CenterTimes

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Chen, Hooper elected to the National Academy of Medicine

From Staff Reports

UT Southwestern scientists Lora Hooper, Ph.D., and Zhijian "James" Chen, Ph.D., have been elected to the National Academy of Medicine, one of the highest honors attainable in health and medicine.

With their election in mid-October, UT Southwestern now has 18 members of the National Academy of Medicine (NAM), along with 24 members of the National Academy of Sciences, placing the institution among the nation's elite academic medical centers. Eleven UTSW faculty members – including Drs. Hooper and Chen – are members of both organizations. Drs. Chen and Hooper are also among UT Southwestern's 14 Howard Hughes Medical Institute Investigators.

"The election of Drs. Hooper and Chen to the National Academy of Medicine recognizes the significance of their contributions to the understanding of basic cellular processes that can inform new paradigms of disease and disease treatment," said Daniel K. Podolsky, M.D., President of UT Southwestern and himself a member of NAM. "Dr. Hooper's work has provided important new insights into mechanisms of microbiome interaction with the intestine and their impact on health. Dr. Chen's discoveries identified a signaling pathway critical to cellular recognition of abnormal nucleic acid that is serving as a foundation for new approaches to the development of treatments for autoimmune diseases and cancer as well as vaccine development."

New members are elected by current members through a process that recognizes individuals who have made major contributions to the advancement of the medical sciences, health care, and public health. Drs. Chen and Hooper, both members of the Center for the Genetics of Host Defense and the Harold C. Simmons Comprehensive Cancer Center, will be inducted during ceremonies in 2023.

"The election of Drs. Hooper and Chen into the NAM continues the trend of increasing recognition of UT Southwestern as one of the elite academic medical centers in the world through its outstanding faculty and the impact they make in advancing

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Zhijian "James" Chen, Ph.D., and Lora Hooper, Ph.D.

Honoring excellence in those who care for UTSW's patients

By Carol Marie Cropper

From one doctor who helped introduce advanced stroke care to a remote village in Ethiopia to another who worked to cut the incidence of excessive bleeding in new moms, UT Southwestern's newest Leaders in Clinical Excellence Awardees for 2022 represent the best of the medical center's care.

Ten physicians or programs were honored at the annual Leaders in Clinical Excellence Awards ceremony, held Nov. 10 at the Tom and Lula Gooch Auditorium and also broadcast online.

At the ceremony attended by family, friends, and colleagues of this year's award winners, President Daniel K. Podolsky, M.D. shared, "Each year, the Leaders in Clinical Excellence Awards ceremony provides a special opportunity to recognize clinical faculty members who exemplify

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$50M Perot family gift expands Medical Scientist Training Program

Perot Family Scholars Medical Scientist Training program students with members of the Perot family (center group, from left) Katherine Perot Reeves, Margot Perot, Ross Perot Jr., Nancy Perot, and Carolyn Perot Rathjen. Not pictured: Suzanne Perot McGee.

From Staff Reports

The Perot family, The Perot Foundation, and The Sara and Ross Perot, Jr. Foundation have provided a transformative $50 million endowment for UT Southwestern's Medical Scientist Training Program (MSTP), among the nation's elite programs that provide graduates a dual M.D./Ph.D. degree to strengthen the advancement of laboratory discoveries into the clinical arena.

Funding will provide a permanent endowment for the Perot Family Scholars Medical Scientist Training Program – one of just 54 M.D./Ph.D. training programs in the country supported by the National Institutes of Health. The program is celebrating its 40th anniversary of graduating top-level physician-scientists from UT Southwestern Medical School and UT Southwestern Graduate School of

Please see PEROT on page 7

Fifty years of scientific adventure

Symposium celebrates partnership of UTSW Nobel Laureates Brown and Goldstein

By Deborah Wormser

On a sunny October day, hundreds of UT Southwestern faculty, students, and staff went stargazing. They packed the Tom and Lula Gooch Auditorium for a symposium with some of the world's top scientific luminaries to help celebrate the 50-year research partnership of faculty members Michael S. Brown, M.D., and Joseph L. Goldstein, M.D.

The illustrious pair, who began running a lab together in 1972, won the 1985 Nobel Prize in Physiology or Medicine for discovering the LDL receptor and its role in cholesterol metabolism.

Dr. Brown is Director of the Erik Jonsson Center for Research in Molecular Genetics and Human Disease while Dr. Goldstein is Chair of Molecular Genetics. Both are Professors of Molecular Genetics and Internal Medicine.

On campus, their legacy includes mentoring 175 students and postdoctoral fellows, discovering at least three major signaling pathways, and building a uniquely supportive campus culture while pursuing multiple lines of research. As of Oct. 3, the Brown-Goldstein lab has opened new scientific avenues in nine areas of metabolism, resulting in 524 articles and 197,367 citations.

In welcoming attendees to the daylong Oct. 14 symposium, UTSW President Daniel K. Podolsky, M.D., noted that when the Nobel Laureates returned from being feted at the Nobel ceremony, they got right back to work, showing their commitment to the value of discovery to benefit

Please see SYMPOSIUM on page 8

Construction kicks off for Dallas' first state behavioral health hospital

By Carol Marie Cropper

State and local government officials joined leaders from UT Southwestern, the Texas Health and Human Services Commission, and Children's Health to celebrate the groundbreaking of the Texas Behavioral Health Center at UT Southwestern – the first state mental health hospital in the Dallas-Fort Worth metroplex and one that is desperately needed to address the region's lack of state inpatient beds.

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Barker honored with UT Regents' Outstanding Teaching Award

By Carol Marie Cropper

Completing medical school is difficult enough, but mastering the art of teaching is even harder, according to Blake Barker, M.D., the recipient of a Regents' Outstanding Teaching Award that recognizes his dedication to both mentoring future generations of caregivers and teaching excellence.

Dr. Barker is among 14 educators from across the state system recognized in November as Regents' Award winners by the UT System Board of Regents. Honorees received a certificate, medallion, and check for $25,000 in recognition of their contributions to student success and learning.

"It is a distinct honor to be recognized among the educators I am fortunate to work alongside every day," said Dr. Barker, Associate Dean for Student Affairs, Associate Professor of Internal Medicine, and the 55th UTSW faculty member to date to receive a Regents' Award.

Teaching is humbling, he said. A key, Dr. Barker emphasized, is understanding that one of your jobs is to create a learning environment that permits mistakes and "stupid questions."

"I think of myself as a coach more than a teacher. As a coach, I hope to create a learning

Blake Barker, M.D.

environment that is supportive but bounded by high expectations," he said. "I aspire to push learners to stretch their boundaries and seek new knowledge with this outcome in mind: a physician fit for my own family."

Dr. Barker, a general internal medicine practitioner who joined UT Southwestern in 2011, must be doing something right. He began winning teaching awards while still in his internal medicine residency at Northwestern Memorial Hospital in Chicago. He was chosen by interns to receive the Dr. Gerald M. Grumet Teaching Award in 2010, then won a Faculty Teaching Award the following year.

At UT Southwestern, students have consistently given him high marks for his teaching and successfully nominated him for membership in both the Alpha Omega Alpha Honor Medical Society and the Gold Humanism Honor Society. He is also a member of the Southwestern Academy of Teachers, an elite group of UTSW educators who work to foster teaching excellence.

By age 5, the Texas native said he had decided to become a doctor. "Somehow, I just knew this is what I was going to do. I appreciated in the few physicians I was exposed to in childhood the respect and kindness they offered my family member and me," Dr. Barker said.

The choice to combine teaching and medicine came later, said Dr. Barker, who attended Baylor College of Medicine before going to Northwestern for residency.

"I like the intellectual stimulation of being around people who are creating and teaching and discovering," he said. "I really just wanted to be around learners."

Angela Mihalic, M.D., Dean of Medical Students and Associate Dean for Student Affairs, said few faculty members are more deserving of the Regents' Award than Dr. Barker. "He is a gifted and celebrated teacher, a kind and caring mentor, a fierce student advocate, a servant leader, and an innovative educator and scholar," Dr. Mihalic said.

Added Thomas J. Wang, M.D., Professor and Chair of Internal Medicine: "He has demonstrated excellence in teaching quality, innovation, and educational leadership throughout his tenure at UT Southwestern."

Dr. Barker said he subscribes to the master adaptive learner philosophy of teaching. "Medical students and residents are like Olympic athletes of learning," he said. "They accomplish a whole lot on their own. ...What they really need is for you to create an experience for them or create a learning environment that helps them cement that knowledge or really capitalize on it.

"I think our job is to really help people connect with their own internal motivations to inspire future learning."

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Dr. Wang holds the Donald W. Seldin Distinguished Chair in Internal Medicine.

UTSW burn surgeon receives prestigious Piper Professor Award

By Jan Jarvis

The greatest lessons for Brett Arnoldo, M.D., as a burn surgeon and educator are not delivered from behind a podium in a classroom. Instead, they happen during surgery, on rounds, or at a patient's bedside.

"Most of what I teach happens as I'm going through the day," said Dr. Arnoldo, Professor of Surgery. "It happens in those moments that come up and you can't predict when."

Dr. Arnoldo's unique teaching style and passion for medicine were recently recognized by the Minnie Stevens Piper Foundation with a Piper Professor Award. This elite honor recognizes outstanding college professors in Texas. Dr. Arnoldo is the 17th current or former UTSW faculty member to receive the award since its creation in 1958.

Dr. Arnoldo's drive and dedication to medicine make him very deserving of the award, said Benjamin Levi, M.D., Associate Professor of Surgery and Chief of the Division of Burn, Trauma, Acute, and Critical Care Surgery. He said Dr. Arnoldo helped

Brett Arnoldo, M.D.

establish the Parkland Health and UT Southwestern burn teams as providers of one of the top burn programs in the country.

"Dr. Arnoldo is one of the most remarkable physicians, teachers, and humans I have worked with," Dr. Levi said. "His dedication to patients and their families as well as the faculty, staff, and trainees around him is remarkable. He is the surgeon you would want at your bedside and the teacher and mentor you would want to guide you or your loved ones."

Dr. Arnoldo's previous honors and awards

- UTSW Excellence in Education Award, Clinical Teaching Core Clerkship, Acute Care (2006)
- Outstanding Achievement in Resident Teaching Award, UTSW Department of Surgery (2005)
- Traveling Fellow Award from the American Burn Association (2005)
- Best Overall Resident, Department of Surgery, State University of New York at Buffalo (2000)

Dr. Arnoldo's journey to medicine was unconventional. He initially planned to become an artist and had earned a master's degree in fine arts before the challenges of making a living led him in a different direction – medicine.

"More than a job and career, it's like a calling to do something that helps other people," he said.

He received his medical degree from State University of New York at Buffalo School of Medicine in 1995, followed by a general surgery residency there from 1995-2000. In 2003, Dr. Arnoldo was recruited to UT Southwestern by the late Gary Purdue, M.D., a surgical faculty member at the time.

Working in the burn unit proved to be both immensely rewarding and tough, Dr. Arnoldo said.

"Burn patients are in the hospital a long time and you develop a relationship with them, which I find very rewarding," he said.

Audra Clark, M.D., UTSW Assistant Professor of Surgery, said Dr. Arnoldo generously gives of himself to teach, support, and promote medical students and residents.

"Dr. Arnoldo is one of the most effective and impactful mentors I have been lucky enough to learn under," Dr. Clark said. "I have trained under Dr. Arnoldo as a medical student, resident, and fellow, and I can honestly say that I chose a career in burn surgery in large part because of him."

By inspiring his students, Dr. Arnoldo hopes to play a part in addressing a national shortage of burn surgeons.

After being appointed to the Laurel and Gary F. Purdue, M.D. Chair in Burn Care in 2019, he planned to use the endowment to support research led by early-career investigators. UT Southwestern has built a pipeline of burn surgeons, which speaks to the commitment and support from leadership, he said.

"There's something very human about it," Dr. Arnoldo said of burn surgery. "What I have learned as a surgeon has given life meaning."

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Dr. Arnoldo holds the Laurel and Gary F. Purdue, M.D. Chair in Burn Care.

Dr. Levi holds the Dr. Lee Hudson-Robert R. Penn Chair in Surgery.

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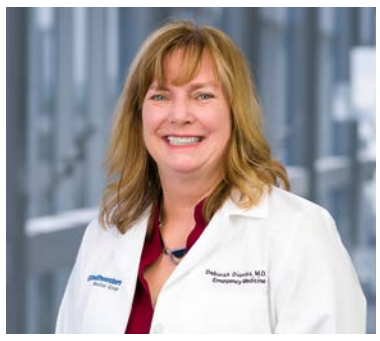

Deborah Diercks, M.D., M.S.
Professor and Chair, Emergency Medicine

Diercks honored with ACEP Leadership Award

Deborah Diercks, M.D., M.S., Professor and Chair of the Department of Emergency Medicine, was awarded the 2022 Outstanding Contribution in Research Award by the American College of Emergency Physicians (ACEP) for her work in cardiovascular emergency medicine. The award is one of ACEP's select Leadership Awards, the College's annual awards honoring exceptional contributions across several categories including policy, advocacy, education, and research.

A nationally recognized leader in the specialty, Dr. Diercks oversees the emergency medicine programs for UT Southwestern and its two major affiliated hospitals, Parkland Memorial Hospital and William P. Clements Jr. University Hospital, which together represent one of the largest emergency medicine programs in the country.

Her research particularly focuses on acute cardiovascular emergencies. She has received funding from the National Institutes of Health, among other sources, for studies on early management of acute coronary syndromes, the influence of gender on symptom characteristics, and utilization of cardiac biomarkers.

Dr. Diercks earned her medical degree from Tufts University School of Medicine. Upon completing her residency in emergency medicine at the University of Cincinnati, she joined the faculty at the University of California, Davis. While there, she was a major contributor to the growth and development of UC Davis' emergency medicine programs. She joined UT Southwestern as the inaugural Chair of the Department of Emergency Medicine in 2014.

■

Dr. Diercks holds the Audre and Bernard Rapoport Distinguished Chair in Clinical Care and Research.

Norberto Rodriguez-Báez, M.D.,
Professor of Pediatrics

Rodriguez-Báez recognized nationally as a master educator

Pediatric liver disease expert Norberto Rodriguez-Báez, M.D., recently received the 2022 Education Excellence Award from the North American Society for Pediatric Gastroenterology, Hepatology, and Nutrition (NASPGHAN).

The national award recognizes individuals who have made a significant and sustained contribution to the field of pediatric gastroenterology, hepatology, and/or nutrition through education scholarship on a national or international basis.

A Professor of Pediatrics, Dr. Rodriguez-Báez has dedicated much of his career to advancing medical education. In addition to caring for children and adolescents at UT Southwestern and Children's Health, he serves as Director of the Pediatric Gastroenterology Fellowship Program and leads pediatric gastroenterology training for residents and medical students.

Considered an international expert in pediatric liver disease and medical education, Dr. Rodriguez-Báez has been an invited speaker at several national meetings and has delivered presentations in Argentina, Colombia, the Dominican Republic, Puerto Rico, and Ecuador, among other countries. Dr. Rodriguez-Báez joined the UT Southwestern faculty in 2001.

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UT Southwestern campus celebrates opening of Peter O'Donnell Jr. Biomedical Research Building

The nine-story Peter O'Donnell Jr. Biomedical Research Building was designed to foster collaboration among faculty and trainees in multiple science departments.

By Deborah Wormser

It was a day of celebration as UT Southwestern welcomed the campus community for tours of the new Peter O'Donnell Jr. Biomedical Research Building prior to the new facility's Oct. 6 dedication ceremony that was attended by faculty, staff, and donors who helped to make the project a reality.

The nine-story, nearly 300,000-square-foot building was designed to foster collaboration among faculty and trainees in Biophysics, Immunology, and many of the labs that comprise the Peter O'Donnell Jr. Brain Institute (OBI).

Campus leaders planned the space to facilitate the communication of ideas across departments – similar to the way the branchlike dendrites of neurons speed the chemical messages called neurotransmitters throughout the body. Those dendrites are depicted in the tiles that line the walls of one elevator lobby.

The dedication was held in the Linda and Mitch Hart Lobby of the new building. Daniel K. Podolsky, M.D., President of UT Southwestern, described the tower as one in a series of projects that will transform the campus in the coming years.

Some of the microscopes coming to the new facility will be the first such instruments in Texas.

William T. Dauer, M.D., Director of the Peter O'Donnell Jr. Brain Institute, shared with the dedication ceremony audience how the new space will help researchers more effectively tackle brain disease.

All technology will be shared between laboratories and even between departments. Dr. Podolsky said the instruments look at the very structure of the individual molecules in a cell to find out how they work to help determine how they can be modified via new compounds to achieve therapeutic benefit for patients.

The President shared his enthusiasm for the new technology while also acknowledging several project benefactors including the UT System, the state of Texas, the O'Donnell Foundation, and Terry and Robert Rowling, who gave generously to fund the building named in honor of Peter O'Donnell Jr.

"Deciphering and discovering how to effectively tackle brain disease in a way that meaningfully improves the lives of our patients is among the most difficult and puzzling areas of biomedical science. But the real differentiator will be the amazing people who work here and those who are attracted to come to this space," said William T. Dauer, M.D., a neurologist acclaimed for his research into dystonia and Parkinson's disease and Director of the O'Donnell Brain Institute.

The labs already up and running in the new building include Dr. Dauer's lab and that of Helen Lai, Ph.D., Associate Professor of Neuroscience and Anesthesiology and Pain Management, who studies neurons involved with body sensations with a goal of revealing novel ways to treat chronic pain.

Marc Diamond, M.D., Director of the Center for Alzheimer's and Neurodegenerative Diseases and a Professor of Neurology and Neuroscience, will move into the building early in 2023, followed by Immunology Chair Lora Hooper, Ph.D., and members of the Department. The Department of Biophysics, chaired by Michael Rosen, Ph.D., will remain in its current location while installing some key equipment for cryo-electron microscopy structural biology into the building to further collaborations. Drs. Hooper and Rosen are Howard Hughes Medical Institute Investigators.

The building features carefully planned open floor space. To foster interaction, individual labs open to one another in one continuous research area. Walls and doorways separate that area from desk space for trainees and postdoctoral researchers, which are in another open-plan area to enhance collaboration. That's where scientists can analyze their data and speak quietly in small groups. Nearby group gathering rooms are designed for larger meetings.

Inviting gathering spaces line several hallways away from those work areas – sections designed to promote cross talk between labs as well as between basic science and clinical colleagues. The design is expected to encourage discussion that leads to translational advances in a bench-to-bedside-to-bench cycle of creating and improving therapies.

Assistant Dean Lisa Gardner, Ph.D., who oversees student recruitment for the Graduate School of Biomedical Sciences, said the building "with its incredible state-of-the-art labs and spaces – some

During the building tours, Kareena Arora, a Research Technician in the Dauer lab, shows UTSW employees how she examines brain sections on an epifluorescence microscope.

designed specifically for spontaneous scientific discussions among colleagues – will attract the most promising young trainees and faculty to UT Southwestern. Collaboration is 'in our DNA' at UT Southwestern, and I love the fact that every new building maintains that commitment. I am excited to show this new space to prospective graduate students and watch their eyes light up."

■

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

Dr. Diamond holds the Effie Marie Cain Distinguished University Chair in Alzheimer's Research.

Dr. Hooper holds the Jonathan W. Uhr, M.D. Distinguished Chair in Immunology and is a Nancy Cain and Jeffrey A. Marcus Scholar in Medical Research, in Honor of Dr. Bill S. Vowell.

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. Rosen holds the Mar Nell and F. Andrew Bell Distinguished Chair in Biochemistry.

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

Newly opened Cancer Care Outpatient Building enhances treatment

By Carol Marie Cropper

Mark Feighner survived two different types of cancer, so when UT Southwestern dedicated its new Cancer Care Outpatient Building recently, he wanted to be there as part of the celebration and was invited to speak at the dedication. "You guys saved my life," he told UTSW executives, health care providers, and supporters gathered for the event.

Then he turned his attention to the nine-story, 300,000-square-foot building itself, quoting Winston Churchill on the importance of such communal spaces: "We shape our buildings, and thereafter, they shape us," the British Prime Minister said when arguing for rebuilding the House of Commons after it was bombed by the Nazis during World War II. In a similar vein, Mr. Feighner said the Cancer Care building will also prove important for its community. "I'm confident that this building at UT Southwestern will positively shape the lives and the outcomes of thousands and thousands of patients through the years."

The Cancer Care Outpatient Building, the newest location for patients of the Harold C. Simmons Comprehensive Cancer Center, opened to its first patients Nov. 7. A dedication ceremony and campus tours were held Oct. 18.

The tower replaces cancer treatment areas that were located in the Seay Biomedical Building, and stands adjacent to the new Peter O'Donnell Jr. Biomedical Research Building, which opened just a few weeks before.

The new tower is home to the same high-tech diagnostic and treatment equipment used before, including MRI and other sophisticated imaging machines. But the Cancer Care Outpatient Building's equipment is integrated into a light-filled research and treatment facility that features soft blue and taupe furnishings, many floor-to-ceiling windows, and more than double the amount of previous treatment space.

"This new facility has been planned and designed with the total well-being of our patients in mind – a place where they and their families can not only count on the highest level of expertise delivered with compassion but an environment that promotes hope and healing," said UTSW President Daniel K. Podolsky, M.D. "We expect that our caregivers and others working there will also experience those same attributes in making it a fulfilling place to work. Fittingly this place of clinical care has a direct physical connection to research facilities as we conceptually try to shrink the gap between discovery and better treatment for our patients."

The 300,000-square-foot Cancer Care Outpatient Building that opened in November expands treatment space for UT Southwestern cancer patients in a facility designed with the patient in mind.

Large pieces of art – such as this spiraling white sculpture called Infinite Energy of the Universe – provide calm and inspiration for patients and their families.

Because cancer can be so stressful on the lives of patients and their families, it's crucial to keep their needs top of mind, said John Warner, M.D., Executive Vice President for Health System Affairs and Health System CEO.

"At UT Southwestern, the design of a facility, the initiation of a program, begins first with listening to patients," he said, adding that the new building also facilitates UTSW's multidisciplinary treatment approach, with all the various specialties a cancer patient might need all located in one building rather than scattered in different locations.

Infusion rooms, where patients receive chemotherapy, were built with outside views. An on-site acute care center and second-floor pharmacy will spare many patients trips elsewhere.

Another new feature is a meditation room on the ninth floor, which offers restful blue artwork and floor-to-ceiling windows that look out toward the lawn of William P. Clements Jr. University Hospital.

Due to innovative research and discovery, cancer treatment is evolving rapidly, said Carlos L. Arteaga, M.D., Director of the Simmons Cancer Center, of which the new Cancer Care Outpatient Building is a part. Many cancers that were once

The building includes the latest technology for cancer detection, such as this high-resolution, photon-counting CT.

life-threatening will be close to eliminated in the near future, at least in the developed world, he predicted. Of relevance to this, the new building will have a whole floor dedicated to cancer clinical trials.

"Going through cancer care is both physically and emotionally intensive for our patients," explained Sangeetha Reddy, M.D., Assistant Professor of Internal Medicine, "and I'm very appreciative that we have the support and the services to help them through this process."

■

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

See the endowed chairs held by Dr. Podolsky above.

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.

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

UTSW scientists among top 1% of highly cited researchers worldwide

From Staff Reports

More than 20 UT Southwestern scientists made the list of 2022 Highly Cited Researchers, placing them among the top 1% of researchers worldwide who have demonstrated significant and broad influence in their chosen fields of research.

Out of nearly 8 million researchers in the world over the last decade, less than 1% have published multiple papers frequently cited by their peers that rank in the top 1% of citations for their field and publication year. The 2022 list contains more than 6,900 highly cited researchers in 21 fields.

UT Southwestern scientists are currently leading about 5,800 research projects with nearly $610 million in support from the National Institutes of Health, the state of Texas, foundations, individuals, and corporations.

The list, announced in November by the Institute for Scientific Information at the British analytics firm Clarivate, includes UTSW researchers from cardiology, psychiatry, diabetes, digestive disease, cell biology, molecular biology, microbiology, biochemistry, immunology, and genetics. It also includes leaders from the Harold C. Simmons Comprehensive Cancer Center, Hamon Center for Regenerative Science and Medicine, Hamon Center for Therapeutic Oncology Research, Peter O'Donnell Jr. Brain Institute, Touchstone Center for Diabetes Research, Harry S. Moss Heart Center, Center for Depression Research and Clinical Care, Children's Medical Center Research Institute at UT Southwestern, Center for Inflammation Research, and the Peter O'Donnell Jr. School of Public Health.

"Research fuels the race for knowledge, and it is important that nations and institutions celebrate the individuals who drive the wheel of innovation," said David Pendlebury, Head of Research Analysis at the Institute for Scientific Information at Clarivate. "The Highly Cited Researchers list identifies and celebrates exceptional individual researchers at UT Southwestern Medical Center who are having a significant impact on the research community as evidenced by the rate at which their work is being cited by their peers. These individuals are helping to transform human ingenuity into our world's greatest breakthroughs – and it is an honor to celebrate their achievements."

Considered a "who's who" of influential researchers, the Highly Cited Researchers list is produced each year. The recognition highlights scientists who demonstrate significant and broad influence reflected in their publication of multiple highly cited papers over a decade.

These highly cited papers rank in the top 1% by citations for a field or fields and publication year in the Web of Science citation index. Of the world's population of scientists and social scientists, Highly Cited Researchers are 1 in 1,000.

University ranked fourth in nation for tech transfer

Patents, licenses, startups help UT Southwestern move discoveries from bench to bedside

By Christen Brownlee

UT Southwestern ranked fourth in the nation and No. 1 in Texas for commercializing new biomedical technologies, considered a critical step in bringing laboratory discoveries into clinical practice.

UTSW was the only Texas institution in the top 10 of the rankings, released in late October by the economic think tank Heartland Forward. The University of Texas System ranked No. 3 nationally among university systems on the list. Five other Texas institutions made the top 25 list.

"Dallas is in the early stages of becoming a biomedical/pharma hub. The critical components to create such a boom are in place and growing rapidly, and this is an exciting time for our region, which offers tremendous opportunity," said Denise Canales, M.A., Assistant Vice President of Technology Commercialization in UTSW's Office for Technology Development (OTD), which is located in Pegasus Park, Dallas' new 23-acre biomedical laboratory and office park.

"UT Southwestern has actively positioned itself at the forefront of this evolution, pioneering trailblazing solutions to medical challenges that have viable market potential," added Brad Phelan, M.B.A., OTD's Director of Technology Commercialization.

Over the years, UTSW scientists have been issued nearly 750 patents and disclosed more than 4,000 innovations, with the University issuing more than 1,100 licenses and options to business partners, resulting in more than $278 million in licensing revenues for the University. Ninety startups have been launched off UTSW technologies, including Taysha Gene Therapies, ReCode Therapeutics, OncoNano Medicine, Exonics Therapeutics, Rodeo Therapeutics, and Peloton Therapeutics. Peloton, acquired by Merck for approximately $1 billion in 2019, developed a first-in-kind kidney cancer drug approved by the Food and Drug Administration in 2021.

Technology in development or brought to market based on UTSW research includes

Pegasus Park

cancer therapeutics, lightweight shielding that protects surgeons from intraoperative radiation, a new catheter design, and mRNA drugs. UTSW's decadeslong history of bringing lab discoveries full circle includes successes like cholesterol-lowering statin drugs and FDA-approved orphan drugs for kidney stones. UTSW also has established a variety of education and training tools available for students, trainees, and faculty, including joining Blackstone LaunchPad, a network for colleges and universities that provides technology development mentorship and skill-building.

Another initiative to foster biomedical invention is the annual UTSW Pitch Competition. Held Oct. 27 last year, the event provided UTSW faculty opportunities to present early-stage technologies to leading investors, entrepreneurs, and representatives from the health care industry with prizes totaling $200,000 in three categories: therapeutics, diagnostics/medical devices, and digital health.

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

UT Southwestern recognized for health care leadership development

By Staff Reports

UT Southwestern has been named one of the Top 5 Best Organizations for Leadership Development (BOLD) by the National Center for Healthcare Leadership (NCHL).

BOLD Award winners are based on scores and responses to the NCHL 2022 National Healthcare Leadership Survey. UTSW was one of seven health care systems in the nation recognized for its efforts.

"At UT Southwestern, education is a vital part of our mission and simply part of our DNA – and that includes fostering the growth and development of every one of our UTSW colleagues. We have a very collaborative approach across multiple disciplines and departments and build on each group's strengths to provide innovative leadership and professional and career development to our faculty and professional staff," said Suzanne Farmer, Ph.D., Assistant Vice President, Organizational Development and Training (ODT). "Being recognized by the NCHL is a true honor and gives further affirmation of our collaborative approach to health care leadership development."

The NCHL conducts a survey of health care organizations across the U.S. every other year to assess all components of organizations' efforts to prepare and develop leaders.

"This national recognition further demonstrates UT Southwestern's commitment to developing the next generation of health care leaders, along with top scientists, physicians, and other providers in the health care field," said Holly G. Crawford, M.B.A., Executive Vice President for Business Affairs.

UTSW's submission included input and data from leaders across the organization who submitted a thorough, cross-functional review of UTSW's multidepartment approach to strategies like attracting and onboarding talent, monitoring factors like hire rate and turnover, tracking leadership learning programs, supporting diversity and inclusion, providing administrative fellowships and executive coaching, and nurturing faculty and employee wellness.

"UT Southwestern has experienced tremendous growth over the last several years. And as we expand in all aspects of our mission, that growth increases the demand for great leaders," Dr. Farmer said. "Departments across the institution have stepped up in partnership to ensure talented employees and faculty have growth opportunities at UT Southwestern. It's a win-win as employees can build a meaningful long-term career while UT Southwestern benefits from investing in our most valuable asset – our people."

NAM Continued from page 1

scientific boundaries," said W. P. Andrew Lee, M.D., Executive Vice President for Academic Affairs, Provost, and Dean, UT Southwestern Medical School.

Dr. Lora Hooper

Dr. Hooper, Chair of Immunology, is working to understand how resident intestinal bacteria influence the biology of mammalian hosts. Dr. Hooper's discoveries have helped explain how a host peacefully coexists with the trillions of beneficial bacteria present in the intestinal tract and how these bacteria can shape immunological and metabolic functions in their host.

The Hooper lab's studies in germ-free mice have led to the discovery of a number of secreted antimicrobial proteins that kill bacteria, which attach to the intestinal surface. These proteins limit the bacterial invasion of intestinal tissues and prevent infection. Her lab is using biochemical and structural approaches to understand the molecular mechanisms by which antimicrobial proteins kill bacteria. She uses genetically engineered mouse models to determine how intestinal epithelial cells sense bacterial invasion and direct immune responses that limit bacterial access to deeper host tissues. The Hooper lab has also used germ-free mice to make discoveries about how gut bacteria promote fat absorption from the diet, which could help explain how intestinal bacteria can influence the susceptibility to disorders such as diabetes, heart disease, and obesity.

"I am incredibly honored to be elected to the National Academy of Medicine. This is really a recognition of the excellent and insightful work of my many lab members over the years, and of the superb scientific environment at UT Southwestern," said Dr. Hooper, also Professor of Immunology and Microbiology.

Dr. Zhijian "James" Chen

Dr. Chen, Professor of Molecular Biology and Director of the Center for Inflammation Research, is broadly interested in mechanisms of signal transduction, namely how a cell communicates with its surroundings and within itself and how a cell detects harmful or foreign insults and mounts an appropriate response to restore homeostasis. Specifically, Dr. Chen's lab focuses on ubiquitin signaling in the NF-κB pathway and innate immune sensing and signaling of cytosolic DNA and RNA.

Dr. Chen's research into complex cellular biochemistry has led to the discovery of pathways and proteins that trigger immune and stress responses. Dr. Chen, who was awarded the Breakthrough Prize in Life Sciences in 2019, has identified proteins, such as the mitochondrial protein MAVS, that are crucial to the body's defense against RNA viruses such as influenza, Ebola, and SARS-CoV-2. Dr. Chen and his team are dissecting a signaling pathway involving a novel DNA sensor – cyclic GMP-AMP (cGAMP) synthase, or cGAS – that activates an interferon response that plays a critical role in immune defense against pathogens and malignant cells, as well as in autoimmune diseases such as lupus. Treatment of these autoimmune diseases could involve chemical inhibition of cGAS, whereas cGAMP and its derivatives may be used as adjuvants for vaccines and cancer immunotherapies.

"I am very honored and humbled to be elected to the National Academy of Medicine. This is an endorsement that the discoveries made through the hard work of members of my laboratory have the potential to benefit patients and improve health. I am very grateful to the UT Southwestern community for the support that has enabled these discoveries," said Dr. Chen.

In addition to Drs. Chen and Hooper, current NAM members at UT Southwestern and the years of their induction are: Samuel Achilefu, Ph.D. (2021); Ralph DeBerardinis, M.D., Ph.D. (2020); Sean Morrison, Ph.D. (2018); Joseph Takahashi, Ph.D. (2014); Daniel K. Podolsky, M.D. (2009); Bruce Beutler, M.D. (2008); Ellen Vitetta, Ph.D. (2006); Steven McKnight, Ph.D. (2005); Helen Hobbs, M.D. (2004); Eric Olson, Ph.D. (2001); Norman Gant, M.D. (2001); Kern Wildenthal, M.D., Ph.D. (1999); Carol Tamminga, M.D. (1998); Scott Grundy, M.D., Ph.D. (1995); Michael Brown, M.D. (1987); and Joseph Goldstein, M.D. (1987).

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Dr. Chen holds the George L. MacGregor Distinguished Chair in Biomedical Science.

Dr. Hooper holds the Jonathan W. Uhr, M.D. Distinguished Chair in Immunology and is a Nancy Cain and Jeffrey A. Marcus Scholar in Medical Research, in Honor of Dr. Bill S. Vowell.

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

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.

Biomedical Preparatory at UT Southwestern welcomes inaugural class

A teacher works with new students at the school, which aims to provide young children with a foundation in science, technology, engineering, and math (STEM) fields.

By Courtney Borchert

Biomedical Preparatory at UT Southwestern, which opened in August, is taking education in an innovative direction to help students think like scientists from an early age.

The school, located on Forest Park Road, is the result of a partnership between the Dallas Independent School District (DISD) and UT Southwestern, with the aim of providing young children with a foundation in science, technology, engineering, and math (STEM) and introducing them to the world of biomedical discovery. It currently serves students in prekindergarten through first grade and will expand one grade level each year up to eighth grade. There are 127 students enrolled this year.

Half of the available student spots are reserved for economically disadvantaged students. All 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.

The school's mission is to create a nurturing, safe, and positive environment that promotes curiosity, research, and discovery.

About four years ago, the idea for the school came to Charles Ginsburg, M.D., Vice Provost and Senior Associate Dean for Education. Dr. Ginsburg said he has always been interested in early childhood education and aware of the inequalities that exist among those from different socioeconomic backgrounds.

"We have a first-class biomedical research institution that has incredible intellectual and physical resources that allow us to provide for the academic enrichment of young children," said Dr. Ginsburg, also Professor of Pediatrics. "I wanted UT Southwestern to expand access to its resources in nontraditional ways for the benefit of the community."

The school's slogan, "Science Starts Here," is a clear statement of what DISD and UTSW are trying to achieve – a space where young learners gain first-hand exposure to real-world science as well as direct access to biomedical science-related field trips.

At the helm of Biomedical Preparatory at UTSW is Principal Roberto Gonzalez, M.D., who was a family doctor in Colombia and, most recently, the principal at DISD's Stevens Park Elementary School.

"Medicine focuses on helping someone get better, and I believe I'm still doing that every day by contributing to students' health literacy and social-emotional development," Dr. Gonzalez said.

Fostering skills needed for the future

Educators at Biomedical Prep are looking ahead at what skills are needed to put students on a path ideal for budding scientists. But how does one teach biomedical science to a 5-year-old?

Dallas ISD has incorporated extracurricular and cocurricular activities at Biomedical Prep such as Amazon Future Engineers, a program aimed at making computer science education more accessible to children and young adults from underserved and underrepresented communities. On STEM-themed Fridays, students conduct experiments like using petri dishes to learn about what causes bacterial growth on hands, and making the connection between a lesson on the skeletal system and the story of Humpty Dumpty – complete with a lab where students build protective gear for an egg-drop challenge.

Dr. Gonzalez said a key component of the work taking place within the school's walls is empowering students to be active participants in their education.

"At Biomedical Prep, we want to encourage future scientists who take a human-centered approach, which we refer to as design thinking, where they begin with empathy first when designing solutions to real-world problems," Dr. Gonzalez said. "We hope to inspire both compassion and curiosity, and show students how to accept and learn from mistakes."

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

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

Díaz Vázquez named 2022 SACNAS Distinguished Mentor

By Rachel Stowe Master

Arnaldo Díaz Vázquez, Ph.D., Assistant Dean for Diversity at the UT Southwestern Graduate School of Biomedical Sciences, has been named the 2022 Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) Distinguished Mentor.

SACNAS is an inclusive organization dedicated to fostering the success of Chicanos/Hispanics and Native Americans in attaining advanced degrees, careers, and positions of leadership in science, technology, engineering, and math (STEM). The award recognizes those who live the SACNAS mission year-round through unparalleled dedication to excellence in science, research, mentoring, and teaching.

Arnaldo Díaz Vázquez, Ph.D.

"The SACNAS Distinguished Mentor Award is a great honor. To receive the award in my birthplace of Puerto Rico is truly meaningful," said Dr. Díaz Vázquez, who is also an Assistant Professor of Pharmacology. "SACNAS celebrates science and culture in a welcoming and inclusive environment and values mentoring as an essential component of fostering our community members' success."

Dr. Díaz Vázquez embodies the notion that mentoring is vital in fostering a more diverse, inclusive, and equitable space for mentees.

"Mentoring is not about creating mini versions of ourselves; it's about empowering our students to be independent thinkers, embrace who they are, and be proud of their unique voices. It's also about having faith in our students and having their back in times of difficulty and self-doubt," he said.

After receiving a Bachelor of Science from the University of Puerto Rico, Rio Piedras, and a Ph.D. in biochemistry from Texas A&M University, Dr. Díaz Vázquez completed his postdoctoral training in cancer pharmacology in the Blair laboratory at the University of Pennsylvania Perelman School of Medicine. He has extensive experience developing and implementing targeted outreach, recruitment strategies, and research training programs aimed at increasing the number of underrepresented students pursuing Ph.D.s in biomedical graduate programs.

Dr. Díaz Vázquez joined UTSW in January 2021 as the inaugural Assistant Dean for Diversity and Inclusion in the Graduate School of Biomedical Sciences as part of broader initiatives to expand racial and ethnic diversity among students, trainees, and faculty across the institution's three schools.

The Graduate School offers numerous mentoring opportunities. The Summer Undergraduate Research Fellowship (SURF) and Amgen Scholars Program are both 10-week research programs that provide a faculty-mentored, intensive research experience. The UT Southwestern-Postbaccalaureate to PhD (PB2PHD) Program provides recent college graduates with a yearlong, faculty-mentored research experience in addition to an academic and professional development plan to strengthen their skills, increase their competitiveness for graduate school or M.D./Ph.D. admission, and prepare them for the rigors of Ph.D. training and a successful transition to the STEM workplace.

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

UTSW community celebrates the diversity of Hispanic-Latino cultures

By Carol Marie Cropper

Hispanic-Latino food, music, discussion, and art were all part of the celebration on Oct. 12 as the UT Southwestern community gathered online and in person for National Hispanic Heritage Month to pay tribute to the contributions and challenges of those whose ancestors came from Spain, Mexico, the Caribbean, Central America, and South America.

The UTSW event, called Unidos: Inclusivity for a Stronger Nation, and using the more inclusive term "Hispanic-Latino Heritage Month," was part of a nationally designated month that annually runs Sept. 15 to Oct. 15 – a period when many Latin American countries celebrate their independence from Spain in the 1800s.

Celebrating such diversity, as well as the contributions of Hispanic-Latino communities on campus, is important as the University recognizes and embraces the benefits of a more inclusive and diverse culture, said Shawna Nesbitt, M.D., M.S., inaugural Vice President and Chief Diversity, Equity, and Inclusion Officer at UT Southwestern. Almost 17% of UTSW employees identify as Hispanic or Latino, she added.

"UT Southwestern is you. UT Southwestern is me. UT Southwestern is all of us," said Dr. Nesbitt, also a Professor of Internal Medicine. "It's all the beauty, the innovativeness, the talent, and the compassion that is born out of the mosaic of this community."

Singer-guitarist Jan Garcia, a Clinical Research Coordinator, performs at the campus event in honor of National Hispanic Heritage Month.

Three speakers on a panel for the South Campus celebration pointed out that those who identify as Hispanic or Latino are not one homogenous group.

"We're considered the same and we're not. Everybody brings a different flavor to the table," said speaker Roberto Gonzalez, M.D., Principal of the new Biomedical Preparatory at UT Southwestern on Forest Park Road in Dallas. The school, which opened Aug. 15, is the result of a partnership between UT Southwestern and the Dallas Independent School District (DISD).

"We might share a few things – maybe the accent, or how we look, or how we embrace family," added speaker Larissa Velez, M.D., Associate Dean for Graduate Medical Education and a Professor of Emergency Medicine at UT Southwestern. "But we are very different."

In fact, the panel itself demonstrated that difference. While Dr. Gonzalez was born in Colombia, South America, Dr. Velez is originally from Puerto Rico, a Caribbean island and territory of the United States. Carlos Girod, M.D., the third member of the panel, is also a Puerto Rico native. He serves as Professor of Internal Medicine at UTSW and Associate Vice President for Clinical Affairs at Parkland Health for UTSW.

With more than 60 million people in the United States identifying as Hispanic or Latino, the diversity they bring enhances our communities and the world, Dr. Girod said.

Because others paved the way for their own successes, the panelists said it is incumbent upon the Hispanics and Latinos in the audience and at UT Southwestern to go into the community and schools to share the stories of their history and cultural background. "People will learn from you, and you'll be role models for generations that are coming up in health care," said Dr. Velez.

The fourth annual event at UT Southwestern was hosted by the Office of Institutional Equity & Access' Division of Diversity and Inclusion and the Hispanic-Latino Business Resource Group (BRG).

Those attending were treated to a reception featuring Mexican flautas, Cuban black bean soup, Caribbean sweet plantains, and other ethnic delicacies, as well as a display of Hispanic- and Latino-inspired paintings by Stephanie Hargrove, a Talent Acquisition Partner in Human Resources.

During the celebration, Jan Garcia, a Clinical Research Coordinator and Hispanic-Latino BRG member, sang the Latin songs *La Llorona (The Weeping Woman)* and *Bésame Mucho (Kiss Me a Lot)*. She was accompanied on tenor saxophone by Jacob Frie, a Senior Business Analyst, and on drums by Mike Askins, the husband of Andrea Askins, Lead Talent Acquisition Partner and Chair of the Hispanic-Latino BRG.

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Dr. Girod holds the Ron Anderson, M.D. Professorship in Clinical Care and Education at Parkland Memorial Hospital.

Dr. Velez holds the A. Compton Broders III, M.D. Chair in Emergency Medicine.

More online: Check out a photo gallery from the event and read the full story on *Center Times Plus* at **utsouthwestern.edu/ctplus.**

Tribute to Veterans event celebrates service, shared connections

Keynote speaker retired Col. Mark Raschke

By Courtney Borchert

The military-to-civilian life transition is a significant one for service members. However, many veterans who join UT Southwestern say that the University aligns with their core values and continues their connection to a higher purpose as they launch the next chapters of their careers.

In recognition of National Veterans and Military Families Month in November, UTSW honored active and retired military faculty, employees, and students at its eighth annual Tribute to Veterans Celebration. The event, held Nov. 10, featured remarks from President Daniel K. Podolsky, M.D.; a keynote presentation from retired Col. Mark Raschke, Manager of Leadership Development at UT Southwestern; and closing remarks from Chris Rubio, Associate Vice President and Chief Operating Officer for University Hospital. Mr. Rubio is also Executive Sponsor of the Veterans Business Resource Group (BRG).

In his speech titled "What Connects Us," Mr. Raschke, a U.S. Army veteran with five deployments, including Operations Desert Storm, Iraqi Freedom, and Enduring Freedom in Afghanistan, shared how his experience in the military

The Tribute to Veterans Celebration included a presentation of colors from the H. Grady Spruce High School Color Guard.

Brittanny Anderson, Administrative Manager in Academic Recruitment, sang *The Star-Spangled Banner.*

fueled his passion for leadership development and service. He said he has a strong commitment to assisting veterans in their transition from military service to civilian employment.

Mr. Raschke asked audience members to think about where they were before joining UT Southwestern, whether with another company or in an entirely different industry. He then explained how lessons learned in previous experiences carry over and prepare us for opportunities and challenges in our current workplace.

"We all have different backgrounds," Mr. Raschke said. "We all have a unique story, and we should embrace that. What connects us is that we have all chosen this career, this profession of service."

Values in action

Mr. Raschke noted how the seven basic values of the Army match up with UT Southwestern's values and PACT standards. PACT – which stands for problem-solving; ability, attitude, and accountability; communications and compassion; and teamwork – relates to putting these values into action to solve problems.

One takeaway from Mr. Raschke's presentation was the importance of maintaining connection at all levels of the organization and building a culture in which every team member takes ownership of the problem at hand and collaborates with colleagues to make strides forward.

Dr. Podolsky commented on UT Southwestern's expanding geographic footprint and the importance of building and maintaining meaningful connections with one another in order to advance the work of our mission. He highlighted the BRGs as one mechanism that exists to drive employee inclusion and engagement – including the Veterans BRG, which strives to elevate awareness and support of our military veterans.

The event, hosted by the Office of Institutional Equity and Access' Division of Diversity and Inclusion and the Veterans BRG, included a presentation of the colors from the H. Grady Spruce High School Color Guard; a performance of *The Star-Spangled Banner* by Brittanny Anderson, Administrative Manager in Academic Recruitment; and a musical closure featuring the United States Armed Forces Medley.

Parting thoughts: Are leaders born or made?

"Leadership is a skill that can be learned," Mr. Raschke told the audience during a brief Q&A session moderated by Mr. Rubio. "I've watched time and time again individuals learn skills that can make them successful in a leadership role. I think that some of our very best leaders are those who didn't know that they had it in them. Sometimes that lightbulb moment happens when someone else taps them on the shoulder and says, 'I see potential in you and I think you could do this,' and challenges them to take on that next level in their career."

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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.

Nelson appointed Chief of Division of Maternal-Fetal Medicine

By Jan Jarvis

Maternal-fetal medicine specialist David B. Nelson, M.D., an advocate for women's health care who has led numerous programs to improve access to care in underserved communities, has been named Chief of the Division of Maternal-Fetal Medicine.

"I am honored to work with the talented team in the Division of Maternal-Fetal Medicine who are dedicated to providing high-quality patient care, training the next generation of health care providers, and advancing leading-edge concepts to improve the well-being of patients and their children in the future," said Dr. Nelson, an Associate Professor of Obstetrics and Gynecology whose new role took effect Nov. 1.

Dr. Nelson earned both his bachelor's and medical degrees from the University of Arkansas. He then came to UT Southwestern to complete his residency in obstetrics and gynecology and a fellowship in maternal-fetal medicine before joining the faculty of the Division of Maternal-Fetal Medicine in 2014.

In 2015, Dr. Nelson was appointed Medical Director for the Parkland Prenatal Clinic System of Women's and Infants' Services. In 2018, he was named Chief of Obstetrics at Parkland Memorial Hospital, which has one of the highest annual delivery rates in the country, at more than 12,000 per year.

Dr. Nelson has led programs to improve maternal health care,

David B. Nelson, M.D.

including the Extending Maternal Care after Pregnancy (eMCAP) program for expectant mothers with greater socioeconomic and health needs who live in southern Dallas County. The program, a collaborative team effort from UTSW and Parkland Health, recently received the Department of Health and Human Services Racial Equity in Postpartum Care Challenge award. (See related story below.)

In 2019, Dr. Nelson provided testimony at a congressional subcommittee hearing on strategies to improve maternal health. The following year, he was chosen to serve on the Texas Perinatal Advisory Council. Additionally, he has published more than 95 peer-reviewed articles.

Dr. Nelson, who received UT Southwestern's Rising Star Award in 2018, has a passion for teaching; clinical service; and mentoring students, residents, and fellows to advance health care outcomes research, said Catherine Spong, M.D., Chair of Obstetrics and Gynecology.

In his new role, Dr. Nelson said he remains dedicated to improving access to care in underserved communities.

"I am excited for the opportunities ahead for our diverse, talented team to continue to advocate for health care equity and provide outstanding individual patient-centered care across North Texas," he said.

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Dr. Nelson holds the Gillette Professorship of Obstetrics and Gynecology and is a Dedman Family Scholar in Clinical Care.

Dr. Spong holds the Paul C. MacDonald Distinguished Chair in Obstetrics and Gynecology.

Program for at-risk new mothers receives federal challenge award

By Jan Jarvis

An innovative program that delivers community-based health care to new mothers in ethnic or socioeconomic groups at higher risk for health care complications has been recognized by the Department of Health and Human Services (HHS) for improving access to postpartum care.

The Extending Maternal Care After Pregnancy (eMCAP) program received an HHS Racial Equity in Postpartum Care Challenge award. In July, the program that provides services to women in southern Dallas County with limited access to regular hospital- or clinic-based locations was named one of 25 winners of phase 1 of the overall $1.8 million national competition.

The contest, which includes a $40,000 award, identifies innovative methods to improve equity of postpartum care for Black and American Indian/Alaska Native beneficiaries enrolled in Medicaid or the Children's Health Insurance Program. The winning organizations demonstrated success in addressing equity during the postpartum period with an emphasis on follow-up care for diabetes, postpartum depression and/or anxiety, hypertension, and substance use disorders.

The Extending Maternal Care After Pregnancy (eMCAP) team led by David B. Nelson, M.D., includes coordinators, nurse navigators, and community health workers from UT Southwestern and Parkland Health & Hospital System.

The eMCAP program has improved health care using evidence-based approaches to target gaps in screening and to increase access for patients to follow-up maternal care, said David B. Nelson, M.D., Associate Professor of Obstetrics and Gynecology, who leads the unique program that his team launched in 2020. To date, the program has served at least 2,200 new mothers. In November, Dr. Nelson was named Chief of the Division of Maternal-Fetal Medicine. (See related story above.)

"Being a part of this program significantly increased follow-up for patients with hypertension and diabetes up to 12 months after birth," Dr. Nelson said.

The program has also led to improvements in treatment for behavioral health issues.

"We know that after they give birth, patients are at risk for anxiety and depression," Dr. Nelson said. "So we didn't just screen for that but successfully referred patients to counselors, made sure they made it to follow-up visits, and had mental health care access."

Services were added that enhanced access to postpartum care, including visits from community health workers or nurses, mobile clinics, and virtual visits. By extending the time that women receive care after delivery from 60 days to a year, the program has had a significant positive impact on women's health.

The program at Parkland, provided in partnership with UTSW physicians and other caregivers in obstetrics and gynecology, could one day change the way postpartum care is provided, Dr. Nelson said.

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See the endowed titles held by Dr. Nelson above.

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

Senior NIH researcher Prinz appointed Chair of Cell Biology

By Carol Marie Cropper

Growing up in New Mexico, William A. Prinz, Ph.D., thought of biology and biochemistry as the fields in which the most astonishing breakthroughs in science happened.

"It was such an exciting time in biology and biochemistry then – and now," said Dr. Prinz, who joined UT Southwestern in November as the new Chair of the Department of Cell Biology.

He earned a Ph.D. in microbiology and molecular genetics from Harvard University and was a postdoctoral fellow in Harvard's Cell Biology Department before moving to the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) at the National Institutes of Health, where he spent the next 21 years conducting research.

In his years at the NIDDK and as a student, Dr. Prinz published 88 scientific papers. His research focused on the tiny organelles within cells that do the cell's work, much like the organs in a human body. He is best known for studies into the exchange of fats (also called lipids) between organelles at so-called membrane contact sites where organelles come in close contact within a cell.

William A. Prinz, Ph.D.

In an interview for *Center Times*, Dr. Prinz answered questions about his background and research.

What is organelle biogenesis and why is it important?

All cells have internal structures called organelles. They are called organelles because they are conceptually similar to organs in animals and humans. Organelles are critical for many cellular functions and help cells respond to environmental cues and stresses. Understanding how organelles form and function is one of the central questions in cell biology. I started studying organelle biogenesis because I am fascinated by how cells reproduce themselves and how the size, shape, and position of organelles allow cells to function optimally.

What research findings are you best known for?

Some of my earliest work as an independent investigator revealed the biochemical mechanism of fat transport by a large family of proteins called oxysterol-binding proteins. I showed that oxysterol-binding proteins transport fats between organelles at membrane contact sites. I went on to discover how this is controlled and showed that membrane contact site formation can be induced by cellular stresses and help with fat exchange to lessen toxic accumulation of fat in organelles.

What studies are you most proud of?

I am particularly proud of a pair of papers – one in the *Journal of Cell Biology* and one in *Current Biology* – on proteins called FIT2s. These proteins had been implicated in the creation of fat-storage organelles called lipid droplets. We found that in cells lacking FIT2 proteins, nascent fat cells fail to emerge from the membrane of the endoplasmic reticulum (ER), another cell organelle. In a second study, we found that FIT2s probably affect the fat composition of the ER membrane and suggested that lipid-droplet emergence is driven by fats. Several people have told me they present these papers in cell biology classes they teach.

How do defects in fat metabolism and organelle creation contribute to disease?

Several major diseases are associated with defects in fat metabolism and equilibrium or homeostasis, including metabolic syndrome, Type 2 diabetes, and atherosclerosis. Numerous rarer genetic disorders are caused by defects in genes required for fat metabolism and regulation. Understanding and treating these diseases requires a knowledge of how cells modulate fat homeostasis and respond to stress. I hope that understanding these principles will facilitate the search for drug targets to treat disorders caused by defects in organelle formation and fat homeostasis.

What is your vision for the Department?

The Cell Biology program at UTSW is already excellent. I want to build it into one that is among the best in the world by attracting top young talent and fostering collaborations both within the Department and with the broader UTSW community.

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Dr. Prinz holds the Virginia and Edward Linthicum Distinguished University Chair in Biomedical Science.

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

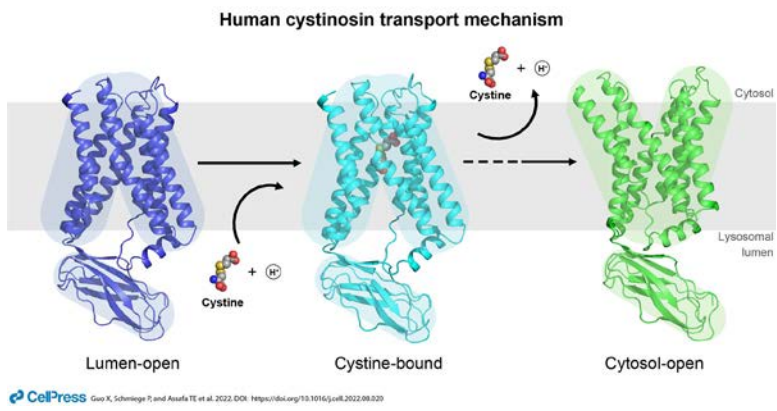
Cryo-EM reveals function of protein implicated in rare hereditary disease

By Deborah Wormser

Understanding the mechanisms of cystinosis – a rare and devastating hereditary disease that can appear in infancy – could lead to better treatments for that condition as well as a deeper understanding of cellular transport.

Researchers at UT Southwestern and in California used cryo-electron microscopy (cryo-EM) along with other cutting-edge biophysical techniques to reveal the structure and function of cystinosin, a key transporter for cystine, the two-molecule complex of the amino acid cysteine. They were able to define structures of the transporter protein in multiple conformations, including bound and unbound states, a first step toward understanding what goes wrong with the molecule in the genetic disease called cystinosis.

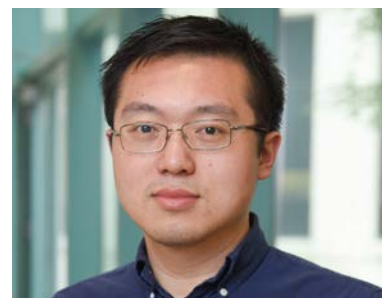
The disease that causes a buildup of cysteine crystals in the body affects fewer than 5,000 people in the United States, according to the National Institutes of Health (NIH). It is an autosomal recessive disorder, meaning it occurs when someone inherits one mutated cystinosin gene from each parent.



This graphic shows three structures of cystinosin, a key transporter for the amino acid complex of cystine. From left: 1) cystinosin is ready to receive cystine, 2) cystine is bound for transport across the cell membrane and into the cell's interior (the cytosol); and 3) released into the cytosol.

"Cystinosis, discovered in 1903, was long known as a genetic disease of lysosomal transport. But without a structure, scientists were unable to picture how the mutation led to the condition," said Xiaochun Li, Ph.D., Associate Professor of Molecular Genetics and Biophysics and corresponding author of a study outlining this research in *Cell*.

Lysosomes are sac-like, membrane-bound organelles that hold enzymes the cell needs for digestion, housekeeping, and other functions. The amino acid cysteine is used to make proteins throughout the body. Most people adequately recycle this key amino acid.



Xiaochun Li, Ph.D.

Mutations that lead to an inability to recycle cysteine – in this case by rendering cystinosin unable to be transported out of the lysosomes – result in a buildup of crystals that are toxic to cells.

"This project incorporates several cutting-edge technologies from the field of biophysics. We collaborated with researchers at Stanford University and at UC Santa Cruz to present six structures at atomic resolution. The cryo-EM studies were all carried out at UT Southwestern's cryo-EM core facility (CEMF)," Dr. Li said.

Among many intriguing observations, the researchers' analyses determined the mechanism behind cystinosin's shape change between its different states. In addition, while most mutations in the protein interrupted cystine transport, potentially leading to cystinosis, the researchers discovered a select few that improved the protein's function. This could lead to novel therapeutics, they said.

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Dr. Li is a Rita C. and William P. Clements, Jr. Scholar in Biomedical Research at UT Southwestern.

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

Perot Continued from page 1

Biomedical Sciences, both among the top-ranked schools nationally.

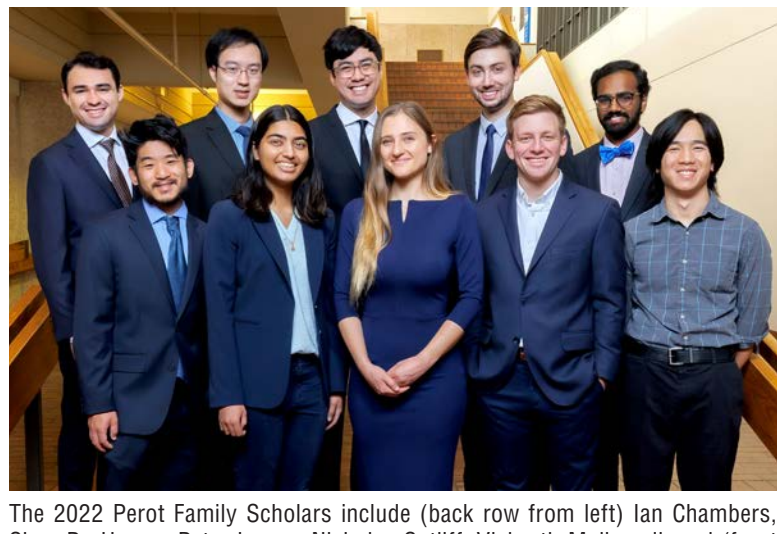
"This extraordinary gift provides a permanent foundation at UT Southwestern for this distinctive dual-degree program that will not only benefit top UT Southwestern students, but also help address a disturbing national trend in the diminishing number of fully trained physician-scientists," said Daniel K. Podolsky, M.D., President of UT Southwestern. "The Perot family's beneficent support further cements their historical commitment to the continuous advancement of academic medicine and its benefits."

UT Southwestern's faculty includes a number of distinguished physician-scientists with the dual degree, including the late Nobel Laureate Alfred G. Gilman, M.D., Ph.D., former Dean of UT Southwestern Medical School; three of UT Southwestern's 18 members of the National Academy of Medicine; and two of UT Southwestern's 14 Howard Hughes Medical Institute Investigators.

"Ross was an enthusiastic supporter of the Medical Scientist Training Program because he considered it to be one of our best investments in people and intellect," Margot Perot said. "Our family is delighted to sustain our support and association with the MSTP program. We know that it will yield enormous rewards in the years to come. We are certain our funds will go far to train young scientists destined to make significant medical breakthroughs in the future."

The Perot Family Scholars program builds on a legacy that Ross and Margot Perot invested in for the past four decades, starting in 1987 with a $20 million gift supporting Nobel Laureates Michael Brown, M.D., and Joseph Goldstein, M.D., and the MSTP, followed by more than $23 million in additional support in 1996 for training and biomedical research. Dr. Brown is Director of the Erik Jonsson Center for Research in Molecular Genetics and Human Disease while Dr. Goldstein is Chair of Molecular Genetics. Both are Professors of Molecular Genetics and Internal Medicine.

In addition, the Perot family has generously supported the Perot Foundation Neuroscience Translational Research Center, mental health programs, and veterans research, including groundbreaking research by Robert Haley, M.D., on Gulf War Syndrome. Dr. Haley, a Distinguished Teaching Professor, is Professor of Internal Medicine and in the Peter O'Donnell Jr. School of Public Health.



The 2022 Perot Family Scholars include (back row from left) Ian Chambers, Shao-Po Huang, Peter Leung, Nicholas Sutliff, Vishruth Mullapudi, and (front row from left) Matthew Cenci, Soumya Kulkarni, Nataliya Tod, Ben Kroger, and Tommy Tan.

"I think the Perot family's contribution is, as it was back in the 1980s, enormously forward-looking," Dr. Brown said. "This latest gift will make it possible for us to produce a whole new generation of physician-scientists who will then go on to develop new cures and ultimately the means to prevent many diseases."

Since its launch in 1978, UT Southwestern's M.D./Ph.D. program has graduated nearly 300 physician-scientists, with approximately 75% going on to faculty positions at academic medical centers. Twenty-four of the graduates serve on the faculty at UT Southwestern, where they train the next generation of physician-scientists.

The Perot family's support will expand the number of students admitted to the dual-degree program as well as add biomedical engineering, computational biology, bioinformatics, and data science as research disciplines to study. The investment also will enhance the curriculum and experiences of MSTP students and increase efforts to recruit students from elite U.S. colleges, including top international students who wish to stay in the U.S. for their careers.

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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. Beecherl, Jr. Distinguished Chair in Biomedical Research, and the Paul J. Thomas Chair in Medicine.

Dr. Haley holds the U.S. Armed Forces Veterans Distinguished Chair for Medical Research, Honoring Robert Haley, M.D., and America's Gulf War Veterans.

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.**

Brown and Goldstein anniversary: A historic day to remember

Hundreds of UT Southwestern faculty, distinguished scientists from around the globe, and visitors attended the Oct. 14 symposium and reception honoring the 50-year research partnership of Nobel Laureates Michael S. Brown, M.D., and Joseph L. Goldstein, M.D. Here are some photo highlights from the event.

Dr. Brown addresses the crowd at the end of the symposium.

Symposium co-Chair Helen Hobbs, M.D., tells stories about the history of the Brown and Goldstein 50-year partnership.

Drs. Brown and Goldstein are honored with a standing ovation in the Tom and Lula Gooch Auditorium.

Hundreds of attendees enjoy the outdoor reception for the Brown and Goldstein partnership celebration.

Guest speaker Feng Zhang, Ph.D., takes a selfie with Drs. Brown and Goldstein.

Dr. Goldstein thanks the speakers for their presentations and the crowd for attending the symposium.

Symposium speakers stand by the statue of Donald Seldin, M.D., on the plaza named in his honor. The late Dr. Seldin served as a former UTSW Chair of Internal Medicine.

From left: Drs. Goldstein, Brown, and Eric Olson, Ph.D., listen to the presentations.

Symposium Continued from page 1

patients around the world. He stressed that their achievements have surpassed those of their research discoveries.

"Beyond their scientific contributions and their worldwide impact, they helped to create the unique research culture of UT Southwestern characterized by a spirit of true collaborative collegiality, and commitment to excellence that pervades pursuit of our institutional mission in all of its aspects," Dr. Podolsky said.

Helen H. Hobbs, M.D., and Eric Olson, Ph.D., who chaired the symposium, introduced the distinguished scientists invited to speak. That group included two Nobel Laureates, two Shaw Prize recipients, a Lasker Award winner, and nine Howard Hughes Medical Institute (HHMI) Investigators, including the HHMI's Vice President and Chief Scientific Officer. All speakers are members of the National Academy of Sciences; four are members of the National Academy of Medicine.

"We have assembled an amazing lineup of 10 of the best scientists in the world to discuss a broad range of topics ranging from the mysteries of human consciousness and perception to cutting-edge technologies," said Dr. Hobbs, who was a fellow in the Brown-Goldstein lab when the researchers were awarded the Nobel. That work provided the scientific basis for the statin class of cholesterol-lowering drugs used by millions of people around the world to reduce the risk of heart attack and stroke.

Dr. Hobbs is a Professor of Internal Medicine and Molecular Genetics at UTSW and an HHMI Investigator. She won the 2015 Breakthrough Prize in Life Sciences for genetics research techniques she developed and used to identify key genes involved in lipid metabolism.

Inspiring leadership

"Drs. Brown and Goldstein have led by example. They have fearlessly tackled central problems in medicine with unwavering rigor. Either of them individually is formidable, but the two together are greater than the sum of the parts," said Dr. Olson, founding Chair of the Department of Molecular Biology and Director of both the Hamon Center for Regenerative Science and Medicine and the Sen. Paul D. Wellstone Muscular Dystrophy Cooperative Research Center.

Dr. Hobbs was chief resident at UTSW and heading for a career in patient care when the late Donald Seldin, M.D., Chair of Internal Medicine at the time, suggested she try research. He recommended she learn from the best: Drs. Brown and Goldstein. Dr. Olson's connection to the duo is similarly unique.

"Coming to UTSW was the best decision of my career. I have watched them closely over all these years and have learned from their example," said Dr. Olson.

After identifying many genes involved in muscle development and disease, Dr. Olson's lab recently uncovered a strategy for correcting Duchenne muscular dystrophy using CRISPR gene-editing technology.

Words from Dr. Brown

Finally, at the pinnacle of the day filled with inspiring research presentations, Drs. Brown and Goldstein took to the stage – separately – for closing remarks that showed how a researcher who sits down behind a microscope and zooms out to grasp the big picture could work elbow-to-elbow for 50 years with a partner who always zooms in to see the details.

"I just feel sorry for all of you because you've never known what it's like to share an adventure," Dr. Brown said. "When you answer a question or you open up a new door into a new area of science, having somebody right there to share that experience – the thrill of it – and then immediately have this intense discussion about what the next steps are going to be is amazing. I can't imagine doing science any other way. So, to the young people here, think about it."

Dr. Brown added that both he and Dr. Goldstein fell under the spell of Dr. Seldin's vision of medicine and science as a unified endeavor, a view common as Southwestern Medical College evolved into The University of Texas Southwestern Health Science Center at Dallas in 1972, and eventually to UT Southwestern Medical Center.

Guest speaker Bonnie L. Bassler, Ph.D., visits with honorees Joseph L. Goldstein, M.D., and Michael S. Brown, M.D., at the historic symposium celebrating a 50-year research partnership.

"The amazing thing is that our institution recognized our partnership so that at every level, we were promoted at the same time," Dr. Brown said.

Dr. Goldstein shares insights

Taking the stage next, Dr. Goldstein made one joke about Dr. Brown's enjoyment of storytelling before zeroing in on the details of a particular night early in their time as housestaff at Massachusetts General Hospital, where they met in 1966.

Their daily routine involved providing diagnosis and treatment. Once their patients were asleep, they'd meet for midnight breakfasts in the hospital cafeteria. On one particular day, they couldn't let go of a challenging case from the emergency room: a woman with a severe bacterial infection and an unusual chronic condition marked by extreme thinness, diabetes, and an enlarged fatty liver.

"This patient came in with acute meningococcal meningitis, and it turned out she had lipodystrophy. That's a very rare disease in which you have no fat tissue in the periphery of the body, but you have fat in the liver," Dr. Goldstein said. "We talked about what in the world could cause something like that. And that was probably the beginning of the first of now many hundreds of discussions we had about 'sick' molecules that cause sick patients.

"And you all will find it hard to believe, but 33 years later we serendipitously produced a mouse with lipodystrophy, which was the first example of a model for this human disease."

He added that Jeffrey M. Friedman, M.D., Ph.D., at The Rockefeller University in New York, had recently (1994) identified leptin as a hormone made by fat tissue that acts on neurons in the brain to regulate appetite and weight.

"We found that we could cure the mouse's metabolic derangement with leptin. The fatty liver disappeared and the diabetes disappeared," Dr. Goldstein said. A leptin drug is now used to treat the fatty liver and diabetes seen in lipodystrophy patients.

The day was filled with tales of relationships – among speakers who had trained in other presenters' labs and involving those helped by advice they received early in their careers from Drs. Brown and Goldstein. There were also stories of unexpected connections observed in scientific findings that led to astounding breakthroughs, many of which grew from special mentor-trainee bonds in the labs of the renowned scientists describing their research journeys at the symposium.

"Brown and Goldstein are the pillars upon which UT Southwestern was built," Dr. Olson said. "Beyond UTSW, they have been role models for scientists, and their foundational discoveries of the molecular basis of cholesterol metabolism have changed the world."

As Dr. Goldstein left the stage, the event ended with a standing ovation.

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. Beecherl, 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. Olson holds The Robert A. Welch Distinguished Chair in Science, the Pogue Distinguished Chair in Research on Cardiac Birth Defects, and the Annie and Willie Nelson Professorship in Stem Cell 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.

More online: Watch a video, see more photos from the event, and read the full story on *Center Times Plus* at **utsouthwestern.edu/ctplus.**

Training to combat health care workplace violence

Emergency Medicine group teams up with UT Dallas to develop virtual reality tool

By Jan Jarvis

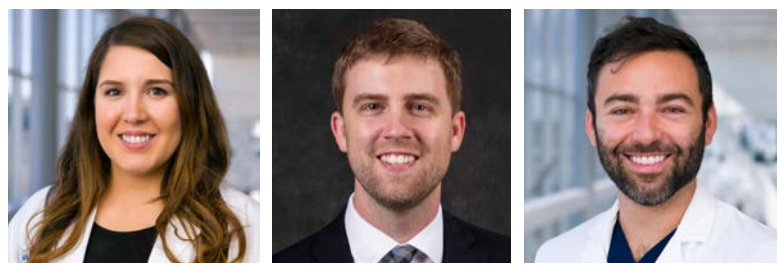
As threats against health care workers rise, hospitals are reevaluating safety measures, strengthening the ability of staff to prepare for and respond to aggression. To assist that effort, a team of UT Southwestern Emergency Medicine physicians helped create a training tool that puts health care workers inside a virtual hospital room to practice de-escalation skills for a potentially aggressive individual.

The virtual reality training tool grew out of a need to address workplace violence in an innovative way, said Gilberto Salazar, M.D., Associate Professor of Emergency Medicine and in the School of Health Professions.

Data from the U.S. Bureau of Labor Statistics show health care workers are five times more likely to experience workplace violence than employees in other industries. Such violence can range from verbal abuse to physical violence, and emergency rooms are a frequent epicenter for these altercations. According to a recent survey by the American College of Emergency Physicians, 85% of emergency physicians reported that violence in their workplaces has increased. Two-thirds of the nearly 3,000 emergency doctors polled reported being assaulted in the past year.

"The ongoing exposure to workplace violence is detrimental to the mental and physical health of health care workers," Dr. Salazar said. "We owe it to ourselves as medical professionals to find better ways to address this issue. Through virtual reality, we can immerse the user in real-life situations and teach them the most effective way to respond."

UT Southwestern's Gilberto Salazar, M.D., (left) tests out the virtual reality training module that was developed in partnership with a UT Dallas team led by Todd Polk, Ph.D., UTDesign Director for Bioengineering (right). The tool is designed to train health care staff on effective responses and de-escalation skills for workplace violence scenarios.

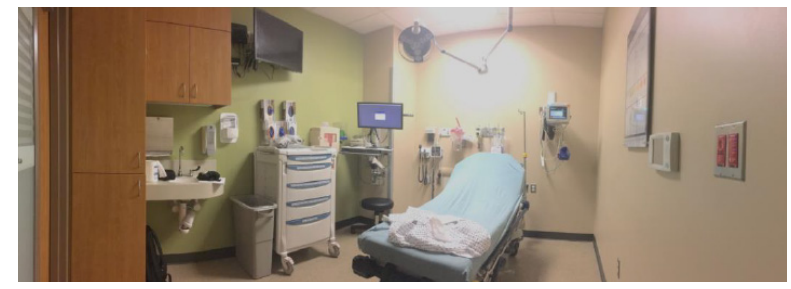


Emergency Medicine residents who helped lead the development of the virtual reality training tool include: (l-r) Maria Box, M.D., Philip Jarrett, M.D., and Andrew Stratton, M.D.

Turning to VR technology

To turn their idea into an actual training tool, the team from the UTSW Department of Emergency Medicine partnered with UT Dallas' UTDesign Program, which pairs regional North Texas companies and organizations with senior UT Dallas engineering and computer science students to solve engineering problems.

The project began with three Emergency Department residents – Andrew Stratton, M.D., Maria Box, M.D., and Philip Jarrett, M.D. – who developed a curriculum with instructions on how to recognize the early signs of aggression and de-escalate a situation involving an aggressive individual.



A sample view from the prototype version of the virtual reality training module.

The curriculum was based on existing science and evidence developed in various disciplines, including emergency medicine, nursing, psychiatry, and pharmacology. Subtle signals often precede aggressive behavior – but these can be difficult for busy team members to detect, Dr. Jarrett said. VR allows learners to lead simulated patient encounters in a way that rivals reality.

"VR places the user directly into the room, combining intimidatingly realistic scenarios with teachable decision points and iterative practice," he said. "Unlike traditional products for workplace violence training, VR has the distinct advantage of helping learners feel the intensity of a dangerous situation without the actual threat of harm."

After the physicians developed a curriculum in which the user chooses how to respond to various situations, UTDesign created a prototype. The team wanted to design a tool that not only put the user in a hospital room, but allowed the person to "feel" what was happening, said Todd Polk, Ph.D., UTDesign Director for Bioengineering.

While a headset allows the user to "see" what is happening inside the virtual hospital room, a vest and gloves with haptic feedback – mimicking the feeling of touch – make it possible to "feel" what occurs.

Making a virtual idea reality

After development of a prototype, Dr. Salazar applied for a UT Southwestern Simulation Innovation Award, which provides financial support to projects designed to facilitate the growth of state-of-the-art simulation research or curricular design. Upon winning the $10,000 award, Dr. Salazar applied for and was granted Institutional Review Board (IRB) approval to further study health care workplace violence and compare the tool's effectiveness with other training methods.

The funding award helped pave the way for the next iteration of the VR training module, currently being developed by Austin-based Augmented Training Systems, which will be used for the IRB study and potentially for general use at UT Southwestern and elsewhere. The team hopes to eventually make the tool available nationally.

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

Awards Continued from page 1

UT Southwestern's core values of excellence, innovation, teamwork, and compassion." Dr. Podolsky added, "These awards are an especially impactful form of recognition at UT Southwestern because the recipients are nominated by their colleagues. Their steadfast commitment to our patients and their families, as well as our institution, serve as an example to each of us and it's a pleasure to honor them in this manner."

More than 220 physicians were nominated by the campus community this year for the awards given to clinical faculty. A committee of UTSW faculty then selected the winners.

Excellence in patient care

The top award – the Patricia and William L. Watson Jr., M.D. Award for Excellence in Clinical Medicine – went to blood cancer specialist Robert H. Collins Jr., M.D., FACP, Professor of Internal Medicine. The Watson Award recognizes a clinician who exemplifies excellence in patient care and is a leader in advancing clinical innovation.

Dr. Collins joined UT Southwestern in 1998 as Director of Hematologic Malignancies and Bone Marrow Transplantation.

An accomplished scientist and researcher, Dr. Collins said that he entered medicine because of his fascination with science. As the author of more than 130 articles in scientific journals, his expertise is evident, but he said his commitment to helping patients was somewhat unexpected. "Something happened. I was befriended by lots of patients and developed these deep relationships and friendships. It softened my heart," Dr. Collins said.

"My goal is to be an excellent doctor, in every meaning of that word, when you realize that it's all about service. If somehow your career is about the other person, that really is what makes you happy. What a great job."

Erin E. Gordon, D.O., Clinical Assistant Professor of Pediatrics, received the Patient and Family Recognition Award, designed to honor clinical faculty who provide compassionate and exceptional care, engendering patient trust and satisfaction.

Dr. Gordon once rode home with a family and their baby girl who was born with a heart defect and "unfortunately was not a candidate for heart transplantation," explained John Warner, M.D., Executive Vice President for Health System Affairs and CEO of UT Southwestern Health System. The family wanted their child to spend her final days at home and Dr. Gordon accompanied them in the ambulance to make sure she got there.

"Dr. Gordon – as she is known to do – found a way," Dr. Warner said.

Innovative programs to advance care

The winner of The President's Award for Diversity and Humanism in Clinical Care went to Mehari Gebreyohanns, M.D., an Associate Professor of Neurology and specialist in stroke care, telemedicine, and global neurology. After a visit to his native country of Ethiopia in 2016, he not only launched a program there to improve neurological care, including to diagnose and better treat epilepsy and stroke, he also worked with the Ethiopian community in North Texas to create a phrase in their language to describe stroke (ye-angol tikat) so that patients could communicate more effectively with their caregivers.

These physicians were not the only award winners whose work and innovations changed the lives of patients.

Amit Singal, M.D., M.S., and Adam Yopp, M.D., responded to the fact that Texas has both the highest incidence and prevalence rates for liver cancer in the United States by creating and growing UT Southwestern's Multidisciplinary Liver Tumor Program. They founded the program in 2010, and it now has clinics at both the Harold C. Simmons Comprehensive Cancer Center and Parkland Health.

Robert H. Collins Jr., M.D., FACP, (right) receives the Patricia and William L. Watson Jr., M.D. Award for Excellence in Clinical Medicine, the University's top honor for a clinician, from President Daniel K. Podolsky, M.D.

For this, Dr. Singal, Medical Director of the Liver Tumor Program and Chief of Hepatology, and Dr. Yopp, Chief, Division of Surgical Oncology, won a Program Development Award, given for innovation and collaboration foundational to the success of the institution.

A second Program Development Award went to Shivani Patel, M.D., Associate Professor of Obstetrics and Gynecology. Dr. Patel, who leads the Obstetrics Quality Assurance and Performance Improvement Program that was established in 2019 by nurses and physicians, helped introduce protocols that have reduced surgical site infections in new mothers, allowed blood to be delivered faster in cases where massive transfusions are needed, and lowered the incidence of postpartum hemorrhage from 14% in 2019 to 5% by mid-2021, according to Dr. Warner.

Rising stars and longtime service

Two Rising Star Awards were given this year to doctors considered exceptional early-career clinical faculty. One went to James "Brad" Cutrell, M.D., an Associate Professor of Internal Medicine and infectious disease specialist who led development of UT Southwestern's COVID-19 treatment protocols and occupational health protocols for employees during the pandemic. Another was won by Linda A. Dultz, M.D., M.P.H., Medical Director, Parkland Hospital Surgical Intensive Care Unit, who cared for and performed surgery on Parkland's COVID-19 patients.

Mary Jane Pearson, M.D., Professor of Obstetrics and Gynecology, received the Institutional Service Award for a willingness to share her time and expertise through work on committees, task forces, and in other activities that impacted patient care. "Service is very simply figuring out where you can be of help and doing it," Dr. Pearson said in a video presentation.

Paying it forward

Finally, two Mentoring Awards were given to clinicians who are impacting the future of medicine by their commitment and effectiveness as mentors. David Gerber, M.D., Professor of Internal Medicine and in the Peter O'Donnell Jr. School of Public Health, was referred to as the "mentor-in-chief" by his nominator, said W. P. Andrew Lee, M.D., Executive Vice President of Academic Affairs, Provost, and Dean of UT Southwestern Medical School, referring to Dr. Gerber's willingness to take less experienced physicians under his wing. Myra H. Wyckoff, M.D., received the other Mentoring Award. Dr. Wyckoff is a newborn intensive care specialist and Director of the Neonatal Resuscitation Program at Parkland Memorial Hospital. She has won three pediatric teaching awards over the years, Dr. Lee said.

"Life is hard, and medicine is hard, and we need people who can show us the way," said Dr. Wyckoff.

"If I can help others to continue this type of career, not only is it really satisfying but it's also really important to the field of medicine," added Dr. Gerber.

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Dr. Collins holds the Sydney and J.L. Huffines Distinguished Chair in Cancer Research in Honor of Eugene Frenkel, M.D., and the H. Lloyd and Willye V. Skaggs Professorship in Medical Research.

Dr. Gerber holds the David Bruton, Jr. Professorship in Clinical Cancer Research.

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

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. Singal holds the Willis C. Maddrey, M.D. Distinguished Chair in Liver Disease and is a Dedman Family Scholar in Clinical Care.

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.

Dr. Yopp holds The Occidental Chemical Chair in Cancer Research.

Academic Colleges – a unique and cherished part of UT Southwestern Medical School life

By Cathy Frisinger

Embraced by both students and faculty, the Academic Colleges system has arguably become the most beloved element of a UT Southwestern Medical School education, with a Cary student or a Seldin student every bit as loyal to their assigned College as a Gryffindor or Ravenclaw is to their Hogwarts House from the well-known *Harry Potter* series of books and movies.

Fifteen years ago, the Medical School instituted this system, with each student assigned to one of six Colleges: Cary, Estabrook, Fashena, Pritchard, Seldin, or Sprague.

William "Gary" Reed, M.D., who has been Headmaster of the Colleges since 2014, said the system grew out of a request by students to introduce clinical practice earlier in their education. It had been standard protocol in medical schools nationwide to devote the first two years of medical school to basic science and then begin clinical instruction the third year. But that was changing.

With medical students anxious to start clinical instruction earlier, UT Southwestern's system of Academic Colleges and subunits composed of six or seven students and a mentor began. The College subgroups meet once a week with their mentors during the first year of medical school; in these sessions they are taught the art of taking a medical history and performing a physical examination.

"The mentors teach their groups the building blocks of what it is going to be like to be a physician," said Dr. Reed, Associate Dean, Quality, Safety, and Outcomes Education and Professor of Internal Medicine and Surgery.

UT Southwestern Medical School's Academic Colleges system places students in groups for small-group studying, mentoring, and healthy competition. Each fall, members of the Colleges compete in Olympics-style games to build camaraderie.

Alec Mason, a third-year student in Seldin College, said his mentor, Emilia Thomas, M.D., has been one of his strongest supporters.


From left: Angela Wang, a third-year student in Pritchard College, calls her mentor, Ashley Agan, M.D., "the best."

Clinical transition training

The students attend Colleges sessions – actually considered a course – each year of their medical education. Adding four class years together, this equates to about 1,000 medical students enrolled in the course currently. This course provides not only mentorship and study opportunities, but also teaching of important skills, such as taking a medical history and performing a physical examination.

"This would not be possible without the outstanding dedication and work of the Colleges Course Director, Thomas Dalton, M.D., Associate Professor of Internal Medicine, who directs the curriculum and operations of the entire four-year course, and Heather Smith, Manager of Academic Colleges, who directs the administrative team of the Colleges," said Dr. Reed.

Once the clinical portion of medical school begins, the Colleges' subgroups of six students continue to meet with their mentors, though less often. Once a month, they discuss issues such as ethics, how diversity impacts medical practice, and how to talk to families regarding upsetting medical news about a loved one.

"In the clinical years, it turns more to discussion about what they are experiencing in their clinical work. It's a place for students to learn about the subtle parts of being a physician," said Dr. Reed.

The students develop a close relationship with their mentors. "The mentor becomes their first colleague. It becomes a friendship as much as a faculty relationship," he said.

Angela Wang, a third-year student in Pritchard College, calls her mentor, Ashley Agan, M.D., Assistant Professor of Otolaryngology – Head and Neck Surgery, "the best."

"We're the COVID class of med students. We didn't have a lot of time with our classmates our first year, but the one thing we did have was lots of time with our mentor. Dr. Agan was very patient. There was no dumb question," said Ms. Wang.


Charles Ginsburg, M.D.

Alec Mason, a third-year student in Seldin College, said his mentor, Emilia Thomas, M.D., Associate Professor of Internal Medicine, has been one of his strongest supporters. "I totally intend to ask her to be my attending (physician) for my internal medicine rotation," Mr. Mason said.

Faculty members also appreciate the warm relationships they develop with the students, Dr. Reed said, and there are always more seeking to become Colleges mentors than needed. "It's actually become very competitive to become a mentor," he said.

Building camaraderie

While the subgroups are a crucial element in the educational process for the students, the larger Academic Colleges groups function as a social unit throughout the students' medical school careers. Each College has its own mascot and a "commons," an area designed for both study and social interaction, affording opportunities for the students in each College to get to know each other.

New this year for Academic College life is a bit of memorabilia – a coin unique to each College.

Each year, there is an Olympics-style competition among the Colleges with team-building events like tug of war, a race to log the most volunteer hours, and fun contests like chips-and-dip eating.

The commons areas will shortly be getting makeovers with exciting murals. Also new this year for Academic College life is a bit of memorabilia – a coin unique to each College. Charles Ginsburg, M.D., Vice Provost and Senior Associate Dean for Education, said the Colleges coins were inspired by the military tradition of "challenge coins," presented in recognition of achievement. "I'm hoping these coins will be a memento the students will treasure and keep throughout their lives," he said.

Mr. Mason said the Academic Colleges system, and especially the small-group mentoring, are among the reasons he chose to attend UT Southwestern Medical School. "This is actually the kind of thing I was looking for when I was looking at schools. I asked about it during my interview and made sure it was well-established," he said.

Dr. Reed isn't surprised that potential students would ask about the Academic Colleges and mentorship groups to enhance their medical education. "My interpretation of the student evaluations is that this is their favorite class," he said.

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

Dr. Reed holds the S.T. Harris Family Distinguished Chair in Internal Medicine, in Honor of Gary Reed, M.D., and the Eva A. Rosenthal Professorship in Internal Medicine, in Honor of Gary Reed, M.D.

The illustrious namesakes of UT Southwestern's Academic Colleges

The six individuals that the Academic Colleges are named after are icons in the history of UT Southwestern, representing a variety of disciplines and all aspects of our mission. Below is some background on those illustrious namesakes:

Edward H. Cary, M.D., graduated from medical school in New York in 1901 and moved to Dallas in 1902, which at the time was considered the "Wild West of Medicine." Dr. Cary became Professor of Ophthalmology at Dallas' first medical school, then called the University of Dallas Medical Department, and six months after joining the faculty was named Dean. Dr. Cary's ambition was always to improve the quality of medical education in Dallas to equal the kind of training he had received. In 1939, Dr. Cary helped create the Southwestern Medical Foundation, which started Southwestern Medical College, the precursor to UT Southwestern.

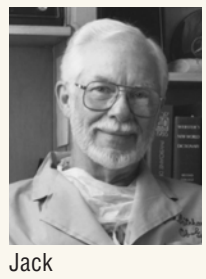

Edward Cary, M.D.

After a stint as a naval officer, **Ronald W. Estabrook, Ph.D.**, earned his Ph.D. in biochemistry from the University of Rochester. He served as Chairman of the Department of Biochemistry at UT Southwestern for 14 years and then became the first Dean of the UT Southwestern Graduate School of Biomedical Sciences, helping to turn UT Southwestern into a major research center that enjoys international recognition for its scientific achievements.


Ronald Estabrook, Ph.D.

Gladys J. Fashena, M.D., was a pioneer in many ways, having earned a master's degree from Columbia University and then a medical degree from Cornell Medical School in 1934 – at a time when women had to fight to be allowed to study medicine. A pediatric cardiologist, she was among the first to recognize that newborns who were blue had congenital heart problems. She taught at what would become UT Southwestern for nearly 40 years. In 1976, she became the first female President of the Dallas County Medical Society.


Gladys Fashena, M.D.


Jack Pritchard, M.D.

Jack A. Pritchard, M.D., a graduate of Case Western Reserve Medical School, was an obstetrician whose laboratory and clinical work revolutionized the treatment of high-risk pregnancies. Dr. Pritchard studied hematological changes that occurred during pregnancy, which led to treatment for eclampsia. When he was named head of the Department of Obstetrics and Gynecology at UT Southwestern in 1955, he was the youngest Ob/Gyn chief in the country. Dr. Pritchard gained fame throughout the state in 1975 when he delivered the Davis quintuplets, the first successful delivery of quintuplets in Texas.


Donald Seldin, M.D.

Donald W. Seldin, M.D., attended Yale School of Medicine and taught there for several years, so it was a shock to arrive in Dallas in 1951 and find a medical school that was housed in old Army barracks. Undaunted, he set out to build a Department of Internal Medicine that would rank with the best in the country, a task he achieved over time. Dr. Seldin was the recipient of numerous honors, including becoming an early member of the National Academy of Medicine and his appointment as President of seven major medical societies.

Charles C. Sprague, M.D., a native of Dallas, was UT Southwestern's first President, a position he held for 19 years. He earned his medical degree at UT Medical Branch at Galveston and then trained in internal medicine and hematology at Tulane University, Washington University, and Oxford. He served as Dean of the Tulane University School of Medicine prior to joining UT Southwestern. At UTSW, he presided over a period of explosive growth in the 1970s and was a member of the National Academy of Medicine.


Charles Sprague, M.D.

Congratulations to the School of Health Professions graduates of 2022

One hundred nineteen students from the UT Southwestern School of Health Professions celebrated graduating in December in a live commencement ceremony. Shawna Nesbitt, M.D., M.S., inaugural Vice President and Chief Diversity, Equity, and Inclusion Officer for UT Southwestern, delivered the commencement address, speaking about living a life of impact. Below are a few photo highlights from the Dec. 11 event, which was held in the Tom and Lula Gooch Auditorium on the South Campus.

Dr. Gilberto Moralez Jr., Assistant Professor in the School of Health Professions, carries the Vernie A. Stembridge, M.D., Academic Mace as he leads graduates in the procession.

Drs. Samarpita Sengupta and Bethany Grubb, Assistant Professors in the School of Health Professions, hood Physician Assistant Studies graduate Alexandria Casanova Zepeda.

Capturing the excitement of the day with a selfie are Physical Therapy graduates (from left) Megan Pierson, Daisy Rodgers, and Ronald "Rocky" Rodriguez.

Proudly showing off their diplomas are Physician Assistant Studies graduates Jane Igbeka (left) and Shelby Hunt.

Dr. Shawna Nesbitt, Vice President and Chief Diversity, Equity, and Inclusion Officer, gives the commencement address.

Clinical Nutrition graduates (from left) Malinda Terry, Ramya Srikanth, Kelsey Setien, and Viviana Quintero take in the excitement of the day.

Physical Therapy graduate Michelle Chan shows off her diploma.

Physician Assistant Studies graduate Jared Reyna takes a group photo with family and friends.

Health professions students earn honors

At the ceremony, 13 students were recognized with special awards from the Dean's Office. The award winners include some 2022 graduates and others who already graduated or will earn their degrees next year. Congratulations to the following honorees:

John Schermerhorn, M.D., Student Service Award
Richelle Lewis
Gabrielle Griffith
Cristina Garcia

L. Ruth Guy, Ph.D., Student Leadership Award
Megan Pierson
Aisha Khan
Andie Keller

Raul Caetano, M.D., Ph.D., Student Research Award
John Giacona
Brandon Kelley
Rachel Archer

Gordon Green, M.D., Student Clinician Award
Thomas Samaan
Adriana De La Rue
Brooke Evans

Rising Star Award

Rising Star Award
Martin Ortuno

Hospital Continued from page 1

The mental health facility will be located at the corner of Medical District Drive and Harry Hines Boulevard near Zale Lipshy Pavilion – William P. Clements Jr. University Hospital, Children's Medical Center Dallas, and Parkland Memorial Hospital.

The 200-bed adult facility, with completion anticipated by late 2025, is funded by the state. A 96-bed pediatric wing – supported through a separate donation from Children's Health – should open in 2026.

State funding to build the adult hospital is part of more than $1.2 billion appropriated by the Texas Legislature since 2017 to replace, renovate, or expand state hospitals in Dallas, Houston, Austin, San Antonio, Kerrville, and Rusk. Currently, the closest such hospital is in Terrell, more than 30 miles east of Dallas.

The Texas Health and Human Services Commission (HHSC) is partnering with UT Southwestern to design, construct, and operate the Behavioral Health Center.

"Texas is making an unprecedented investment in helping people with serious mental illness," said HHSC Executive Commissioner Cecile Erwin Young. "Throughout the state, we are expanding, renovating, and rebuilding our state psychiatric hospital system from the ground up. When complete, this much-needed hospital will offer hope, healing, and recovery for the most vulnerable Texans living in the surrounding metroplex."

"UT Southwestern is pleased to partner with the Health and Human Services Commission to address important unmet needs for behavioral health care in our region," said UTSW President Daniel K. Podolsky, M.D. "In addition to providing much-needed access to inpatient care for those suffering from serious mental illness, this new hospital will provide an opportunity to develop innovative models of care and in parallel provide a training ground for the full spectrum of health care professionals needed for a comprehensive mental health workforce."

To promote the health and healing of patients, current designs for the new building include abundant natural lighting, a landscaped outdoor courtyard, and an open-air balcony with tables.

Key to the design process is a large community engagement campaign, said Hicham Ibrahim, M.D., UT Southwestern Associate Vice President and Chief Medical Officer of Ambulatory Services. Dr. Ibrahim, also a Professor of Psychiatry, told those gathered how the design team sought input from patients, families, behavioral health providers, and other community stakeholders to create a state-of-the-art facility that will offer private patient rooms and bathrooms as well as ample access to daylight and nature. The Texas Behavioral Health Center at UT Southwestern will also provide several unique, high-quality clinical programs that will be innovations in the state hospital system.

The pediatric wing that Children's Health is funding will complement the adult facility and address another growing need, said Christopher J. Durovich, President and Chief Executive Officer of Children's Health.

"The statistics are startling," Mr. Durovich said at the groundbreaking. "One in 3 Texas children experiences a mental health disorder each year. In the last year, we've seen a 31% increase in mental health-related emergency room visits among teens."

UT Southwestern, Children's Health, and Texas Health and Human Services Commission (HHSC) executives joined area legislators at the December groundbreaking ceremony. From left: Hicham Ibrahim, M.D., UTSW Associate Vice President and Chief Medical Officer of Ambulatory Services; Scott Schalchlin, Deputy Executive Commissioner, HHSC; Christopher J. Durovich, President and CEO, Children's Health; Cecile Erwin Young, Executive Commissioner, HHSC; Texas Sen. Royce West; Texas Rep. Toni Rose; Texas Sen. Jane Nelson; Daniel K. Podolsky, M.D., UTSW President; and John Warner, M.D., UTSW Executive Vice President for Health System Affairs and CEO of UT Southwestern Health System.

Longtime legislative supporters of a state mental health hospital for Dallas also spoke, led by state Sen. Jane Nelson, who has chaired the Senate's Finance and Health and Human Services committees.

"We have been working on many fronts in Texas to address the growing need for mental health services," Sen. Nelson said. "Securing funds for this hospital was a wise investment that will have a major positive impact on our ability to care for Texans in need of treatment."

Sen. Nelson praised Dr. Podolsky for his tireless work to get the new state behavioral health hospital placed in Dallas, which included traveling to Austin to help educate legislators about the need.

"The new Texas Behavioral Health Center at UT Southwestern is an exciting and long-overdue addition to our region's ability to address mental health challenges," said state Rep. Toni Rose, another speaker at the ceremony. "The full range of patient services offered by the new hospital, combined with UT Southwestern's world-class research, truly marks a new day for mental health care in North Texas."

State Sen. Royce West, also present at the event, called for additional resources to address the growing need for mental health support in Dallas-Fort Worth. He characterized the Behavioral Health Center as a critical step.

"The new hospital fills a great need in our community for more psychiatric hospital beds. I am proud to have worked on this project since the beginning of the 85th Legislature in 2017," Sen. West said. "I am particularly excited that this facility will provide patients a true continuum of psychiatric care – both inpatient and outpatient – to help treat those persons suffering from severe mental illness."

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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.

UTSW summer research programs provide undergrads valuable experience

By Jan Jarvis

Undergraduates from across the country received valuable laboratory experience with leading UT Southwestern scientists through biomedical research training programs over the summer of 2022. In all, 22 Amgen Scholars and 43 Summer Undergraduate Research Fellows were introduced to the kinds of projects that they might one day encounter in biomedical research careers.

Both programs are designed to inspire future biomedical investigators by providing opportunities for participants to conduct research, analyze data, present results, develop relationships with faculty mentors, and network.

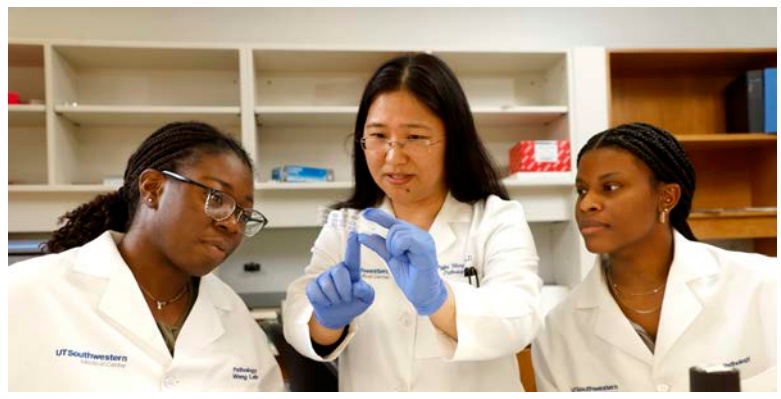
UT Southwestern was selected to join the Amgen Scholars Program in 2019 when it was awarded a four-year grant from the Amgen Foundation. At the time, it was one of only 13 institutions in the U.S. selected to host the program. (Amgen is a vendor for UT Southwestern and also supports UTSW research.)

The SURF (Summer Undergraduate Research Fellowship) program is a 10-week fellowship program for college students pursuing Ph.D. or M.D./Ph.D. careers that the UT Southwestern Graduate School of Biomedical Sciences started in 1984.

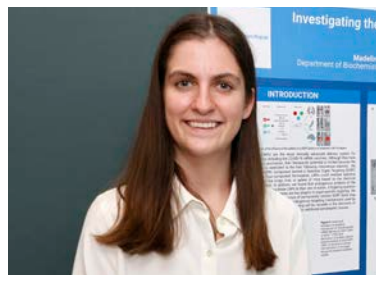
"The Amgen Scholars and SURF programs have given a platform to many students from different walks of life to gain meaningful research experiences and leverage the skills to take their careers to the next level," said Arnaldo Díaz Vázquez, Ph.D., Assistant Dean for Diversity and Inclusion and Director of the two programs.

The programs encourage students from backgrounds historically underrepresented in the sciences to apply, including African-American, Hispanic, Native American and Pacific Islander students, as well as first generation and socioeconomically disadvantaged students and those who are studying at small liberal art colleges, enabling opportunities for those who otherwise might not get a chance to work at a top biomedical institution.

The Amgen program is funded with a grant from the Amgen Foundation, while SURF is supported by funds from UT Southwestern. In addition, the SURF-Stem Cell program receives support from the Hamon Center for Regenerative Science and Medicine and Eric Olson, Ph.D., Chair of Molecular Biology and Director of the Hamon Center, while the Summer Undergraduate Research Institute for the Study of Kidney Disease (SURISKD) is funded through a National Institutes of Health grant under the direction of Principal Investigator Thomas Carroll, Ph.D., Professor of Internal Medicine and Molecular Biology. SURF-Stem Cell and SURISKD programs are both subsets of the SURF program, the first focused on studies of tissue formation and regeneration of damaged organs while the latter specializes in kidney-related research.



Yingfei Wang, Ph.D., Assistant Professor of Pathology and Neurology, conducts research in her lab with the assistance of SURF students Grace Ugochukwu (left) and Nia Hughes (right).



"The program here has fostered the notion that if you are curious about a subject, never hesitate to reach out to an expert to learn more," said Amgen Scholar Maddie Brown.

"The summer research opportunities at the Graduate School of Biomedical Sciences align perfectly with our mission and commitment to diversity and inclusion. We celebrate and acknowledge the value of each scholar's culture and perspectives and understand that we must continue increasing our reach and cultivating individual talents to diversify the STEM workplace, which will ultimately translate into advancements in science and human health," Dr. Díaz Vázquez said.

Opportunities abound for Amgen Scholars

UT Southwestern's third class of Amgen Scholars experienced a summer filled with activities designed to promote scholarly advancement, professional growth, and a sense of community.

For University of California, San Diego, senior Maddie Brown, becoming an Amgen Scholar fulfilled a dream. Working in the lab of Daniel Siegwart, Ph.D., Associate Professor of Biochemistry and Biomedical Engineering, provided many opportunities. One of the most rewarding has been speaking with a wide array of faculty members, Ms. Brown said.

"The program here has fostered the notion that if you are curious about a subject, never hesitate to reach out to an expert to learn more," she said. "As a result, I have been able to explore many new and interesting concepts in biology – from cell metabolism to drug targeting."

Dr. Siegwart's laboratory has worked on messenger RNA lipid nanoparticles (LNPs), similar to those used in the mRNA COVID-19 vaccines, for the last decade. His lab discovered unique versions of LNPs that can target and deliver genetic medicines to the lungs called selective organ targeting (SORT) LNPs. SORT LNPs are being further developed by ReCode Therapeutics, a UT Southwestern spinout company that was co-founded by Dr. Siegwart, with multiple clinical trials on track to start in 2023 for treatment of genetic respiratory diseases.

"This summer, Maddie worked diligently to elucidate important details of the mechanism – how and why Lung SORT LNPs target the lungs," he said. "Through scientific insights, hard work, and a diverse collection of biochemical assays, she revealed key aspects of how Lung SORT LNPs bind specific proteins in the blood to transport genetic medicines inside of lung cells."

SURF gives undergrads a taste of research

Each summer, the SURF program gives participants the chance to explore careers as researchers, assigning these fellows to laboratories and research projects according to their training and science interests.

Like Amgen scholars, SURF fellows maintain a busy schedule of conducting research, working with mentors, and preparing to present their research.

"The fact that UT Southwestern is an esteemed biomedical research institution and the home of six Nobel Prize recipients and some of the world's top scientists and medical professionals makes it exciting for me and keeps me motivated to grow," said SURF fellow Raul Caballero Montes.

Working in the lab of Javier Garcia Bermudez, Ph.D., this past summer, Mr. Caballero Montes conducted research in cancer metabolism. Dr. Bermudez is an Assistant Professor of Pediatrics and in the Children's Medical Center Research Institute at UT Southwestern. The research of Mr. Caballero Montes focused on understanding mechanisms that rescue cancer cells from oxidative stress and damage and how to use this knowledge to induce a type of cell death called ferroptosis. Mr. Caballero Montes hopes to improve cancer treatments and prevent cancer spread.

"All the expertise that you get in your lab is combined with the learning experience that you get from the weekly scientific seminars and from speaking with other principal investigators, summer fellows, postdoctoral researchers, and others you have the chance to network with," said Mr. Caballero Montes. "The opportunity to cultivate a scientific mindset – and the feeling of contributing to something enormous – is more than you could possibly imagine."

A foundation for career success

After completing the summer training programs at UT Southwestern, undergraduates leave with a sharp vision of what to expect from a career in research. For Lupita Rios, who grew up in Guatemala and moved to the U.S. at age 12, SURF opened her eyes to dreams she never imagined.

"Up until high school, I had no idea that becoming a scientist was even a possibility," said the 2015 and 2016 SURF fellow. "I was the first in my family to attend a university. Therefore, I was not aware of all the awesome career choices available for me."

Lupita Rios, a current UTSW graduate student and former SURF fellow.

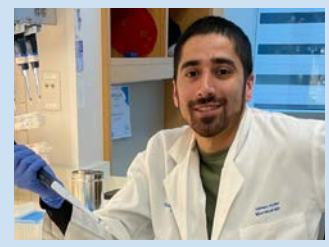
Working in the lab of former faculty member David Self, Ph.D., inspired her to pursue a career in neuroscience, she said.

"This experience was amazing!" said Ms. Rios, who as a SURF student worked in the Department of Psychiatry, focusing on studies of cocaine addiction in rat models. "I was able to do a lot of hands-on work that is difficult to learn in classes alone. I learned a lot of valuable skills, such as developing and designing my own experiments, and I got to use cutting-edge scientific tools."

Participation in the SURF program solidified her decision to pursue a Ph.D. in neuroscience at UT Southwestern.

"After graduating, my plans are to continue my path in research, and help pave the way in STEM careers for other students like me," she said.

Similarly, SURF reinforced Usman Hyder's desire to become a scientist. As a 2017 participant, Mr. Hyder learned how to manage multiple experiments, to think critically about experimental design, and to understand what it meant to both fail and succeed at experiments.



UTSW graduate student Usman Hyder is a former SURF fellow.

The program helped him gain confidence and learn to be an independent scientist, said Mr. Hyder, who worked that summer in the lab of Ivan D'Orso, Ph.D., Associate Professor of Microbiology.

"SURF solidified that I had the capacity to go to grad school and that becoming a principal investigator was a goal that I wanted to achieve," he said. "The critical thinking skills gained during SURF have been important for me to stay focused in the research path."

Now in his fifth and final year of a Ph.D. program in Genetics, Development and Disease at UT Southwestern, he credits SURF and Dr. D'Orso with providing the foundation to help him achieve his career goals.

"Because of my experience both during SURF and now five years later, it remains a dream to come back to UT Southwestern and start a lab here," he said.

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Dr. Carroll holds The NCH Corporation Distinguished Chair in Molecular Transport.

Dr. Olson holds the Pogue Distinguished Chair in Research on Cardiac Birth Defects, The Robert A. Welch Distinguished Chair in Science, and the Annie and Willie Nelson Professorship in Stem Cell Research.

Dr. Siegwart holds the W. Ray Wallace Distinguished Chair in Molecular Oncology Research.

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

Sherry appointed Professor Emeritus in Advanced Imaging Research Center

By Jan Jarvis

Imaging scientist A. Dean Sherry, Ph.D., whose research on MRI molecular imaging agents has advanced our understanding of cancer, diabetes, and other diseases, has been appointed Professor Emeritus in the Advanced Imaging Research Center (AIRC).

In 30-plus years as a UT Southwestern faculty member, Dr. Sherry has made major contributions in diverse fields. He was a founding member of the AIRC, a unique facility that fosters collaborative research in the imaging sciences where students from UTSW, UT Dallas, UT Arlington, and international postdoctoral programs are trained.

Now retired, Dr. Sherry joined UT Southwestern in 1990 as a Professor of Radiology, the same year he was recognized for his outstanding achievements in chemistry with the Doherty Award from the DFW Section of the American Chemical Society.

A. Dean Sherry, Ph.D.

"I came to UT Southwestern because I wanted to apply my chemistry and NMR (nuclear magnetic resonance) skills and my interest in whole-body metabolism to disease models," he said. "It was an opportunity to work with physicians, and it turned out to be a very productive time in my life."

Over much of his career, Dr. Sherry served as a faculty member at two UT institutions. In 1972, he joined UT Dallas as a Professor of Chemistry, retiring from there in 2022 as well.

Dr. Sherry's research has led to a better understanding of metabolism in patients with cancer and diabetes, said Craig Malloy, M.D., Professor of Internal Medicine and Radiology at UT Southwestern.

"He is uniquely effective in translating basic research in chemistry to applications in patients," said Dr. Malloy, a longtime collaborator with Dr. Sherry. These advances included development of new contrast agents for MRI, investigation of metabolism in patients with cancer or diabetes, and creation of new ways of detecting water interactions with biomolecules in clinical scanners.

In particular, Dr. Sherry has been active in the development of gadolinium complexes as MRI contrast agents since the 1980s. Gadolinium contrast agents are widely used in MRI scans to highlight highly perfused from poorly perfused tissues and, more recently, as indicators of biological function.

While leading the AIRC as its inaugural Director, Dr. Sherry helped further MRI research. AIRC researchers are world leaders in developing new MRI tracers that are used to reveal cancer, diabetes, and other diseases. They also map the brain and offer researchers and students a new understanding of the normal brain as well as the abnormalities of disorders such as autism.

The Center, which brought together three UT System institutions – UT Southwestern, UT Dallas, and UT Arlington – is known for metabolism research using MRI tools, supercharging MRI imaging with hyperpolarization, and engineering molecules to find and attack cancers.

Dr. Sherry's dedication to supporting undergraduates led him to initiate the Green Fellows program, which provides a single-semester fully paid undergraduate research fellowship for UT Dallas students. The program is offered jointly by the UT Southwestern Graduate School of Biomedical Sciences and UT Dallas.

Dr. Sherry earned his bachelor's degree in chemistry from Wisconsin State University and his doctorate, also in chemistry, from Kansas State University.

Dr. Sherry said retirement will allow him more time for travel, golf, and spending time with his wife at their lake house on Lake Texoma – but he still plans to spend time at UT Southwestern.

"I love talking to students about their careers, and mentoring was always an important part of my job," he said. "I hope I will now have more time for mentoring faculty and students."

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Dr. Malloy holds the Richard A. Lange, M.D. Chair in Cardiology.