of the Texas State Legislature committed \$10 million in startup funds. Plans for the new school have advanced under the guidance of Interim Dean Celette Sugg Skinner, Ph.D., and an executive steering committee. A national search for the school's inaugural permanent Dean is planned for this year. The school will enroll its first students for the Master of Public Health degree in the fall of 2023, followed by the launch of its doctoral degree programs in 2024.

The initial faculty of the Peter O'Donnell Jr.

School of Public Health will comprise members of the Department of Population and Data Sciences of the Medical School, as well as several other departments across all UT Southwestern schools. The faculty will be substantially expanded by recruitment of leading senior and early career public health scholars from across the country and beyond, supported by funds from the O'Donnell Foundation as well as institutional resources and additional philanthropic gifts.

Cross-cutting programs of the Peter O'Donnell Jr. School of Public Health will be anchored on existing strengths at UT Southwestern. These include data science, epidemiology, implementation science, and health system/population health research. These programs will address some of society's most challenging problems that impact communities in North Texas and worldwide. Areas of concentrations within these programs will include a focus on the burden of chronic diseases (such as diabetes, Alzheimer's, obesity, and heart disease), disease prevention, socioeconomic determinants of health and disparities in health outcomes and health equity, global health and emerging infections, and environmental change impact on

health. The Peter O'Donnell Jr. School of Public Health will advance the well-being of communities by translating scientific discoveries into public health solutions and assuring the capacity to respond to future public health emergencies.

"The science of public health seeks to improve the quality of life for whole communities. That goal resonates with the core mission of UT Southwestern – promoting health and a healthy society that enables individuals to achieve their full potential," Dr. Podolsky said. "A better understanding of the barriers to health provides promise for equitable and accessible care for all in North Texas, one of the most populous and diverse regions of the country."

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.

Dr. Skinner holds the Parkland Community Medicine Professorship.

CENTERTIMES

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Study finds mechanical hearts can regenerate some heart tissue

By Patrick McGee

Mechanical hearts spur some regeneration in dormant parts of failing hearts, according to a UT Southwestern pilot study that shows promise for developing regenerative heart therapies.

"This is by all accounts a small study, but it represents the first evidence that mechanical hearts, which are tried-and-true approved treatments for end-stage heart failure patients, can generate new muscle tissue in the failing human heart," said lead author Hesham Sadek, M.D., Ph.D., Professor of Internal Medicine, Biophysics, and Molecular Biology.

His findings, published in *Circulation*, found that left ventricular assist devices (LVADs), widely accepted in cardiology as lifesaving interventions, showed metabolic reactivation in myocardial areas that had little or no activity.

"What we need to do now is replicate these results in larger studies," Dr. Sadek said. "If this holds true in larger studies, mechanical hearts might emerge as a regenerative therapy to reverse heart failure, which is the holy grail in heart failure treatment."

Dr. Sadek has broken extensive ground in this area of cardiology research with studies of heart regen-



The study found that left ventricular assist devices, or LVADs, led to regeneration in dormant parts of failing hearts.

eration in mice that were published in *Nature and Science*. *Cell* reported his findings that oxygen metabolism causes DNA damage in heart cells that shuts down their ability to regenerate.

"This study found evidence of regeneration in the parts of the heart that would be considered dead," said Assistant Professor of Internal Medicine Vlad Zaha, M.D., Ph.D., who

co-lead the study with Dr. Sadek. "It's a promising finding that will lead to further investigations to replicate the results at larger scale, and – if confirmed – to explore potential new therapies to amplify this process in the context of LVAD support."

The pilot study of four patients ages 39 to 59 who were taking medications for heart failure measured metabolic



Hesham Sadek, M.D., Ph.D.

activity by tracking a radiolabeled sugar molecule called F-fluorodeoxyglucose (FDG) in the heart. This FDG signal is considered a marker of "viable," or living, heart tissue.

Positron emission tomography (PET) imaging tracked FDG uptake every six months for up to 18 months. All participants exhibited some degree of increase in FDG uptake in areas of previous metabolic inactivity at their baseline, which is suggestive of possible myocardial regeneration. Among the four patients, the increase in FDG uptake from their baseline ranged from



Vlad Zaha, M.D., Ph.D.

1.87% to 23.8%.

The study was funded in large part by UT Southwestern's Hamon Center for Regenerative Science and Medicine and the Leducq Foundation.

Dr. Sadek holds the J. Fred Schoellkopf, Jr. Chair in Cardiology.

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

UTSWMyCare app to improve patient communications

By Jan Jarvis

UT Southwestern has launched a new patient-care app that streamlines communications and puts wayfinding on the palm of patients' hands. Called the UTSWMyCare app, it is available for download at the Apple and Google app stores.

In addition to offering a simple digital care experience that helps patients easily manage their health and stay connected with their providers, what makes UTSWMyCare unique among other health care apps is that it features an on-campus navigation tool, embedded video-visit functionality, and the full MyChart experience. By fully integrating MyChart into the UTSWMyCare app, patients can access the same features available in MyChart today – quick access to medical records, lab results, messaging, prescription refills, scheduling, video visits, and more.

Telehealth visits are made easier with everything the patient needs to conduct a visit all in



UTSWMyCare, UT Southwestern's new app, streamlines patient communications and includes campus wayfinding features.

one place. Patients can log in to the app, check in, visit their provider, and schedule follow-up appointments without leaving the app.

The wayfinding tool allows campus visitors to get turn-by-turn directions to campus buildings

as well as from the parking garage to the front desk at their doctor's office. Patients seeking a place to eat on campus can also get directions on the app. Today, indoor wayfinding is available within William P. Clements Jr. University

Hospital, West Campus, and North Campus, with additional campus locations coming soon.

"The wayfinding feature is very intuitive to use," said Chelsea Kleen, Director of Health System Emerging Strategies. "You just type in the search bar 'urology,' and all points of interest populate by distance from your current location. Once you select the appropriate point of interest, the app seamlessly gets you from your location to the parking garage, then inside the building and to the front desk of that clinic for your appointment."

Ms. Kleen also stated, "Overall, the UTSWMyCare app is really easy to use. I am especially excited about the wayfinding, video visit, and full MyChart integration features, all of which are unique to our app and make it so easy for our patients to find the care they need when they need it."

Patients who need a ride-sharing service to get to their appointments can access Uber and Lyft from within the UTSWMyCare app. To learn more about UTSWMyCare, visit utswmed.org/mycare.



R. Nick Hogan, M.D., Ph.D., wearing the Zimmerman Medal

Hogan awarded prestigious 2021 Zimmerman Medal

Internationally renowned for his research in neuro-ophthalmology, ocular pathology, and prion disease, **R. Nick Hogan, M.D., Ph.D.**, Professor of Ophthalmology, Neurological Surgery, Neurology, and Pathology, recently received the 2021 Zimmerman Medal for his outstanding contributions in ophthalmic pathology.

The award, presented by the American Association of Ophthalmic Oncologists and Pathologists (AAOOP), is named after Lorenz E. Zimmerman, M.D., considered the "father" of ophthalmic pathology.

"The Zimmerman Medal is one of the most prestigious awards in ophthalmology and a well-deserved tribute to Dr. Hogan's distinguished contributions to the field of ophthalmic pathology," said J. William Harbour, M.D., Chair of Ophthalmology. "We

NEWS MAKERS

in the Department are extremely proud of him and this truly distinctive honor, as he continues to make important contributions to science, education, and his patients."

"I am humbled I was chosen for this honor, given the reputational magnitude of previous awardees," Dr. Hogan said. "To be chosen is especially rewarding because my selection as an awardee was made by my peers. As I near the end of my professional career, receiving the Zimmerman Medal is the most gratifying finale I could have hoped for."

As part of the award, Dr. Hogan had the honor of presenting the Zimmerman Lecture at an on-demand symposium during the AAOOP's annual meeting. His "Ocular Manifestations of Prion Diseases" lecture summarized the discoveries his team has made concerning retinal degeneration in prion diseases, the amount of prions present in the various tissues of the eye, and what that might mean in terms of risk for corneal transplantation and transmission of prion disease.

Specializing in neuro-ophthalmology disorders, ophthalmic pathology, and oncology, Dr. Hogan is the author of numerous publications,

an editorial board member for *Frontiers in Neuro-Ophthalmology*, and a reviewer for many scholarly journals. He is also a grant reviewer for the National Science Foundation and the National Prion Research Foundation.

Jiang, Siegart elected to AIMBE College of Fellows

Two UT Southwestern faculty members have been elected to the American Institute for Medical and Biological Engineering (AIMBE) College of Fellows, a group that represents the top 2% of the most accomplished medical and biological engineers in academia, industry, education, and government.

Steve Jiang, Ph.D., Vice Chair and Chief of the Division of Medical Physics and Engineering, and **Daniel Siegart, Ph.D.**, Associate Professor of Biochemistry, were nominated, reviewed, and elected by their peers to the AIMBE College of Fellows. Both are members of the Harold C. Simmons Comprehensive Cancer Center.

Dr. Jiang, also Professor of Radiation Oncology, was recognized for his outstanding contributions to the application of artificial intelligence in medicine. He said he was



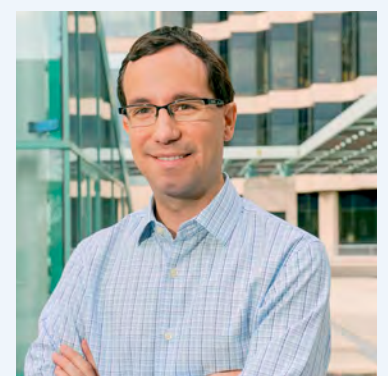
Steve Jiang, Ph.D.

honored to be selected as an AIMBE Fellow and recognized alongside a cohort of the most accomplished and distinguished medical and biological engineers.

"It is a testament to the collaborative and interdisciplinary nature of our work on the development and deployment of artificial intelligence technologies to solve important medical problems," Dr. Jiang said. "I fully support the AIMBE mission to advance medical and biological engineering innovations."

Dr. Siegart was recognized for his outstanding research contributions on lipid nanoparticles for nucleic acid delivery.

"I am appreciative of the significant contributions made by our talented UT Southwestern students and postdocs, with whom I have the joy to work with every day," he said. "I am honored to join the AIMBE College of Fellows and am looking forward to



Daniel Siegart, Ph.D.

serving with AIMBE to advocate for engineering and medical innovation."

The most accomplished and distinguished engineering and medical school chairs, research directors, professors, innovators, and successful entrepreneurs comprise the College of Fellows. AIMBE Fellows are regularly recognized for their contributions in teaching, research, and innovation.

During a ceremony at the AIMBE's 2022 Annual Event on March 25, Dr. Jiang and Dr. Siegart were among 154 inducted as AIMBE Fellows. With their additions, UT Southwestern now has eight faculty members as Fellows of the AIMBE.

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

Dr. Jiang holds the Barbara Crittenden Professorship in Cancer Research.

MATCH DAY | 2022

A perfect Match Day celebration

UTSW Medical School Class is first since 2019 to gather together in person for residency reveal

By Samantha Pruser

The faces of 205 fourth-year medical students revealed eager anticipation as they gathered together in person to mark 2022 Match Day after two years of virtual events. These soon-to-graduate UT Southwestern Medical School students longingly awaited 11 a.m. to open envelopes revealing the hospitals and programs where they would be completing residencies.

Held outside on Eugene McDermott Plaza on Friday, March 18, the event concluded months of anticipation. This year's students matched into 26 different specialties at hospitals across the country.

For 2022, the top five residency specialties selected by UT Southwestern students were:

Internal Medicine

Anesthesiology

Pediatrics

Orthopedics

Psychiatry

"Match Day is a culmination of many years of hopes, hard work, sacrifice, and self-discovery for these students," said Angela Mihalic, M.D., Dean of Medical Students and Associate Dean for Student Affairs. "Each year it is remarkable to look into each student's face, recall them from first-year orientation week, and see the remarkable transformation that has happened over the past four years."

W. P. Andrew Lee, M.D., Executive Vice President for Academic Affairs, Provost, and Dean of the Medical School; Charles Ginsburg, M.D., Vice Provost and Senior Associate Dean for Education; and many other academic leaders took part in this milestone event. The day's festivities included a countdown clock and drumroll – both long-standing UT Southwestern traditions.

For the Class of 2022 in particular, the path to Match Day was laden with obstacles imposed by the COVID-19 pandemic.

"These students had hands-on, real-life learning that could never be taught in a lecture or textbook. They are one

of the few groups of physicians who know exactly how a world reacts to a pandemic," said Melanie Sulistio, M.D., Associate Dean for Student Affairs. "These students have learned how decisions affect public health, and also how information is spread in the modern age, something that will serve them well as they become physician leaders."

Each year, fourth-year medical students participate in the National Resident Matching Program (NRMP). Students complete an extensive cycle of applications and interviews for residency programs at hospitals throughout the country. The NRMP then uses an algorithm to match students to programs according to rankings provided from both parties. In 2022, 42,549 active applicants participated in the Main Residency Match, according to the NRMP.

While managing the rigors of medical school during a pandemic, this year's senior medical students also proved their commitment to improving the inclusivity of medicine for all, whether patient or provider.

"The Class of 2022 has demonstrated a strong passion for advocacy, both in their educational pursuits as well as in advocating for patients," Dr. Mihalic said. "They have shared in and led efforts to promote social justice, address racism in medicine, and promote improvements in the curriculum for expanded teaching of social determinants of health."

Shawna D. Nesbitt, M.D., M.S., Associate Dean for Student Diversity and Inclusion, mirrored the praise of the advocacy efforts of this year's matching students.

"Their thoughtful and innovative approach to learning about health equity and the effect of institutionalized racism on the health of our patients is inspiring. This class represents the hope of a healthier and more equitable society," Dr. Nesbitt said. "The future of medicine is far brighter with the entry of the Class of 2022 into health care."

Match Day represents the culmination of years of hard work for medical students on the precipice of graduating. Of the 205 students who matched in the Class of 2022, 64 will complete residencies at UT Southwestern, 102 will train in Texas, while the rest disperse to top institutions across the country.

Dr. Ginsburg holds the Marilyn R. Corrigan Distinguished Chair in Pediatric Research.

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

More online: For more Match Day coverage, including videos, additional stories, and the full student spotlights, go to [Center Times Plus](https://www.utsouthwestern.edu/ctplus) at [utsouthwestern.edu/ctplus](https://www.utsouthwestern.edu/ctplus).



Match Day 2022: Reactions from a few inspiring students

More than 200 medical students participated in UT Southwestern's live Match Day celebration on March 18. Here are some of the joyous reactions of students who participated in this milestone event of their four-year medical education. Read more about their stories on *Center Times Plus*.

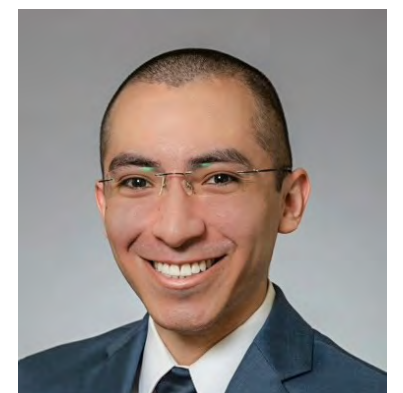
Louise Atadja



Specialty: Orthopedic Surgery
Match: Yale-New Haven Hospital, Connecticut

Reaction: "Match Day was even more exciting than I could have hoped for. Opening the envelope surrounded by my family and friends and seeing my first choice, Yale, was an amazing moment I'll always remember. The hard work and late nights paid off and it's incredible to see it come to fruition!"

Alejandro Rodriguez



Specialty: Physical Medicine and Rehabilitation
Match: UT Southwestern

Reaction: "I feel fortunate to have matched at UT Southwestern, a program near my family that offers a broad range of exposure to PM&R in the state where I hope to practice. The cherry on top was learning that a lot of my friends were staying here too."

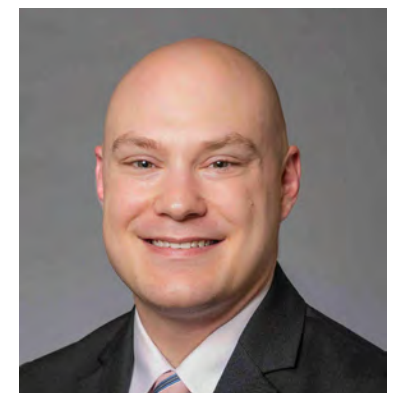
Ahneesh Mohanty



Specialty: Plastic and Reconstructive Surgery
Match: University of Michigan Hospitals, Ann Arbor

Reaction: "I feel elated and blessed to have matched to plastic and reconstructive surgery at the University of Michigan, Ann Arbor, which was my top choice. It was the perfect match for me."

Austin Moore



Specialty: Pediatrics
Match: Children's Hospital, Boston

Reaction: "I'm incredibly excited. It was exactly where I wanted to go – the research in Boston is amazing, I really enjoyed the feel of the program during my interview, and I get to be close to my fiancée, who moved to Boston just last year. I couldn't be happier."

Keri Janowiak



Specialty: Pathology
Match: Methodist Hospital, Houston

Reaction: "It's such a relief to finally know where I'll be spending the next four years of my life, and I'm thrilled to be going home to Houston for the rest of my training at an outstanding program!"

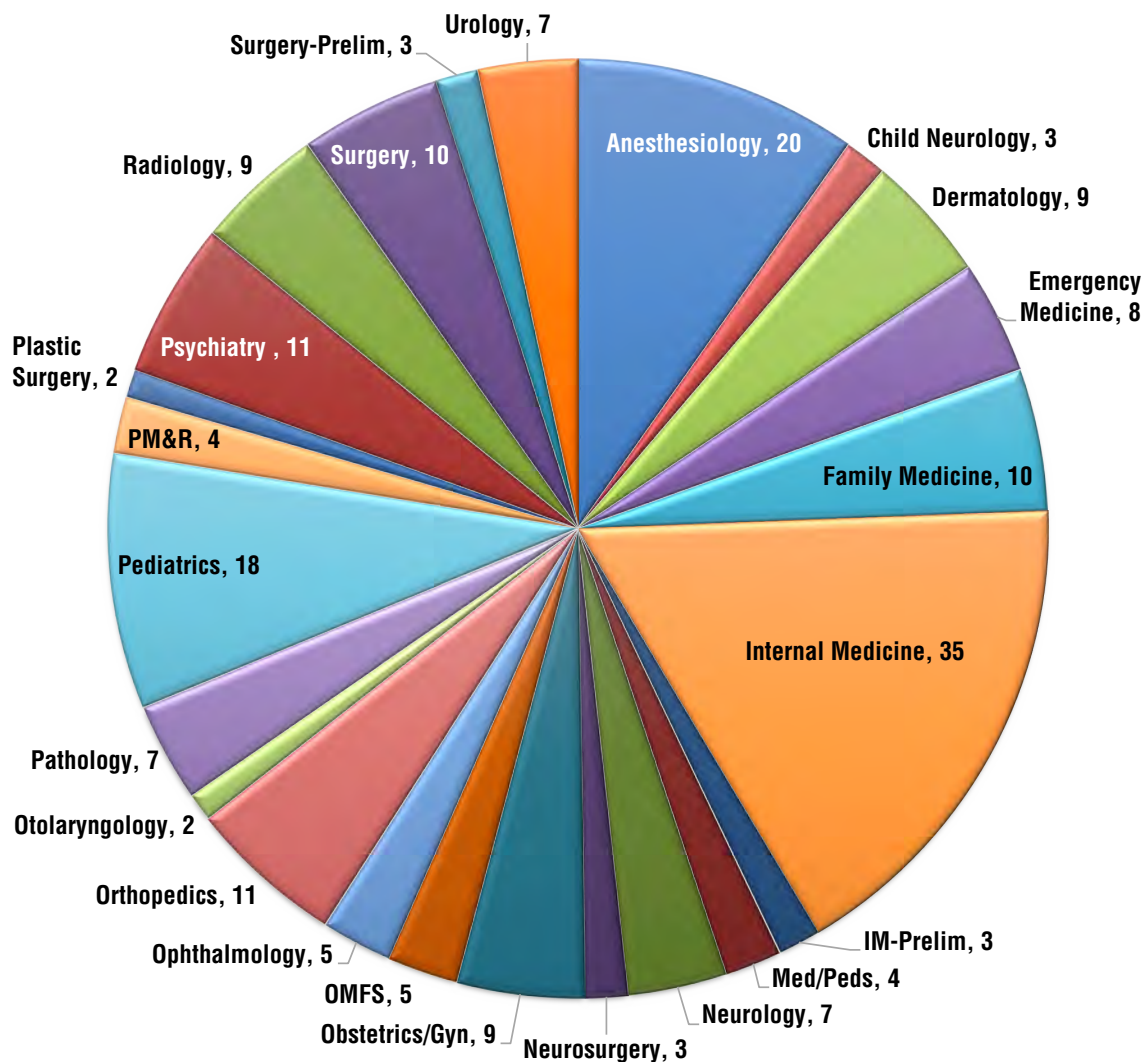
Clifford Rodgers



Specialty: Emergency Medicine
Match: UT Southwestern

Reaction: "Today I matched into my No. 1 choice and couldn't be happier. This was not only a major accomplishment for myself, but for my family and the faculty who helped me achieve this goal."

UTSW Match Results: Class of 2022



MATCH DAY | 2022



HERE, GROUPED BY SPECIALTY, ARE THE MATCHES ACHIEVED BY MEMBERS OF THE UT SOUTHWESTERN MEDICAL SCHOOL CLASS OF 2022

ANESTHESIOLOGY

Andrew Aboujaoude, NYP Hosp-Columbia U Med Ctr, N.Y., **Stanley Bradshaw**, Stanford Health Care, Calif., **Anjali Chacko**, Yale-New Haven Hosp, Conn., **Rafael De Souza**, UT Southwestern, **Lilly Fang**, UT Southwestern, **Fady Guirguis**, Ohio State U Med Ctr, **Vishal Gupta**, NYU Grossman School Of Medicine-NY (Preliminary-Internal Medicine, NYU Grossman SOM, N.Y.), **Jianing Jenny He**, UT Southwestern, **Reena Jasani**, NYU Grossman SOM, N.Y. (Preliminary-Surgery, UT Southwestern), **Dlolean Lemon-Riggs**, Massachusetts Gen Hosp, **Jennifer Min**, NYP Hosp-Weill Cornell Med Ctr, N.Y., **Micah Newton**, Vanderbilt U Med Ctr, Tenn., **Eric Nunez Lafontaine**, UT Southwestern, **Cayenne Price**, UT Southwestern, **Shafeen Qazi**, UC Irvine Med Ctr, Calif., **Ian Shields**, Hosp of the U of PA, **Mohammad Siddiqi**, U Miami/Jackson Health System, Fla., **Nita Tunga**, Loyola U Med Ctr, Ill., **Matthew Vachon**, Virginia Commonwealth U Health System, **Erin Vigil**, UT Med Branch, Galveston

CHILD NEUROLOGY

Dominique Cooper, Children's Hosp, Philadelphia, **Brianne Dentel**, UT Southwestern, **Fatima Zuberi**, UT Southwestern

DERMATOLOGY

Laila Abbas, UT Southwestern (Transitional Year, HCA Houston Healthcare/U Houston), **Nathan Egge**, Oregon Health & Science U (Preliminary-Internal Medicine, Baylor Scott & White Med Ctr, Texas), **Adrienne Joseph**, UT Med School, Houston (Transitional Year, HCA Houston Healthcare/U Houston), **Elysha Kolitz**, UT Southwestern (Preliminary-Internal Medicine, Presbyterian Hosp, Dallas), **Samantha Lopez**, UT Southwestern (Preliminary-Internal Medicine, Baylor U Med Ctr, Dallas), **Orlando Martinez Luna**, U Michigan Hosps, Ann Arbor (Transitional Year, UT Austin Dell Med School), **Paige McKenzie**, Yale-New Haven Hosp, Conn. (Preliminary-Internal Medicine, Presbyterian Hosp, Dallas), **Courtney Prestwood**, Emory U SOM, Ga. (Preliminary-Internal Medicine, UT Med Branch, Galveston)

INTERNAL MEDICINE-DERMATOLOGY

Sung Kyung Cho, Hosp of the U of PA

EMERGENCY MEDICINE

Seth Bohman, UT Southwestern, **Austin Cottam**, Ohio State U Med Ctr, **Lauren Day**, U Maryland Med Ctr, **Anthony Han**, UT Southwestern, **Khiem Hoang**, Emory Univ SOM, Ga., **Rosalind Ma**, UT Southwestern, **Clifford Rodgers**, UT Southwestern

INTERNAL MEDICINE-EMERGENCY MEDICINE

Matthew Cline, Zucker SOM-Northwell NS/LIJ-N.Y.

FAMILY MEDICINE

Coleman Beddingfield, John Peter Smith Hosp, Fort Worth, **Natalie Bonner**, John Peter Smith Hosp, Fort Worth, **Yue Gao**, Tower Health/Drexel Univ COM, Pa., **Christopher Gluckman**, UT Austin Dell Med School, **Jane Gu**, UT Southwestern, **Merin John**, In His Image Family Med, Tulsa, Okla., **Agnes Kim**, Valley Med Ctr, Wash., **Rachel Manuel**, UT Southwestern, **Linh Nguyen**, UTHSC,



San Antonio, **Leah Smith**, John Peter Smith Hosp, Fort Worth

INTERNAL MEDICINE

Nikita Agarwal, Beth Israel Deaconess Med Ctr, Mass., **Murtaza Ahmed**, Cedars-Sinai Med Ctr, Calif., **Dhiraj Ankolekar**, Northwestern McGaw/NMH/VA-ILL., **Nicholas Campalans**, UC San Francisco, **Julie Cooper**, UT Southwestern, **Alejandro De La Torre**, Duke U Med Ctr, N.C., **Manasa Dutta**, UT Southwestern, **Ethan Fan**, Presbyterian Hosp, Dallas, **Hector Filizola**, UCLA Med Ctr, **Maria Ilyas**, U Florida COM-Shands Hosp, **Aaron Ireland**, U Nevada Reno SOM, **Farzan Jafri**, Baylor U Med Ctr, Dallas, **Anishka Kappalayil**, UT Southwestern, **Isaac Lill**, Baylor COM, Houston, **Patrick Lynch**, Baylor COM, Houston, **William McAlpine**, Duke Univ Med Ctr, N.C., **Griffin Milan**, CA Pacific Med Center, **Alisa Momin**, Presbyterian Hosp, Dallas, **Aamer Naofal**, Baylor COM, Houston, **Aman Narayan**, UT Southwestern, **Ashley Phillips**, Johns Hopkins Hosp, Md., **Arifa Plumber**, Presbyterian Hosp, Dallas, **Heather Postma**, UT Southwestern, **Mathews Roy**, UT Med Branch, Galveston, **Ambica Sethi**, UT Austin Dell Med School, **Neal Sharma**, Cook County Health and Hosp System, Ill., **Nishith Sripathi**, U New Mexico SOM, **Chandra Subedi**, UTHSC, San Antonio, **Sanaa Tejani**, UT Southwestern, **Tabitha Ting**, Stanford Health Care, Calif., **James Tran**, Baylor COM, Houston, **Karlyn Tunnell**, Emory Univ SOM, Ga., **Andres Urias Rivera**, Baylor COM, Houston, **Isabel Wees**, UT Southwestern, **Helena Zhang**, Baylor COM, Houston

INTERNAL MEDICINE/PEDIATRICS

Steven Duncan, Christiana Care, Del., **Benjamin Jacob**, Ohio State U Med Ctr, **Jenny Kim**, Indiana University SOM, **Priscilla Liem**, Baylor COM, Houston

INTERNAL MEDICINE-PRELIMINARY

Kevin Burningham, Kirk Kerkorian SOM at UNLV, Nev., **Emily Limmer**, UT Southwestern, **Juliana Pineider**, UT Southwestern

NEUROLOGICAL SURGERY

Cylaina Bird, U Michigan Hosps-Ann Arbor, **Luke Dosselman**, UT Southwestern, **Mark Pernik**, U Tennessee Health Sci Ctr, Memphis

NEUROLOGY

Gabriela Alejo, U Miami/Jackson Health System, Fla., **Rachel Green**, Vanderbilt U Med Ctr, Tenn., **Arash Hamvatan**, Loma Linda U, Calif., **Avneet Hans**, U Alabama Med Ctr-Birmingham, **Tae Kim**, Barnes-Jewish Hosp, Mo., **Yoona Lee**, UT Southwestern, **Collin Sanderson**, Mayo Clinic School of Grad Med Educ, Ariz.

OBSTETRICS AND GYNECOLOGY

Samantha Brocklehurst, U Oklahoma COM, Oklahoma City, **Rodolfo Fernandez-Criado**,

Brown U/Women & Infants Hosp of R.I., **Madysen Kuo**, Methodist Health System, Dallas, **Anh Ngo**, UT Southwestern, **Kelly Schostag**, UT Southwestern, **Beatrice Secheli**, UT Southwestern, **Sophia Tran**, UT Southwestern, **Connie Zhao**, UT Southwestern

OBSTETRICS AND GYNECOLOGY-PRELIMINARY

Danielle Mathisen, U of Hawaii

OPHTHALMOLOGY

Ashika Angirekula, UT Southwestern, **Caroline Murchison**, U Miami/Bascom Palmer (Preliminary-Internal Medicine, U Miami/Jackson Health System, Fla.), **Roma Pradhan**, UT Southwestern, **Cameron Ward**, U Wash Affil Hosps (Preliminary-Internal Medicine, U Wash Affil Hosps), **Jeffrey Wooliscroft**, LSUHSC-Shreveport, La. (Preliminary-Internal Medicine, LSUHSC-Shreveport)

ORAL AND MAXILLOFACIAL SURGERY

Brian Carr, UT Southwestern, **Joseph Gulko**, UT Southwestern, **Nicholas Kolar**, UT Southwestern, **Rodrigo Sarmiento**, UT Southwestern, **Ishpreet Shergill**, UT Southwestern

ORTHOPEDIC SURGERY

Emmanuel Adeyemo, Detroit Med Ctr/WSU, Mich., **Louise Atadja**, Yale-New Haven Hosp, Conn., **Olatunde Badejo**, Hosp for Special Surgery, N.Y., **Farzam Farahani**, U Alabama Med Ctr-Birmingham, **Roberto Gonzalez**, Baylor COM, Houston, **Paul Gudmundsson**, UT Southwestern, **Sharon Huang**, U Rochester/Strong Memorial, N.Y., **Ami Kapadia**, George Wash U, D.C., **Kylan Larsen**, U New Mexico SOM, **Benjamin Montanez**, UT Southwestern, **Angela Zhang**, UT Southwestern

OTOLARYNGOLOGY

Taylor Leavitt, Baylor COM, Houston, **Jordan Salley**, UT Southwestern

PATHOLOGY

Miles Black, Hosp of the U of PA, **Kyle Goodman**, Barnes-Jewish Hosp-Mo., **Keri Janowiak**, Methodist Hosp, Houston, **Adelaide Kwon**, UT Southwestern, **Elisa Lin**, UT Southwestern, **Noah Mehr**, U Chicago Med Ctr, Ill., **Cecilia Zhou**, UT Southwestern

PEDIATRICS

Neethu Augustine, Virginia Commonwealth U Hlth System, **Kaley Desher**, Emory U SOM, Ga., **Meera Devarajan**, Phoenix Children's Hosp, Ariz., **Kwame Duah**, U Tenn. Health Sci Ctr, Memphis, **Sarah Lairmore**, UT Southwestern, **Gina Milano**, UT Southwestern, **Austin Moore**, Children's Hosp, Boston, **Sarah Prickett**, U Alabama Med Ctr, Birmingham, **Jenny Raman**, U Florida COM-Shands Hosp, **Melissa Reynoso**, UT Southwestern, **Prachi Singh**, UT Southwestern, **Gabriele Slaughter**, NYP Hosp-Columbia U Med Ctr, N.Y., **Madeline Sparks**, UT Southwestern, **Joyce Tong**, Baylor COM, Houston, **Chuhan Wang**, Baylor COM, Houston, **Caitlin Winebrenner**, UT Med School, Houston, **William Wood**, UT Southwestern, **Tianyi Wu**, UPMC Medical Education, Pa.

PHYSICAL MEDICINE AND REHABILITATION

Won Jeong, Baylor COM, Houston (Preliminary-

Internal Medicine, Baylor COM, Houston), **Mohammad Murtuza**, UT Southwestern, **Alejandro Rodriguez**, UT Southwestern, **Nguyen Tran**, UT Southwestern

PLASTIC SURGERY

Palvasha Deme, UT Southwestern, **Ahneesh Mohanty**, U Michigan Hosps, Ann Arbor

PSYCHIATRY

Kanwal Ahmed, UT Southwestern, **Evan Bogdan**, Charles R. Drew U, Calif., **Henry Guajardo**, Baylor COM, Houston, **Deena Habazi**, Baylor COM, Houston, **Esha Hansoti**, Zucker SOM-Northwell Zucker Hillside, N.Y., **Stephanie Ngo**, St. Elizabeth's Med Ctr, Mass., **Maxwell Ritzer**, John Peter Smith Hosp, Fort Worth, **Tuyet Nhi Tran**, UT Austin Dell Med School, **Brittany Turner**, UT Southwestern, **Matthew White**, Med Coll Wisconsin Affil Hosps, **Christine Yuan**, Texas Tech U Affil, El Paso

RADIOLOGY

Patrick Arraj, Emory U SOM, Ga. (Transitional Year, Emory U SOM, Ga.), **Daniel Garza**, UT Southwestern (Preliminary-Internal Medicine, Presbyterian Hosp, Dallas), **Anurag Gupta**, Yale-New Haven Hosp, Conn. (Transitional Year, Brookwood Baptist Health, Ala.), **Pradyotha Kanchustambham**, Rochester Gen Hosp, N.Y. (Transitional Year, HCA Las Palmas del Sol Healthcare, El Paso), **Christopher Lee**, Santa Clara Valley Med Ctr, Calif. (Transitional Year, John Peter Smith Hosp, Fort Worth), **Kyle Robbins**, Barnes-Jewish Hosp-Mo. (Preliminary-Internal Medicine, U Florida COM-Shands Hosp), **Hasan Seede**, Harbor-UCLA Med Ctr, Calif. (Transitional Year, HCA Houston Healthcare/U Houston), **Justin Yan**, Baylor COM, Houston (Transitional Year, HCA Houston Healthcare/U Houston), **Haoling Zhu**, NYU Grossman SOM, N.Y. (Preliminary-Internal Medicine, Presbyterian Hosp, Dallas)

SURGERY

Alana Carrasco, UT Southwestern, **Hellen Chiou**, Rutgers-R.W. Johnson Med School, N.J., **Isabel Garcia**, UT Southwestern, **Edward Hauptmann**, UT Southwestern, **Cameron Holmes**, Tulane Univ SOM, La., **Steve Komorian**, U North Carolina Hosps, **Charles Liu**, Barnes-Jewish Hosp-Mo., **Arti Machchhar**, U Cincinnati Med Ctr, Ohio, **Sanchit Sachdeva**, LSU SOM-New Orleans, La.

SURGERY-PRELIMINARY

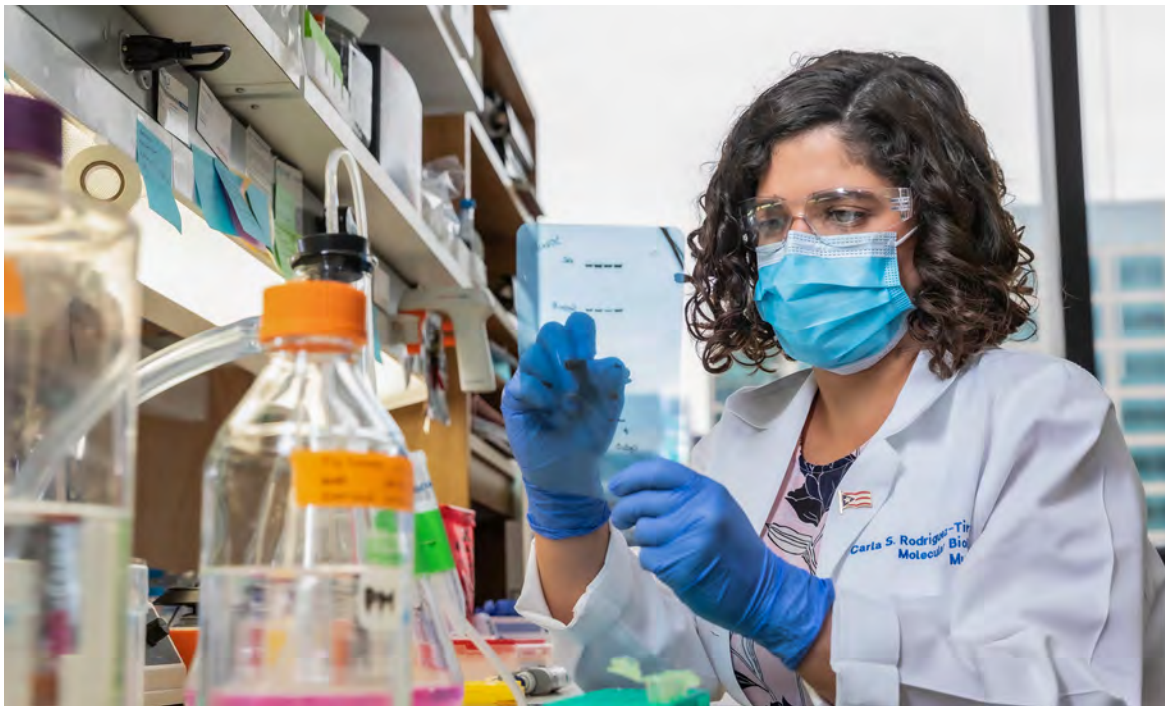
Eliza Ferrari, UT Southwestern, **Silas Henderson**, Baylor COM, Houston, **Dharani Rohit Thota**, Baylor COM, Houston

UROLOGY

Rohit Badia, UT Southwestern, **Grayden Cook**, Brigham and Women's Hosp, Mass., **Mehraban Kavoussi**, UT Med Branch, Galveston, **Hersh Trivedi**, U North Carolina Hosps, **Aaron Tverye**, U Kansas SOM, Kansas City, **Kristyn Williams**, NYU SOM, **Avery Wolfe**, U Oklahoma COM, Oklahoma City

This list does not include matches for 2022 students who asked for no publicity, students pursuing alternative careers, or students who are taking a year off before starting their residency training.

Graduate student receives Kirkpatrick Award for prostate cancer research



Graduate student Carla Rodriguez Tirado has received the William F. and Grace H. Kirkpatrick Award to support her prostate cancer research.

By Carol Marie Cropper

Carla Rodriguez Tirado, a fourth-year Ph.D. student at UT Southwestern, has been honored with a William F. and Grace H. Kirkpatrick Award to support her research into metastatic prostate cancer.

Ms. Rodriguez Tirado's work

focuses on a gene that encodes an enzyme involved in degrading misfolded proteins in healthy cells and is found to be missing in 8% to 15% of prostate cancer patients. Intentionally deleting that gene from human prostate cancer cells using CRISPR gene editing technology makes the cancer more resistant to the current last-

effort treatment for metastatic prostate cancer (cancer that has spread to other parts of the body), she found.

Her aim is to understand how and why deleting the gene allows prostate cancer to continue growing despite treatment with androgen receptor targeted therapies currently used in such patients with the long-

term goal of identifying new treatments for metastatic prostate cancer.

Prostate cancer is one of the most common cancers in American men. According to the Centers for Disease Control and Prevention, 13 out of every 100 men in the U.S. will get prostate cancer at some point – and two to three of those men will die from it. Last year, prostate cancer resulted in more than 34,000 deaths, according to the American Cancer Association.

The Kirkpatrick Award provides \$30,000 to support research proposed by a UTSW predoctoral student in an application for a National Institutes of Health (NIH) National Research Service Award fellowship grant. (As of press time, the NIH has yet to rule on the award winner's application.)

Funding provided by the Kirkpatrick Award will be helpful as Ms. Rodriguez Tirado continues her work in the lab of Ping Mu, Ph.D., Assistant Professor of Molecular Biology. "It will support my research. It's awesome that we get this extra support," said the Kirkpatrick Award recipient.

"Carla is an outstanding cancer biology graduate student in the Molecular Biology Department and I have had the privilege of being her mentor for the last three years," said Dr. Mu. "I am very impressed with her passion for scientific discovery, persistence to tackle challenging

obstacles, comprehensive knowledge of cancer biology, and her willingness for productive collaboration."

Ms. Rodriguez Tirado, who hopes to complete her doctorate in 2024, grew up in Puerto Rico and earned a Bachelor of Science degree in biology magna cum laude from the University of Puerto Rico. She participated in a summer program at UT Southwestern as an undergraduate student, researching lung cancer in the lab of Kathryn O'Donnell-Mendell, Ph.D., Associate Professor of Molecular Biology.

The Kirkpatrick Award winner said she became interested in studying cancer while taking an undergraduate cell biology class.

"I was really interested in how cells work and how cancer cells work – how cancer cells take something that is put in place to keep healthy cells in check and use it to their advantage," she said.

Ms. Rodriguez Tirado's project was chosen by the Graduate School of Biomedical Sciences' awards faculty committee from 17 eligible NIH grant applications of UTSW predoctoral students.

Dr. Mu is a Deborah and W.A. "Tex" Moncrief, Jr. Scholar in Medical Research.

Towler named inaugural Associate Dean of Resident Research

By Carol Marie Cropper

Dwight Towler, M.D., Ph.D., a Professor of Internal Medicine in the Division of Endocrinology, has been appointed UT Southwestern's first Associate Dean of Resident Research to expand physician-scientist development here.

In this role, Dr. Towler will direct a stipend-supported program that provides select UT Southwestern resident physicians the opportunity to work for two years with UTSW research mentors in laboratories before completing their clinical training.

"UT Southwestern created this position to help address the growing need for more physician-scientists as their overall numbers decline," said W. P. Andrew Lee, M.D., Executive Vice President for Academic Affairs, Provost, and Dean of UT Southwestern Medical School. "I can think of no one more capable of leading

this effort than Dwight Towler, himself a highly accomplished and respected physician-scientist."

The new position grew out of a Burroughs Wellcome Fund program aimed at increasing the number of physicians pursuing research. Under Dr. Towler's direction, UT Southwestern successfully secured one of the \$2.5 million Burroughs Wellcome grants by developing its Training Resident Doctors as Innovators in Science (TARDIS) program, which offers medical residents two years of laboratory training. Although the five-year grant will end soon, UT Southwestern has committed \$750,000 a year to continue the effort.

While much research is done by the 600 or so dual-M.D./Ph.D. students who graduate each year in the U.S., there are far more M.D.-only graduates (about 20,000 each year), and they can bring a unique, patient-centric approach to research,

Dr. Towler said. "They are right there at that interface. They draw their inspiration from the unmet clinical needs of their patients," he said.

Creating new "on-ramps" for training M.D.-based investigators will help grow the physician-scientist pipeline, complementing UT Southwestern's successful M.D./Ph.D. program, added Dr. Towler, also a member of the Charles and Jane Pak Center for Mineral Metabolism and Clinical Research.

Dr. Towler, who was the inaugural Vice Chair of Research in Internal Medicine before taking on his new role Feb. 1, earned his medical degree and doctorate in biochemistry from Washington University in St. Louis. He completed his residency and an endocrine/metabolism fellowship at Barnes-Jewish Hospital in St. Louis and served as Chief of the Division of Bone and Mineral Diseases at Washington University for a decade before joining UT South-

western in 2015. He is a member of the Association of American Physicians and the American Society for Clinical Investigation.

He specializes in the diagnosis and treatment of bone and mineral disorders, such as osteoporosis and vascular calcification. His research focuses on the endocrine physiology of bone and vascular disease. Earlier in his career, he co-lead a large research team in the pharmaceutical industry as a senior director, discovering novel therapeutics for treatment of osteoporosis and musculoskeletal frailty.

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

Dr. Towler holds the J.D. and Maggie E. Wilson Distinguished Chair in Biomedical Research, and the Louis V. Avioli Professorship in Mineral Metabolism Research.



Dwight Towler, M.D., Ph.D.

Drug Continued from page 1

The study of more than 160,000 patients published in *JAMA* – the largest study of its kind – found 2,207 patients who were taking NOACs prior to having a stroke and were treated with alteplase. It found no evidence that these patients were at risk of excess bleeding. Instead, these individuals were able to return home free of disabilities and able to move and function independently.

"The real risk is in not treating patients – they would otherwise be left with lifelong disability from their stroke," said Ying Xian, M.D., Ph.D., an author of the study, Associate Professor of Neurology and Population and Data Sciences, and Section Head of Research, Stroke and Cerebrovascular Diseases.

Approved in early 2010s, NOACs such as dabigatran, rivaroxaban, apixaban, and edoxaban made up nearly 80% of new blood thinner prescriptions in 2017, and that number is believed to be higher now, Dr. Xian said. A clinical trial of alteplase in NOAC patients is unlikely, so Dr. Xian and his colleagues studied data from 163,083 patients across the U.S. in the American Heart Association's Stroke Registry.

UT Southwestern is certified as an Advanced Comprehensive Stroke Center by The Joint Commission and the American Heart Association/American Stroke Association. UTSW is ranked as high performing

for stroke care by *U.S. News and World Report*, where it is ranked No. 19 in the nation for Neurology and Neurosurgery.

Other UT Southwestern researchers who contributed to the study are DaiWai Olson, Ph.D., R.N., Professor of Neurology and Neurological Surgery, and Eric Peterson, M.D., M.P.H., Vice Provost and Senior Associate Dean for Clinical Research and Professor of Internal Medicine.

The study is based on data from these two programs: the Get With the Guidelines-Stroke (GWTG-Stroke) program, which is led by the American Heart Association (AHA) and the American Stroke Association (ASA); and the Addressing Real-World Anticoagulant Management Issues in Stroke (ARAMIS) registry, a multicenter cohort study of acute stroke patients that is built upon the existing infrastructure of the AHA/ASA GWTG-Stroke program.

Dr. Peterson holds the Adelyn and Edmund M. Hoffman Distinguished Chair in Medical Science.

More online: Read the full story in the newsroom at [utswmed.edu/newsroom](https://www.utswmed.edu/newsroom).

Up until this study, clinicians had been hesitant to give alteplase to stroke patients on blood thinners. But researchers found no evidence that such patients were at increased risk of excess bleeding.

Best Employer Continued from page 1

top 40 institutions honored by *Forbes* as Best Employers for Women 2021.

"UT Southwestern has a dynamic culture of integrity, inclusiveness, respect, collaboration, and accountability that shapes the way we deliver on our mission of providing expert medical care, academic achievement, and transformative research," said Holly Crawford, Executive Vice President for Business Affairs.

UTSW also has been recognized among Hospital Careers' Top 100 Best Hospitals to Work For, Best Places to Work for Post-docs by *The Scientist*, received a Top 10 Best Organizations for Leadership Development Award from the National Center for Healthcare Leadership, and holds Magnet Recognition from the American Nurses Credentialing Center. UT Southwestern's William P. Clements Jr. University Hospital is nationally ranked among the top 25 hospitals in eight specialties by *U.S. News & World Report* and ranked the No. 1 hospital in Dallas-Fort Worth – the fourth-largest metro area in the U.S.

UT Southwestern is further recognized as a Top Veteran-Friendly Company by *U.S. Veterans Magazine*; as a top Mother-Friendly Worksite by the Texas Department of State Health Services; and received the Lex Frieden Employment Award from the Texas Governor's Committee on People with Disabilities. Additional recognitions

include the 2021 Health Professions Higher Education Excellence in Diversity (HEED) Award from *INSIGHT Into Diversity* magazine, the oldest and largest diversity-focused publication in higher education; selection as a Top Healthcare Company in Best of the Best Awards for *Hispanic Network Magazine* as well as *Black EOE Journal*; and the Corporate Citizen Award from LaunchAbility.

UT Southwestern offers online and in-person training and mentoring programs that help groom employees for future management and leadership roles, provides technical skills to master new software and technologies, and furnishes resources for employee wellness, managing stress and finances, and sharing common interests.

In response to the personal sacrifices made by front-line workers during the pandemic, the University's leadership established a Behavioral Health Response Team to augment efforts provided by the institution's Employee Assistance Program, Faculty Wellness initiative, and the Student Wellness and Counseling Center.

"The pandemic has been challenging, but the commitment and resilience across our enterprise from faculty, staff, and learners continue to prevail as the University provides client-centric care and services to them and to our patients and visitors," Ms. Crawford said.

Wright appointed Chief of Pediatric Rheumatology

From Staff Reports

Tracey B. Wright, M.D., has been appointed Chief of Pediatric Rheumatology at UT Southwestern, Scottish Rite for Children, and Children's Health after serving as the Division's Interim Chief since summer 2019.

A faculty member of the UTSW Department of Pediatrics, Dr. Wright practices at Scottish Rite and Children's Health. She has been named a *D Magazine* Best Pediatric Specialist for many years.

"Members of the national pediatric rheumatology community recognize her as a rising star," said Stephen X. Skapek, M.D., Interim Chair of Pediatrics at UT Southwestern. "Her skills and leadership will enrich our clinical and scholarly missions in the Department of Pediatrics."

Together, UT Southwestern, Chil-



Tracey B. Wright, M.D.

dren's Health, and Scottish Rite serve as major resources for pediatric rheumatology in North Texas, operating the largest and longest-established

multispecialty clinic for children with rheumatic disease in the region, with rheumatology clinics at Children's Health and Scottish Rite.

"As the Joint Pediatric Enterprise (JPE) evolves, our goal is to invest in our clinical programs to better serve our growing patient population," said Dai H. Chung, M.D., Chief Medical Officer of the JPE and Chief of the UTSW Division of Pediatric Surgery. "Dr. Wright's experience and leadership will ensure we continue to collaborate to provide the highest quality care and meet the rheumatology needs of patients in North Texas and beyond."

The Pediatric Rheumatology Division offers one of the 36 Accreditation Council for Graduate Medical Education-accredited pediatric rheumatology fellowship programs in the U.S. and has trained fellows from around

the world for more than 30 years. Four of the approximately 364 board-certified pediatric rheumatologists in the U.S. are Division faculty.

"I am honored to lead such a hard-working team," Dr. Wright said. "We are in a unique position because our programs involve multiple institutions. I plan to leverage those relationships to ensure that we remain a destination program as we grow and expand beyond our current footprint."

Dr. Wright, who joined the UT Southwestern faculty in 2008, also serves as Associate Professor of Pediatrics and Pediatric Fellowship Program Director. Her clinical and research interests focus on pediatric systemic lupus erythematosus and improving outcomes for children and adolescents with the disease. She is currently Principal Investigator for the Clinical and Sample Core for the National Institute

of Arthritis and Musculoskeletal and Skin Diseases-funded Center for Lupus Research, an integrated, cooperative center based at UT Southwestern, and the Druker Institute for Children's Health at Weill Cornell Medicine.

A graduate of Yale University, Dr. Wright received her medical degree from Medical College of Pennsylvania's Hahnemann School of Medicine and completed her internship and residency in pediatrics and a fellowship in pediatric rheumatology at Children's Hospital of Philadelphia.

■

Dr. Chung holds the Helen J. and Robert S. Strauss and Diana K. and Richard C. Strauss Chair in Pediatric Surgery.

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

Campaign Continued from page 1

rehabilitation, and basic neuroscience underlying brain disease and injury.

"This billion-dollar investment reflects UT Southwestern's commitment to work at the vanguard of basic scientific and clinical research aimed at understanding brain function

and uncovering transformational approaches to diagnosis and treatment of disorders affecting the brain. Our hope is that one day no patient diagnosed with brain disease will ever hear the words 'there is no cure,'" said Daniel K. Podolsky, M.D., President of

UT Southwestern.

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

later this year to significantly expand research space for the O'Donnell Brain Institute's 2,100-plus faculty members and additional recruits.

- Broaden the computational and analytical support needed to effectively analyze large numbers of proteins, genes, neurons, and other potential therapeutic targets.

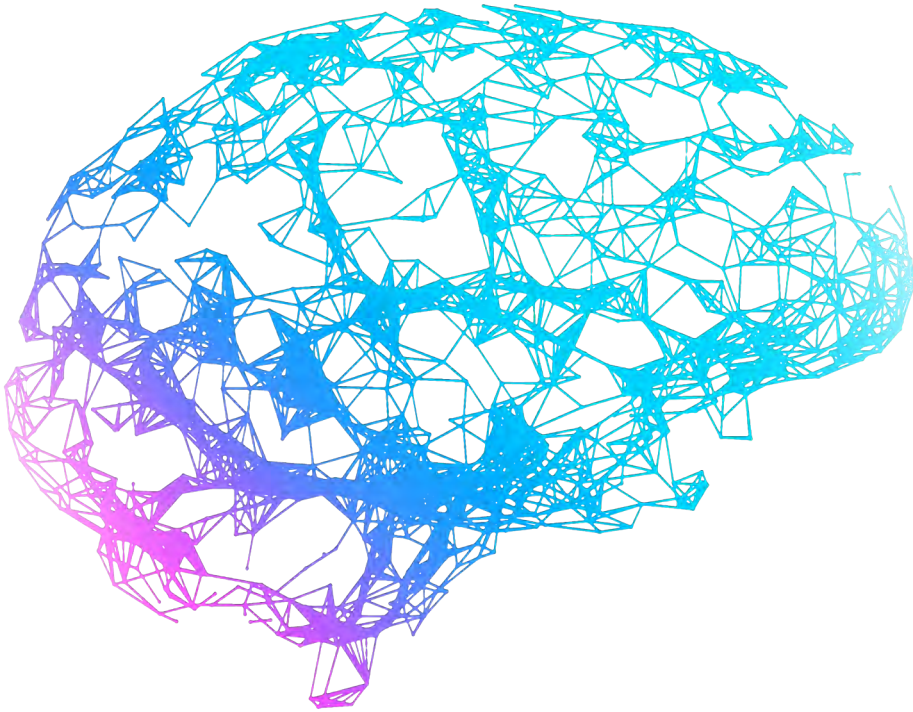
- Acquire enhanced imaging and other advanced technology, such as the country's most sensitive magnetoencephalography, or MEG, which maps brain activity to assess everything from concussions to dementia.

- Provide breakthrough treatments such as high-intensity focused ultrasound (HIFU) for patients with essen-

Institute. These include the Center for Alzheimer's and Neurodegenerative Diseases, Center for Translational Neurodegeneration Research, Texas Institute for Brain Injury and Repair, Mobility Foundation Center for Rehabilitation Research, Annette G. Strauss Center for Neuro-Oncology, Center for Depression Research and Clinical Care, and the Advanced Imaging Research Center. Supported by the Texas Institute for Brain Injury and Repair, UTSW's Whole Brain Microscopy Facility is particularly well suited to advance the study of traumatic brain injury, utilizing cutting-edge microscopy strategies.

"Solving brain disease is going to take everyone working together – the person studying molecules in the lab, the clinician understanding a patient's symptoms, the staff caring for the patient, and everyone in between," said William Dauer, M.D., the inaugural Director of the O'Donnell Brain Institute and a Professor of Neurology and Neuroscience acclaimed for his research into dystonia and Parkinson's disease.

"Understanding the complexity of normal brain function in the human brain, and how it is altered in brain injury and disease, is an imposing challenge," Dr. Podolsky noted. "We needed help to meet this challenge. Our community of supporters and friends at Southwestern Medical Foundation responded with extraordinary generosity during extraor-



The complexity of the brain creates incredible challenges on the path to treatments and potential cures. The interdisciplinary expertise at the O'Donnell Brain Institute unites researchers and clinicians in an effort that spans scientific research, education, and clinical care.



UTSW President Daniel K. Podolsky, M.D.

Brain discoveries under way

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

- Identification of biomarkers differentiating types of psychosis to better understand the pathophysiology of schizophrenia and related disorders and to explore how the brain makes a hallucination or a delusion, providing insight at the cellular and synaptic levels.
- Expansion of a depression initiative to identify pharmacological, psychosocial, and nonpharmacological treatments for depression, including MRI brain-imaging biomarkers that bring new levels of precision for prescribing the most effective antidepressants, as well as national collaborations to expand detection and treatment for depression and other disorders through UTSW's Center for Depression Research and Clinical Care.
- Development of a single-cut gene-editing technique using CRISPR technology that has halted Duchenne muscular dystrophy in

animal models.

- Work to enhance a gene therapy program focused on developing treatments for rare, deadly neurological diseases in children, leading to the launch of the first clinical trials last year that have attracted patients across the globe.

- Use of direct recordings of stereo EEG to locate the origin of epileptic seizures in the brain and develop strategies that can improve memory function and restore memory for patients with brain injuries or tumors.

- Investigation of molecular pathways important for human brain evolution that are also at risk in cognitive disorders such as autism and Alzheimer's disease to uncover disease-relevant patterns of gene expression.
- Pioneering the use of forward genetics and positional cloning in mouse models as a tool for discovering genes underlying neurobiology and behavior, including description of a conserved circadian clock mechanism in animals.

- Investments in cryo-electron microscopy (cryo-EM) – an imaging system that allows visualization of proteins at the atomic level to reveal the structure and function of receptors on the surface of brain cells and how they interact with drugs.

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

– Daniel K. Podolsky, M.D., President of UT Southwestern

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

- Advance research on the underlying mechanisms of brain disease in order to develop more effective therapies.

- Enroll more people in clinical trials to quickly move research discoveries to patient care.

- Expand UT Southwestern's research and clinical expertise by recruiting rising stars across the spectrum of relevant disciplines.

- Fund a third, 12-story tower expansion at William P. Clements Jr. University Hospital, which serves as the O'Donnell Brain Institute's home for inpatient clinical care for those with brain disease and injury, which opened in January 2021.

- Build a nine-story research tower – the Peter O'Donnell Jr. Biomedical Research Building – that will open

tial tremors and tremor-dominant Parkinson's disease.

"I consider the brain the next frontier in medicine," said the late Pete O'Donnell Jr. when making an initial gift to launch the Institute. Over the years, Mr. O'Donnell, along with his late wife, Edith, and the O'Donnell Foundation they established, contributed more than \$400 million to UT Southwestern, supporting some of the most innovative and impactful programs at the Medical Center. "We need discovery, and that's going to be done by the most talented people we can find and support. It can't be done just wishing it's going to happen. You've got to make it happen."

Collaboration drives advancement

Collaboration are a foundational hallmark of the O'Donnell Brain

times. We are deeply appreciative of the confidence and partnership represented by every contributor – our philanthropists, our patients, our scientists, our caregivers, and our collaborators – to solve the puzzle of brain function and alleviate the suffering of so many patients and their families impacted by brain disease and injuries."

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

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

Neuropathologist Burns appointed Professor Emeritus of Pathology

By Jan Jarvis

Neuropathologist Dennis Burns, M.D., who played a key role in reshaping the first major reorganization of the UT Southwestern Medical School curriculum in its history, has been appointed Professor Emeritus of Pathology.

As co-Chair of the Medical School Planning Committee for Curriculum Reform, he led the multiyear effort that resulted in the Foundation for Excellence Curriculum launching in late 2019. The creation of a curriculum that utilized innovative teaching strategies exemplified Dr. Burns' dedication to medical education, collaborative research, and excellence in clinical neuropathology.

"He was a true triple threat, with 150 peer-reviewed, published articles and outstanding clinical skills in

neuropathology," said James Malter, M.D., Chair of Pathology. "However, arguably his greatest contribution was in medical education, at both the pregraduate and postgraduate levels."

Dr. Burns, a UTSW Distinguished Teaching Professor, was voted outstanding educator by the sophomore medical student class 19 times, the freshman class 10 times, and the Department of Pathology's residents three times. In 2016, he earned the Regents' Outstanding Teaching Award from the UT System. He also earned the Piper Professor Award from the Minnie Stevens Piper Foundation in 2016 and the Stembridge Faculty Teaching Award in 1993 and 2015.

At UT Southwestern, he discovered a passion for teaching, which fueled his desire to continue learning. Interacting with medical students was among the most rewarding aspects of his career,

Dr. Burns said.

"Seeing people that I had the privilege of teaching go on to become really successful in their careers has been very satisfying," he said.

Interpreting brain biopsies as a resident led Dr. Burns to an interest in neuropathology, in which he is board-certified, along with anatomic and clinical pathology. During the '80s, when little was known about AIDS, Dr. Burns saw an opportunity to study the nervous system and develop protocols for safely performing autopsies.

"For years, I did the AIDS autopsies that came into Parkland Memorial Hospital," he said. "I did over 200 of them. We were able to contribute to the literature, and we learned a lot about how to do autopsies more safely to limit infection risk to health care workers."

As an anatomic pathologist, Dr. Burns had the opportunity to support

many outstanding UTSW scientists. A member of the Neuropathology Section of Pathology, Dr. Burns participated in the evaluation of neurosurgical biopsies, forensic pathology cases, and neuromuscular biopsies, with a special concentration for the past 25 years on the neuromuscular biopsy service.

Dr. Burns plans to spend his retirement enjoying time with his wife, two children, and grandson. A fly-fishing enthusiast, he looks forward to fishing at his favorite spots around the country.

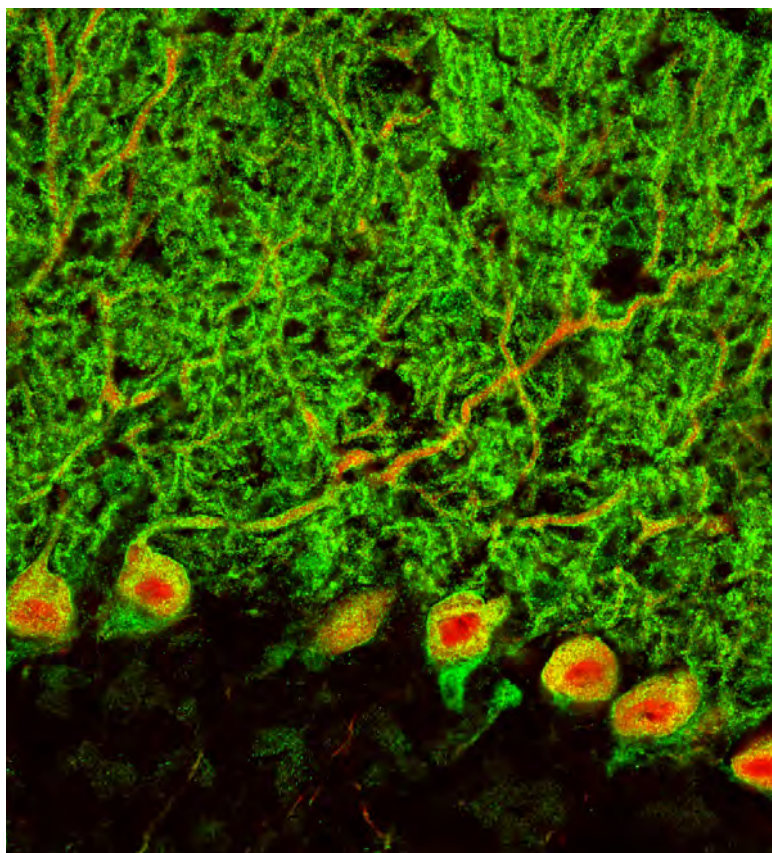
"On a small stream filled with wild trout, that's where my heart belongs," he said.

Dr. Malter holds The Senator Betty and Dr. Andy Andujar Distinguished Chairmanship of Pathology.



Dennis Burns, M.D.

Becoming a hub for cerebellar ataxia care and research



Cerebellar ataxia is caused by damage in the brain's cerebellum. UTSW research has shown that the function of a potassium channel called BK (green) in cerebellar Purkinje neurons (red) are prominently affected and can be targeted for the treatment of cerebellar ataxia. Credit: Shakkottai lab



Vikram Shakkottai, M.D., Ph.D.

By Catherine Gara

UT Southwestern has expanded its Movement Disorders Clinic in the Peter O'Donnell Jr. Brain Institute to become a hub for research and care for patients with cerebellar ataxia, a disorder that causes uncoordinated movements and imbalance due to damage in the brain's cerebellum.

"Our goal is to understand the

major symptoms of the disease, how they localize to specific parts of the brain, and how they progress over time," said Vikram Shakkottai, M.D., Ph.D., Associate Professor and Vice Chair for Basic Research in the Department of Neurology. "We are then using that knowledge in mouse models to discover the underlying physiology and develop novel therapies."

Dr. Shakkottai, who joined UT Southwestern last year, is leading research to determine whether alterations in neuronal physiology contribute to motor dysfunction. In addition to collaborating in the diagnosis of those with balance difficulties, Dr. Shakkottai will add UT Southwestern to a multi-institutional, longitudinal, observational study of participants with inherited ataxia. He conducts basic research on mouse models of the disease, also known as spinocerebellar ataxia (SCA).

The most common types of SCA, a disease that affects about 150,000 people in the U.S., are autosomal dominant disorders caused by an extra number of glutamine codon repeats (CAG_n) in genes that code for ion channels in neurons. These polyglutamine mutations dysregulate transcrip-

tion, and work in Dr. Shakkottai's laboratory has suggested that the transcriptional dysregulation in these disorders affects the number of ion channels in neurons, preventing them from generating action potentials. Purkinje cells, which play the biggest role in the cerebellum in integrating motor signals that are ultimately directed to the motor cortex, are particularly affected.

"Ion channels are a tractable target for new therapies," he said. "They're on the cell membrane so they're easily accessible to drugs (once they cross the blood-brain barrier), and the majority of FDA-approved agents for neurological disorders target ion channels, so it's a well-established path for drug development."

Although there are no current treatments for SCA, Dr. Shakkottai is hopeful that a drug can be developed to alleviate symptoms and slow disease progression. His long-term goal is to change SCA from a debilitating neurodegenerative disease into a chronic disorder that can be managed.

Dr. Shakkottai holds the Dedman Family Distinguished Chair in Neurological Disease.

Cognitive decline a key factor in life expectancy with Alzheimer's

Based on national data from autopsy-confirmed cases, neurological research could lead to better planning for patients and their families

By Margaret Rockwood

Cognitive decline is the biggest factor in determining how long patients with Alzheimer's disease will live after being diagnosed, according to a study from UT Southwestern. The findings, published in the *Journal of Alzheimer's Disease*, are a first step that could help health care providers and neuropsychologists provide reliable prediction and planning assistance for patients with Alzheimer's and their families.

Using a National Alzheimer's Coordinating Center dataset on 764 autopsy-confirmed cases, C. Munro Cullum, Ph.D., Professor of Psychiatry, Neurology, and Neurological Surgery, and first author Jeffrey Schaffert, Ph.D., a postdoctoral fellow in clinical neuropsychology at UT Southwestern, identified seven factors that helped predict life expectancy variances among participants. These factors are the most predictive of how many years of life remain after diagnosis.

"Life expectancy for patients with Alzheimer's disease typically ranges from three to 12 years, but can be longer in some cases. Families are anxious to know what to expect and how to best plan for the time ahead in terms of finances, family caregiving, and how they want to live out their lives," said Dr. Cullum, a neuropsychologist in the Peter O'Donnell Jr. Brain Institute who specializes in cognitive assessment. "We're trying to get them better answers."

Of the variables studied, performance defi-



C. Munro Cullum, Ph.D.

ciencies on a brief cognitive screening test that focuses on orientation were the most significant predictor, accounting for about 20% of the variance in life expectancy. This was followed by sex, age, race/ethnicity, neuropsychiatric symptoms, abnormal neurological exam results, and functional impairment ratings.

"We found that beyond global cognitive function, patients who were older, non-Hispanic, male, and who had more motor and psychiatric symptoms had a significantly shorter life expectancy," Dr. Schaffert said.

The data was drawn from clinical records



Jeffrey Schaffert, Ph.D.

and autopsy reports on patients who died with Alzheimer's disease between 2005 and 2015. Alzheimer's was confirmed by traditional abnormalities observed in brain autopsy specimens, including the presence of abnormal protein aggregation. Life expectancy in the study group ranged from one to 131 months after diagnosis, and most were diagnosed on their first visit.

Dr. Schaffert explained that past studies have focused on only a few of the 21 predictors identified for life expectancy. In this case, researchers had a complete dataset for 14 variables in

this group, the largest to date. Moreover, past studies have not been autopsy-based, thereby confounding results with data from other forms of dementia that mimic Alzheimer's.

The researchers caution that prediction of life expectancy is complex and influenced by many factors. While the cognitive test used in the study was a relatively strong predictor, they plan to follow up using more sensitive measures of memory and other specific cognitive abilities as predictors and probe how the rate of decline in cognition may track with life expectancy. They also hope to expand the population base.

"This dataset was largely derived from well-educated white patients who donated their brains to research. We would like to extend this work to better reflect our more diverse patient population," Dr. Cullum said.

This study was supported by the Texas Alzheimer's Research and Care Consortium (TARCC), funded by the state of Texas through the Texas Council on Alzheimer's Disease and Related Disorders, and by the Texas Institute for Brain Injury and Repair (TIBIR), a state-funded initiative as part of the O'Donnell Brain Institute. Dr. Cullum is TARCC's Scientific Director.

Dr. Cullum holds the Pam Blumenthal Distinguished Professorship in Clinical Psychology.