

CENTER TIMES

DECEMBER 2019 / JANUARY 2020

A PUBLICATION OF THE UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL CENTER

CAMPUS EDITION

A beacon of hope and health care rises in Frisco

By Rick Press

UT Southwestern marked the beginning of “a new era” on Tuesday, Dec. 3, with the opening of a specialty care facility adjacent to a new hospital in Frisco – one of the fastest growing cities in the U.S.

Almost two weeks earlier, hundreds of community leaders, physicians, faculty, and staff gathered for a dedication ceremony of the new UT Southwestern Medical Center at Frisco, the 120,000-square-foot, state-of-the-art medical building that many have watched rise on a former hay farm since 2017. It is part of a new 20-acre medical campus in the city.

“It is a bright new day for us, a new era, and we feel privileged to be

part of the community of Frisco,” said Dr. Daniel K. Podolsky, President of UT Southwestern, speaking to an overflow crowd at the Nov. 21 ribbon-cutting ceremony. “We are deeply honored that the patients of this community will now share with us their trust of their most precious concern, their health and the health of their families.”

The medical campus, located just north of Eldorado Parkway on the Dallas North Tollway, represents a first-of-its-kind collaboration between UT Southwestern and Texas Health Resources, which will operate a 325,000-square-foot, 73-bed hospital just across the breezeway from UT Southwestern’s specialty care building. In its facility, UT Southwestern Frisco will provide innovative specialty

Please see FRISCO on page 6



UTSW patient Ralph Cousins (center) was given the honor of cutting the ribbon at the UT Southwestern Medical Center at Frisco facility while surrounded by executives and other members of the UTSW and Frisco communities.

GAME OF CODES



UT Southwestern’s Dr. Karthigayini Sivaprakasam (center) advises members of Team 11 at the hackathon on technical issues.

Hackathon teams up techies with faculty in a hunt for better treatments and scientific advances

By Carol Marie Cropper

The energy in the room was palpable as UT Southwestern’s President and its Chair of Bioinformatics welcomed more than 120 “hackers” to the institution’s second annual hackathon, part of a worldwide craze drawing techies in swarms.

The “hackers” – mostly 20- and 30-something computer scientists and engineers – combined their skills with those of UT Southwestern’s doctors, medical researchers, and high-performance computing capabilities to solve real-world problems and help patients at the Medical Center and elsewhere.

“I am enthusiastic about the creativity and energy you bring today that has the potential by the time you leave on Sunday to yield great new advances that move this campus forward,” UTSW

Please see HACK on page 7

UT Southwestern expands to RedBird

New regional medical center will increase health care options for southern Dallas residents

From Staff Reports

UT Southwestern and Reimagine RedBird have signed an agreement for UT Southwestern to establish a new medical center, expanding health care services, and providing southern Dallas residents more convenient access to UT Southwestern’s best-in-class medical care in their own community.

UT Southwestern Medical Center at RedBird will occupy 150,000 square feet of the former Sears anchor building at RedBird.

“As part of our mission to improve the health of our community, we are excited by the opportunities presented by this redevelopment effort to bring additional medical services to those living and working in southern Dallas,” said Dr. Daniel K. Podolsky, President of UT Southwestern. “We admire the dedication of RedBird owner Peter Brodsky, who has

demonstrated bold enthusiasm to invigorate RedBird into a model live-work community and created an outstanding location from which we can reaffirm our commitment to our patients and their families in this region of the city.”

Similar to existing UT Southwestern regional medical centers – Frisco, Richardson/Plano, Park Cities, Fort Worth, and Las Colinas – UT Southwestern Medical Center at RedBird, which is slated to open in 2021, will offer a range of care with an emphasis on specialty services. While UT Southwestern has tentatively identified some key specialties that may be most needed, final plans will be made on the basis of additional input from community leaders and residents to be sure its services best match their health care needs.

“Many of our patients travel from far

Please see REDBIRD on page 4

“We wanted to bring the care we offer closer to home, in this instance to the south side of our city.”

– Dr. John Warner

Two life-threatening problems solved with one unusually rare surgery



Juan Cueto

By Patrick McGee

Juan Cueto did not feel sick. But he was rapidly losing weight and devastated with the knowledge that he had two life-threatening health issues – cancer and a liver disease.

Doctors in another state told him there was no treatment; only a liver transplant would cure him of the primary sclerosing cholangitis he was diagnosed with in 2012. He was told this liver disease could lead to bile duct cancer – and it did.

“It was very frustrating. I felt like, ‘How long do I have?’ You start thinking about your kids, your future.

Your life is going down,” said Mr. Cueto, a 46-year-old electrical engineer who lives in Frisco.

Mr. Cueto’s prospects changed dramatically when he moved to Texas in 2016 and found a team of specialists at UT Southwestern who could address both issues in one surgery.

Dr. Parsia Vagefi, Associate Professor of Surgery, brought the new surgical protocol for bile duct cancer and liver disease when he came to UT Southwestern in 2018. The surgery protocol would give Mr. Cueto a new liver by transplant and surgically remove the bile duct. Of the 7,000 liver transplants that take place nationwide every year,

only 1 percent address bile duct cancer in the same surgery.

Dr. Vagefi told Mr. Cueto, “It’s a little bit of a Hail Mary pass, but sometimes Hail Marys work.”

The wait begins, along with tests

UT Southwestern had the expertise, but Mr. Cueto had to wait for a liver to become available.

To be eligible for transplant, doctors also would need to ensure that Mr. Cueto’s cancer had not spread. Oncologists from the Harold C. Simmons Comprehensive Cancer Center put

Please see RARE on page 7

INSIDE THIS ISSUE

INSIDE THIS ISSUE	PAGE
FACULTY HONORS	2, 5
RESEARCH NEWS	3
ALUMNI NEWS	6
EDUCATION NEWS	8

Visit our website at utsouthwestern.edu/ctplus

SMARTER DIAGNOSTICS

UTSW scientists and clinicians apply artificial intelligence tools to predict patient outcomes in cancer, depression.

Page 3

TRIBUTE TO VETERANS

Campus event recognizes and honors UT Southwestern employees who have served our country.

Page 4

ABOLISHING STEREOTYPES

Dr. Shawna Nesbitt shares how her background presented challenges that she overcame to shape her future.

Page 8

Altshuler named Professor Emeritus of Psychiatry after four decades at UTSW

By James Beltran

Dr. Kenneth Altshuler, who transformed the Department of Psychiatry into a national leader in mental health while serving as its Chair for more than two decades, has been appointed Professor Emeritus of Psychiatry.

Dr. Altshuler retired Nov. 30, ending a 42-year career at UT Southwestern as a stalwart proponent of mental health care in Dallas and statewide. He is an accomplished researcher, having published more than 140 papers and books on topics ranging from profound early deafness to sleep and genetics.

"I can think of no faculty member more deserving of the Professor Emeritus honor," said Dr. Carol Tamminga, Professor and Chair of Psychiatry. "His contributions to the academic and clinical missions of the Psychiatry Department have been truly stellar."

Dr. Altshuler spent eight years on the psychiatry faculty at Columbia University's College of Physicians and Surgeons before being named UT Southwestern's Chair of Psychiatry in 1977. Over his 23-year tenure as Chair, he built a small department into one of national stature, raising more than \$50 million that included funds for 10 named chairs and two research centers.

When he stepped down as Chair in 2000, he had grown the Department from six full-time physicians to more than 100. It has since expanded to more than 270 faculty.

Dr. Altshuler credits his late wife, noted philanthropist Ruth Altshuler, for her unwavering help.

"I had never asked anyone for a dime," Dr. Altshuler said. "But the need for more funding became quickly apparant, so that's the task I took on first. I was able to recruit great people, and we all built the Department together. I'm proud to see it continue to grow under Dr. Tamminga's leadership."

Dr. Altshuler earned his bachelor's degree from Cornell University (1948) and his M.D. from the University at Buffalo (1952). He was board certified in psychiatry in 1961 and certified in psychoanalytic medicine by Columbia University in 1962.

Since arriving at UT Southwestern, he has been active in virtually every aspect of mental health care in Dallas. He was a driving force in the creation of the Dallas Psychoanalytic Institute.

He has also made notable contributions in his field at the state and national levels. Dr. Altshuler was a Board member of the Texas Department



Dr. Kenneth Altshuler

of Mental Health and Mental Retardation and served as Director and President of the American Board of Psychiatry and Neurology, as Director of the National Board of Medical Examiners, and as President of the American Association of Chairs of Departments of Psychiatry.

Several awards and facilities bear his name,

including the psychiatric unit at Zale Lipshy Pavilion – William P. Clements Jr. University Hospital, named in his honor in 1989. The Callier Center for Communication Disorders at UT Dallas in 2012 established the Ruth and Ken Altshuler Callier Care Award, which annually recognizes individual or group efforts that better the community and advance the care of patients with communication disorders. In 2014, Metrocare established the Altshuler Center for Education & Research, which provides training and clinical research opportunities for public mental health professionals.

"I really feel proud about what we've accomplished," Dr. Altshuler said. "It was rigorous and rewarding to have participated in the work and see the Department grow from a mom and pop shop to one of national stature."

After stepping down as Chair, Dr. Altshuler continued his daily association with UT Southwestern as teacher, consultant, and exemplar for the students.

Dr. Tamminga holds the Lou and Ellen McGinley Distinguished Chair in Psychiatric Research and the Communities Foundation of Texas, Inc. Chair in Brain Science.

Reimold receives AHA's Women in Cardiology Mentoring Award

From Staff Reports

Dr. Sharon Reimold, Vice Chair for Clinical Operations and Faculty Development in the Department of Internal Medicine, received the Women in Cardiology Mentoring Award at the American Heart Association's (AHA) Scientific Sessions conference Nov. 16.

Sponsored by the AHA's Council on Clinical Cardiology, the award recognizes an exemplary history of mentoring female cardiologists and fostering the professional development of women in a field that is traditionally bereft of women.

"Sharon is at once an exemplar mentor, as recognized by this prestigious award, and a sponsor, always reaching out proactively with ideas to support those around her," said Dr. Joseph Hill, Chief of the Division of Cardiology.

Earlier in her career, Dr. Reimold was the Director of the Cardiology Fellowship program at Brigham and Women's Hospital. She has seen the paucity of women in cardiology and has had a hand in helping to change it. As a first-year cardiology fellow, she was one of only two women in a class of nine. Later, the 1999 cohort selected under her leadership at Brigham and Women's was half women.

To Dr. Reimold, involving more women physicians is not solely a matter of equality – it's a differentiator for patient care. "When there are more women in the field, it increases diversity and brings different perspectives and different ways of thinking," she says.

Today at UT Southwestern, a third of the faculty in the Division of Cardiology are women, which is twice the national average, and the 2019 first-year class of fellows was half female.

Adds Dr. Susan Matulevicius, Associate Professor of Internal Medicine in the Division of Cardiology and Assistant Dean for Faculty Wellness: "I am the cardiologist I



PHOTO BY © AHA/TODD BUCHANAN 2019

Dr. Sharon Reimold receives the Women in Cardiology Mentoring Award.

am today because of Dr. Reimold's influence and mentoring. She has always made me feel valued and heard, has role modeled service leadership, and earnestly works to ensure that opportunities are available for all of her faculty."

Dr. Hill holds the James T. Willerson, M.D. Distinguished Chair in Cardiovascular Diseases, and the Frank M. Ryburn, Jr. Chair in Heart Research.

Dr. Reimold holds the Gail Griffiths Hill Chair in Cardiology.

NEWS

MAKERS

Mendell wins MSK cancer research prize

Dr. Joshua Mendell, Professor and Vice Chair of Molecular Biology, has been awarded the 2019 Memorial Sloan Kettering Paul Marks Prize for Cancer Research.

"It is a great honor to follow in the footsteps of many of my scientific role models who also received this award. I would like to thank all of my outstanding trainees, past and present, whose exceptional work is being recognized with this honor," said Dr. Mendell, one of three investigators nationwide to receive the prize.

In addition to receiving a medal and \$50,000, Dr. Mendell, also a Howard Hughes Medical Institute Investigator, spoke about his research at a Memorial Sloan Kettering scientific symposium on Dec. 5. Since it was first presented in 2001, the biennial Paul Marks Prize for Cancer Research has recognized 31 scientists and awarded more than \$1 million in prize money.

Dr. Mendell's lab studies noncoding RNAs, which lack the instructions for making proteins. Over the last decade, Dr. Mendell's team has found that a specific class of noncoding RNAs called microRNAs are reprogrammed in cancer cells to favor tumor growth.

Not all microRNAs in cancer cells have the same function. Some act as oncogenes and drive the formation of tumors, while others are tumor suppressors. Dr. Mendell's lab is interested in finding therapies that change the activity of microRNAs, such as inhibiting the activity of those that act as oncogenes and restoring or increasing the levels of those that act as tumor suppressors. His team is also investigating other classes of noncoding RNAs and their roles in cancer and other diseases.

Schmid receives Stanford Lifetime Achievement Award

Dr. Sandra Schmid, Chair and Professor of Cell Biology, has received the Stanford Medicine Alumni Association's prestigious Arthur Kornberg and Paul Berg Lifetime Achievement Award in Biomedical Sciences.

"I could not be more honored to be associated, in even this small way, with the legacy of Arthur Kornberg and Paul Berg: the epitome of walking-the-talk scientists and leaders," said Dr. Schmid, who also holds the Cecil H. Green Distinguished



Dr. Mendell

Chair in Cellular and Molecular Biology.

Dr. Schmid is internationally recognized for her research on endocytosis – how cells take in nutrients and other molecules. She has mapped out precise steps in this process and identified the molecular players and their roles. She studies the molecular mechanisms and regulation underlying clathrin-mediated endocytosis, the major pathway for uptake into the cell and a critical regulator of cell-cell and cell-environment communication. A pioneer in defining the GTPase dynamin as a catalyst of membrane fission, she recently discovered isoform-specific functions of dynamin that are activated in cancer cells.

In addition to her research, Dr. Schmid has led the scientific community as co-founding Editor of Traffic, Editor-in-Chief of *Molecular Biology of the Cell*, and former President of the American Society for Cell Biology (ASCB). She was elected to the American Academy of Arts and Sciences in 2015, and her numerous honors include ASCB/Women in Cell Biology junior and senior career recognition awards, the American Society of Biochemistry and Molecular Biology's William C. Rose Award, and the Biophysical Society's Sir Bernard Katz Award.

Dr. Schmid received her Ph.D. in biochemistry from Stanford in 1985.

Wang earns Jacobson Promising Investigator Award

Dr. Sam Wang, Assistant Professor of Surgery, has been recognized by the American College of Surgeons for his research on gastric, liver, and pancreatic cancers. In October, Dr. Wang received the Joan L. and Julius H. Jacobson II Promising Investigator Award at the College's 2019 Clinical Congress in San Francisco.

The Jacobson Award, which comes with a grant, was established in 2004 with a gift from Joan L. and Dr. Julius H. Jacobson II, a general vascular surgeon known for his contributions to the development of microsurgery. The award recognizes outstanding surgeons whose work promises to advance surgical knowledge, practice, and safety.

"It is a great honor to have been selected for the Jacobson Award," Dr. Wang said. "This is a reflection of the great mentorship I have received in the lab from Dr. Hao Zhu here at UT Southwestern and Dr. Matthias Hebrok at the University of California, San Francisco."

Dr. Zhu works in the Children's Medical Center Research Institute at UT Southwestern and is an Associate Professor of Internal Medicine and Pediatrics. He holds the Kern Wildenthal, M.D., Ph.D. Distinguished Professorship in Pediatric Research.



Dr. Wang



Dr. Schmid

CENTERTIMES

Center Times is published by the Office of Communications, Marketing, and Public Affairs at UT Southwestern Medical Center. UT Southwestern is an Affirmative Action/Equal Opportunity Employer. Women, minorities, veterans, and individuals with disabilities are encouraged to apply.

President: Dr. Daniel K. Podolsky

Executive Vice President for Institutional Advancement: Dr. Marc Nivet

Associate Vice President for Communications: Dr. Audrey Huang

Director, Institutional Communications: Debbie Bolles

Design Editor: Mark Hoffer

Three-drug combo improves lung function in type of cystic fibrosis

By Deborah Wormser

A phase three clinical trial that UT Southwestern participated in determined that a three-drug combination improved lung function and reduced symptoms in cystic fibrosis (CF) patients who have a single copy of the most common genetic mutation for the disease.

The Food and Drug Administration approved the therapy based on the results of this international study, which the *New England Journal of Medicine* published in October. A companion investigation appearing simultaneously in *The Lancet* reported on people with one or two copies of the mutation.

Dr. Raksha Jain, Associate Professor of Internal Medicine, is corresponding author of the *NEJM* article and an investigator on *The Lancet* study. In October, Dr. Jain presented both studies at the North American Cystic Fibrosis Conference in Nashville, Tennessee.



Dr. Raksha Jain

CF is a chronic, progressive, and frequently fatal genetic disease that affects the respiratory and digestive systems in children and young adults. The sweat glands and the reproductive system are also usually involved. Individuals with CF have a shortened lifespan.

"Although there are over a thousand different disease-causing mutations, nearly 90 percent of people with cystic fibrosis have at least one copy

of the most common mutation, the Phe508del CFTR allele," Dr. Jain said.

An estimated 80,000 people worldwide are affected by mutations in the cystic fibrosis transmembrane conductance regulator (CFTR) protein, she said. People inherit a gene from each parent that encodes the CFTR protein.

"This three-drug combination was highly effective in people with cystic fibrosis who inherited the Phe508del CFTR mutation, improving health outcomes and symptoms," said Dr. Jain, referring to the *NEJM* study on those with one mutated copy of the gene.

In the clinical trial conducted at 115 sites in 13 countries from June 2018 to April 2019, 403 patients ages 12 and older were randomized to receive either elxacaftor-tezacaftor-ivacaftor combined therapy or a placebo. The trial was co-sponsored by Vertex Pharmaceuticals.

Lung function was measured at four and 24 weeks. Compared with patients

receiving a placebo, lung function in the treatment group was significantly improved at four weeks and sustained through week 24. In addition, lung flare-ups, or increases in symptoms, were 63 percent lower in the treatment group. Study participants also answered questionnaires regarding their quality of life and respiratory symptoms – with those in the treatment group reporting higher scores in these areas.

Excessive amounts of salt via sweating is a hallmark of cystic fibrosis. The treatment group had a lower concentration of salt in their sweat than the placebo group, which demonstrates how this therapy is targeting the underlying cause of the disease, she added.

Adverse events leading to discontinuation occurred in 1 percent of those getting the drug combination. Although the therapy was generally safe and well-tolerated, long-term studies are needed to further understand potential side effects, Dr. Jain said.

"The CF community is working hard to find highly effective therapies for people who are not eligible for this treatment because they don't have the appropriate gene mutation," said Dr. Jain, Director of the UTSW Adult Cystic Fibrosis Center.

In addition to Vertex, the study received support from the National Institutes of Health and from Seattle Children's Hospital. Dr. Jain, who has worked on clinical trials with Vertex for eight years, reports advisory board and consulting fees from Vertex Pharmaceuticals. Disclosure forms provided by the authors are available with the full text of the article at NEJM.org.

Dr. Jain is a Dedman Family Scholar in Clinical Care.

More online: To watch a video on this story, go to *Center Times Plus* at utsouthwestern.edu/ctplus.

AI helps scientists predict depression outcomes

By James Beltran

Is a patient's recovery from depression due merely to a placebo effect – the self-fulfilling belief that a certain antidepressant will work – or does biology influence the outcome?

Using artificial intelligence to identify patterns of brain activity that make people less responsive to certain antidepressants, two studies led by UT Southwestern provide evidence for the impact of biology.

The studies include the latest findings from a large national trial (EMBARC) intended to establish biology-based, objective strategies to remedy mood disorders. If successful, scientists envision using a battery of tests such as brain imaging and blood analyses to increase the odds of finding the right treatment.



Dr. Trivedi

"We need to end the guessing game and find objective measures for prescribing interventions that will work," said Dr. Madhukar Trivedi, who oversees EMBARC and is founding Director of UT Southwestern's Center for Depression Research and Clinical Care.

The studies – each of which included

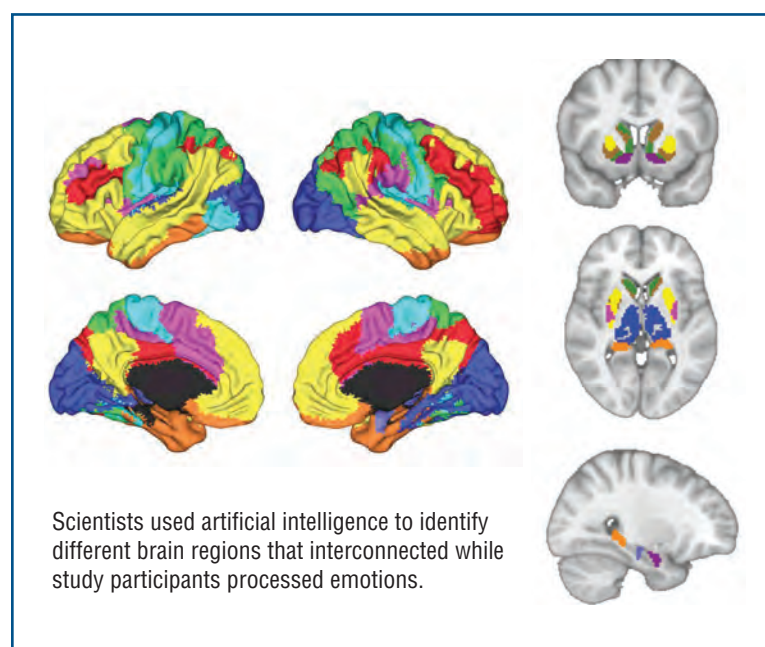
more than 300 participants – used imaging to examine brain activity in a resting state and during the processing of emotions. Both studies divided the participants into a healthy control group and people with depression who either received antidepressants or placebo.

Of the participants who received medication, researchers found correlations between how the brain is wired and whether a participant was likely to improve within two months of taking an antidepressant.

Dr. Trivedi, also a Professor of Psychiatry in UT Southwestern's Peter O'Donnell Jr. Brain Institute, said imaging the brain's activity in various states provided a more accurate picture of how depression manifests in a particular patient. For some, he said, the more relevant data will come from their brains' resting state, while in others the emotional processing will be a critical component and a better predictor of whether an antidepressant will work.

"Depression is a complex disease that affects people in different ways," he said. "Much like technology can identify us through fingerprints and facial scans, these studies show we can use imaging to identify specific signatures of depression in people."

Data from both studies derive from the 16-week EMBARC trial, which Dr. Trivedi initiated in 2012 at four U.S. sites. The project evaluated patients



Scientists used artificial intelligence to identify different brain regions that interconnected while study participants processed emotions.

with major depressive disorder through brain imaging and various DNA, blood, and other tests. His goal was to address a troubling finding from another study he led (STAR*D) that found up to two-thirds of patients do not adequately respond to their first antidepressant.

EMBARC's first study, published in 2018, focused on how electrical activity in the brain can indicate whether a patient is likely to benefit from an SSRI (selective serotonin reuptake inhibitor), the most common

class of antidepressant.

The finding has been followed by related research that identifies other predictive tests for SSRIs, most recently the resting-state brain imaging study published in the *American Journal of Psychiatry* and the second imaging study published in *Nature Human Behaviour*.

The *Nature* research used artificial intelligence to determine correlations between the effectiveness of an antidepressant and how a patient's brain processes emotional conflict. Partici-

pants undergoing brain imaging were shown photographs that offered sometimes conflicting messages, such as an angry face with the word "happy."

AI identified specific brain regions – for example in the lateral prefrontal cortices – that were most important in predicting whether participants would benefit from an SSRI. The results showed that participants who had abnormal neural responses during emotional conflict were less likely to improve within eight weeks of starting the medication.

Combining blood and brain tests, he said, will improve the chances of choosing the right treatment the first time.

Funded by the National Institute of Mental Health, EMBARC (Establishing Moderators and Biosignatures of Antidepressant Response for Clinical Care) was a multicenter effort. Disclosures for Dr. Trivedi, who served as the Coordinating Principal Investigator, are listed in the *AJP* and *Nature* studies.

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

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

Software tool uses AI to help doctors identify cancer cells

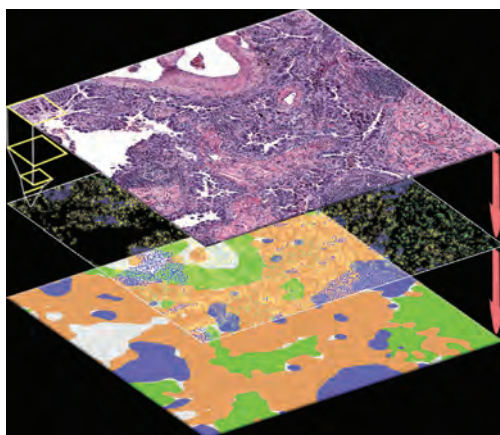
By Rachel Stowe Master

UT Southwestern researchers have developed a software tool that uses artificial intelligence to recognize cancer cells from digital pathology images – giving clinicians a powerful way of predicting patient outcomes.

The spatial distribution of different types of cells can reveal a cancer's growth pattern, its relationship with the surrounding microenvironment, and the body's immune response. But the process of manually identifying all the cells in a pathology slide is extremely labor intensive and error-prone.

"As there are usually millions of cells in a tissue sample, a pathologist can only analyze so many slides in a day. To make a diagnosis, pathologists usually only examine several 'representative' regions in detail, rather than thoroughly examine the entire slide. However, some important details could be missed by this approach," said Dr. Guanghai "Andy" Xiao, corresponding author of a study published in December in *EBioMedicine* and Professor of Population and Data Sciences at UT Southwestern.

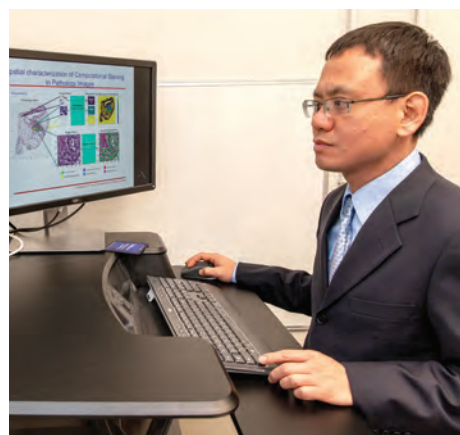
The human brain, Dr. Xiao added, is not best at quantifying subtle spatial morphological patterns. Therefore, a major technical challenge in systematically studying the tumor microenvironment is how to automatically classify different types of cells and quantify their spatial distributions, he said.



Left: This illustration of the ConvPath software workflow shows how the AI algorithm automatically recognizes each cell in the pathology image (upper image) as a tumor cell (orange), stromal cell (green), or lymphocyte (blue), then converts the image into a spatial map (middle image). Clusters of tumor cells are further identified as tumor regions (orange areas in the bottom image). Right: Dr. Guanghai "Andy" Xiao

The AI algorithm that Dr. Xiao and his team developed, called ConvPath, overcomes these obstacles by using AI to classify cell types from lung cancer pathology images.

Here's how it works: The ConvPath algorithm can "look" at cells and identify their types based on their appearance in the pathology images using an AI algorithm that learns from human pathologists. This algorithm effectively converts a pathology image into a "map" that displays the spatial distributions and interactions of tumor



cells, stromal cells (i.e., the connective tissue cells), and lymphocytes (i.e., the white blood cells) in tumor tissue.

Whether tumor cells cluster well together or spread into stromal lymph nodes is a factor revealing the body's immune response. So knowing that information can help doctors customize treatment plans and pinpoint the right immunotherapy.

Ultimately, the algorithm helps pathologists obtain the most accurate cancer cell analysis – in

a much faster way.

"It is time-consuming and difficult for pathologists to locate very small tumor regions in tissue images, so this could greatly reduce the time that pathologists need to spend on each image," said Dr. Xiao, who also has an appointment in the Lyda Hill Department of Bioinformatics and is a member of both the Quantitative Biomedical Research Center (QBRC) and the Harold C. Simmons Comprehensive Cancer Center at UTSW. "Although I am not a pathologist, the use of this algorithm and artificial intelligence gives clinicians and pathologists involved in diagnosing cancer a new tool to hopefully make this process more precise and faster."

The ConvPath software – which incorporates image segmentation, deep learning, and feature extraction algorithms – is publicly accessible at <https://qbrc.swmed.edu/projects/cnn/>.

The study's lead authors include Shidan Wang, QBRC Data Scientist II; Dr. Tao Wang, Assistant Professor of Population and Data Sciences and in the Center for the Genetics of Host Defense; and Dr. Donghan M. Yang, QBRC Project Manager.

The study was supported by the National Institutes of Health and the Cancer Prevention and Research Institute of Texas.

More online: To read the full story, go to *Center Times Plus* at utsouthwestern.edu/ctplus.

UT Southwestern community honors those who served with Veterans Day tribute

By Carol Marie Cropper

UT Southwestern faculty, employees, and students – including more than 70 veterans – gathered on Veterans Day to celebrate those who have honorably served our country. Inspirational speeches, patriotic songs, and festive food set an uplifting tone for the fifth annual campus event.

“Currently, there are over 20 million veterans in the U.S.,” UT Southwestern President Dr. Daniel K. Podolsky told those gathered in a McDermott Lecture Hall for the Tribute to Veterans Celebration. “I am so proud to say that more than 800 of them are members of the UT Southwestern community. We owe each of them a debt of gratitude for their dedication to our country and for protecting our nation’s commitment to democratic values here and abroad. Their experience and perspectives enrich UT Southwestern in our commitment to our mission.”

Keynote speaker Dr. Richard A. Hersack, a retired Air Force Brigadier General and anesthesiologist, traced the history of the creation of today’s U.S. Air Force and the improvements in treatments and medical strategies that now save lives on the battlefield.

In the 20th century, an American soldier injured during combat had about a 70 to 75 percent chance of surviving, Gen. Hersack said. Today, the survival rate tops 90 percent – in large part due to the military’s return to the use of tourniquets to stop bleeding, a common cause of battlefield death, he said.

In fact, that expertise helped civilian athletes survive after the 2013 Boston Marathon bombing, when those with military training rushed to apply tourniquets to the severely injured, he said.

Gen. Hersack retired in 2011, but returned to the Air Force as a civilian. He now serves as Chairman of the Department of Aeromedical Research for the U.S. Air Force School of Aerospace Medicine and Special Assistant to the Commander for Strategic Planning at Wright-Patterson Air Force Base near Dayton, Ohio.

In his address, he told of how the Air Force was preceded by the Army Air Service, founded in 1917 with just 23 pilots. That was 30 years before the creation of the U.S. Air Force, he pointed out.

At that time, soldiers who weren’t making it in infantry or elsewhere were sent to the Air Service, Gen. Hersack said, and most fatalities



Dr. Richard A. Hersack, a retired Air Force Brigadier General and anesthesiologist, gave the keynote address during the annual Veterans Day tribute at UTSW.



Dr. Hersack (center) is surrounded by veterans who are UT Southwestern employees. More than 800 veterans are part of the UTSW community.



2nd Lt. Andrew Aboujaoude, a second-year UTSW Medical School student, spoke about his experience in the Air Force.

occurred during their training. In 1918, the Army graduated its first flight surgeons to treat them. The School of Aviation created flak vests, which were designed to protect pilots from anti-aircraft fire, he added.

One of the attendees represented the next generation of servicemen, 2nd Lt. Andrew Aboujaoude, a second-year UTSW medical student who joined the Air Force as he finished college and graduated from Officer Training School this

past summer.

“I went to Officer Training School this year and I can say that the next generation will not disappoint you folks,” he told the crowd. UT Southwestern graduates in particular do well, he added. “We tend to graduate some really good people, specifically in military medicine.”

As he prepared to speak at the event, “It got me to thinking,” he said. “Why do we go to medical school for 10 to 12 hours a day, then go without

seeing our friends over summer break to instead eat our MREs (military rations), sleep three hours, and do the marching?”

He answered his own question: “It really is the tradition of the people who came before us.”

Before Gen. Hersack’s speech, members of the student cadet corps at a local middle school, W.E. Greiner Exploratory Arts Academy, marched in carrying the American and Texas flags for a presentation of the colors ceremony.

Brittany Anderson, an Executive Recruiter in Talent Acquisition at UT Southwestern, brilliantly belted out “The Star-Spangled Banner.”

At the end, veterans stood as their armed service branch’s song sounded: first Army, then Navy, Marines, Coast Guard, and finally the familiar strains of “The U.S. Air Force” song.

After the event, hosted by the Office of Institutional Equity & Access and the Veterans Business Resource Group, a lunch reception followed that included cupcakes iced in red, white, and blue.

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



Dr. Ethan Halm, left, and Dr. Bethany Agusala each received a Patriot Award in recognition of their support for UT Southwestern nurse Mandell Butler Jr.’s military service as a U.S. Navy reservist. The awards were presented by retired Lt. Col. Russell Hooper, center.



Mandell Butler Jr. is an Advanced Practice Registered Nurse at UTSW, who also serves his country in the U.S. Navy Reserve.

Making life easier for those who serve

By Carol Marie Cropper

Mandell Butler Jr. doesn’t just support his patients as a nurse practitioner; he also serves his country as a lieutenant in the United States Navy Reserve. Because his supervisors at UT Southwestern make that combination easier, he nominated two of them to receive Patriot Awards.

Patriot Awards, given by the Department of Defense, recognize supervisors who support those who volunteer for the National Guard and Reserve, said retired Lt. Col. Russell Hooper, an Army veteran who presented the awards to two UT Southwestern faculty members. A member of the Guard or Reserve, or the spouse of one, can nominate a supervisor for the award that is given as part of the DOD’s Employer Support of the Guard and Reserve program.

Dr. Ethan Halm, Professor of Internal Medicine and Population and Data Sciences, and Dr. Bethany Agusala, Assistant Professor of Internal Medicine, each received a 2019 Patriot Award – which included a framed certificate and a lapel pin – at a Sept. 24 ceremony in Professional Outpatient Building 2.

“We depend a whole lot on our citizen soldiers,” said Lt. Col. Hooper, and the backing of the supervisors they work for is important as they leave work for training or, sometimes, active duty. “If you’re worried about your job or you’re worried about your family, you can’t concentrate on what you’re doing.”

Lt. Butler, who holds a Doctor of Nursing Practice (DNP) as well

as the FNP-C as a Certified Family Nurse Practitioner, said his supervisors in the William T. and Gay F. Solomon General Internal Medicine Clinic at UT Southwestern always step up. “When I have to go away for two weeks for annual training, they make sure my patients are taken care of. Even my messages are answered,” he said. As an added perk, UT Southwestern continued paying his salary while he was gone. Lt. Butler is also an Advanced Practice Registered Nurse, or APRN.

“It was a great honor,” Dr. Agusala said of her award. “I’m always so proud to support our veterans and our guardsmen and reservists.”

“My dad and my father-in-law were both Korean War vets,” Dr. Halm said. “We’re supportive of Mr. Butler’s service. We have a great team in the General Internal Medicine Clinic, which deserves a big thank-you for providing coverage when needed.”

Lt. Butler is a “fantastic” employee – “smart, positive, team-oriented,” Dr. Halm added.

The Navy Reserve lieutenant returned the compliment, saying the way his UT Southwestern supervisors treat him “makes me feel great, makes me feel appreciated. It’s just being respected for the service provided.”

Dr. Halm holds the Walter Family Distinguished Chair in Internal Medicine in Honor of Albert D. Roberts, M.D.

“Dr. Podolsky and his team at UT Southwestern have demonstrated their vision to improve health for all through their extraordinary commitment to a part of our city that has been underserved for too long.”

–Peter Brodsky, majority owner of RedBird

RedBird Continued from page 1

and wide to the UT Southwestern main campus for care. We wanted to bring the care we offer closer to home, in this instance to the south side of our city,” said Dr. John Warner, Executive Vice President of Health System Affairs at UT Southwestern. “We look forward to meeting with community members in the upcoming weeks and months to learn how we can best complement and collaborate with existing and future medical providers in the area to help improve health outcomes in these communities.”

UT Southwestern expects its regional center with much-needed specialty service will complement the initiative of its partner Parkland Health & Hospital System, which has committed to bringing primary care service to the 40,000-square-foot site it plans to develop at RedBird.

“UT Southwestern is world-renowned for its quality care and we are thrilled to facilitate its service of southern Dallas,” said Peter Brodsky, the majority owner of RedBird. “RedBird seeks to provide southern Dallas families with the quality amenities they want, but which are not currently available in their community. In addition to lacking retail, restaurants, and entertainment, southern Dallas does not have enough medical facilities. Parkland’s clinic at RedBird, announced earlier this year, began to address the issue. Now, Dr. Podolsky and his team at UT Southwestern have demonstrated their vision to improve health for all through their extraordinary commitment to a part of our city that has been underserved for too long. We are also excited to welcome patients and families expected to visit UT Southwestern Medical Center at RedBird.”

The mission of the Reimagine RedBird development is to restore the former Red Bird Mall to its rightful place as a point of pride in southern Dallas by providing the quality amenities that community members desire but have to travel long distances to find.

See the endowed titles 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.

Vandergriff named holder of Freeman/Cockerell Dermatopathology Chair

By Rachel Stowe Master

Dermatopathology is a subspecialty focused on diagnosing skin disease by examining tissue samples microscopically and correlating the findings with information gathered from patients during clinical exams.

"It is a unique field because making an accurate diagnosis requires consideration of microscopic and clinical findings together," said Dr. Travis Vandergriff, Associate Professor of Dermatology and Pathology. "We specialize in skin tumors including melanoma and other skin cancers, as well as inflammatory diseases of the skin."

Dr. Vandergriff's unique expertise in this field – along with his contributions to UT Southwestern – led to his appointment recently as the inaugural holder of the Robert G. Freeman, M.D. and Clay J. Cockerell, M.D. Chair in Dermatopathology.

Building UT Southwestern's service from the ground up, Dr. Vandergriff has served as Director of Dermatopathology since 2013 and Co-Director of the Dermatopathology Fellowship Program since 2017. Dermatopathology now provides coverage for UT Southwestern's William P. Clements Jr. University Hospital and Medical Dermatology Ambulatory Clinic, Parkland Health & Hospital System, and Children's Health. Dr. Vandergriff is working to expand services to other ambulatory clinics on campus.



Dr. Travis Vandergriff

"I have developed a dermatopathology service at UTSW with two main goals: providing our patients with the most accurate and timely diagnoses for skin diseases and providing the best education for dermatologists and dermatopathologists in training," Dr. Vandergriff said. "The UTSW dermatopathology service diagnosed nearly 15,000 skin specimens in 2019 and trained over 30 residents in the subspecialty."

Dr. Kim Yancey, Chair of Dermatology, called

Dr. Vandergriff an outstanding clinician, dermatopathologist, and medical educator deserving of the new Chair.

"His innate enthusiasm, kind demeanor, and consistent professionalism have greatly benefited the Department of Dermatology and the greater UT Southwestern community," Dr. Yancey said, adding that Dr. Vandergriff holds leadership positions in local, regional, and national professional organizations.

The endowment was established in 2014 by gifts from the late Dr. Robert Freeman, a pioneer in the field of dermatopathology with his early 1960s research on long-term skin damage from sun exposure, and UTSW Professor of Dermatology Dr. Clay Cockerell, a past President of the American Academy of Dermatology. The two longtime friends and colleagues founded an independent dermatopathology laboratory in Dallas.

"It's really an honor to be named as the holder of this endowed Chair position," Dr. Vandergriff said. "Dr. Cockerell has been a mentor to me since I began my dermatology residency at UTSW in 2008. He is recognized across the country as a leader in both dermatology and dermatopathology, and I have benefited greatly from his teaching. I did my dermatopathology fellowship with Dr. Cockerell and learned how to make accurate, clinically relevant diagnoses. Dr. Cockerell's career has been focused on teaching, and I hope to make a similar impact myself."

Dr. Vandergriff plans to use the endowment funds to attend education-oriented conferences to improve his teaching and mentoring skills and to complete research projects in dermatopathology. A UT Austin graduate, Dr. Vandergriff earned his medical degree from Baylor College of Medicine.

Dr. Yancey holds the Mary Kay Inc. Distinguished Chair in Dermatology.

UTSW faculty donor gives \$100,000 for prostate cancer research

By Sharon Reynolds

Dr. Joan S. Reisch has a saying: "I was born in Connecticut, grew up in Ohio, and moved to Texas ... where I live happily ever after." With a career spanning 60 years, she is currently a UT Southwestern Professor of Population and Data Sciences and Family and Community Medicine and a generous donor for prostate cancer research, in honor of her late husband.

At Southern Methodist University, she discovered her passion for numbers, earning master's and doctorate degrees in mathematical statistics. She also met the love of her life, Dr. John Boddie, who was studying statistics as well. They married and spent almost 40 years together.

In 2012, Dr. Boddie was diagnosed with small cell carcinoma of the prostate, a deadly form of prostate cancer. He turned to Dr. Reisch's colleague at UT Southwestern, Dr. Kevin Courtney, for care. Dr. Courtney is an Associate Professor of Internal Medicine and currently specializes in genitourinary malignancies. His research emphasis is on prostate and kidney cancer.

"Dr. Courtney managed to keep John as healthy and active as possible.



Dr. Kevin Courtney

He explored many treatments, including genetic solutions, as well as chemotherapy and radiation. He is a remarkable and compassionate person who treats all people with respect," Dr. Reisch said.

Before Dr. Boddie passed away in 2017, he and his wife rewrote their wills. "After John died, I asked myself, 'Why am I waiting? I don't need all of the funds that I have available, so why not put them to use now?' And I did. I made a gift to support Dr. Courtney's prostate cancer research. He's been my student, my colleague, John's doctor – he's just a wonderful person," she said.

Dr. Reisch's \$100,000 gift will support Dr. Courtney's efforts to better understand how prostate cancer cells



The late Dr. John Boddie and his wife, Dr. Joan S. Reisch

metabolize certain fuels in ways that are unique compared with normal prostate cells. These studies may provide insight into potential new metabolic targets for treatment of prostate cancer.

"I am profoundly grateful to Dr. Reisch for her extraordinarily generous donation supporting our research efforts," Dr. Courtney said. "Her gift

honors the late Dr. Boddie. I was privileged to be his oncologist and honored that they entrusted me with his care. Dr. Reisch also played an important role in my development as a clinical scientist in her role as Professor of Population and Data Sciences here at UT Southwestern."

At UTSW, Dr. Reisch served in

leadership roles in Biometrics and Academic Computing Services, and headed the Division of Biostatistics in the Department of Clinical Science (now the Department of Population and Data Sciences). Since 1988, she has directed the statistical and data management activities of the Alzheimer's Disease Center. She has been a frequent reviewer for the National Institute on Aging. She served 25 years on UTSW's Institutional Review Board for human research.

"Statistical methods are playing an increasingly important role in health care and medical research," said Dr. Daniel K. Podolsky, President of UT Southwestern. "In her various roles as leader, teacher, mentor, and friend, Dr. Reisch has inspired growth and change at UT Southwestern through the years. We appreciate her efforts to advance prostate cancer research while leaving a lasting legacy in her husband's memory."

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.

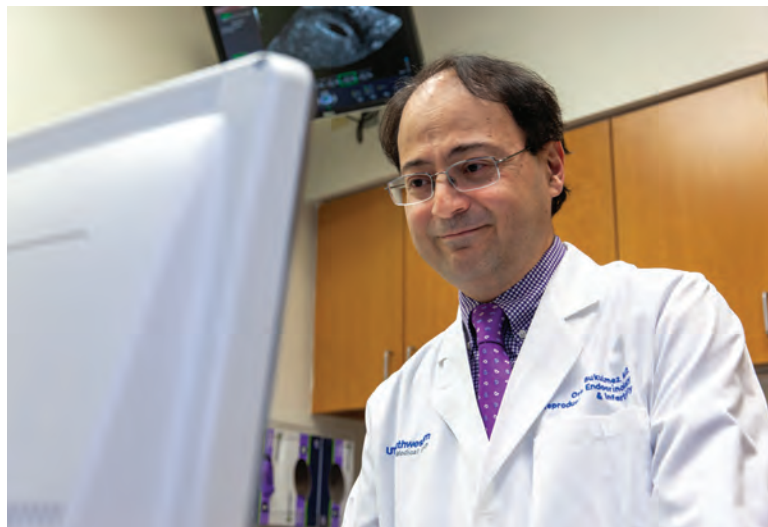
Bukulmez appointed to new Professorship in Reproductive Endocrinology

By Carol Marie Cropper

Dr. Orhan Bukulmez, who specializes in helping families with fertility issues become new parents, has been named the first holder of the Professorship in Reproductive Endocrinology and Infertility, in Honor of Bruce R. Carr, M.D. Doctors who trained under Dr. Carr helped fund the new Professorship.

Dr. Carr, Professor of Obstetrics and Gynecology and Director of the Reproductive Endocrinology and Infertility Fellowship Program, is legendary for shepherding many of the country's infertility specialists during fellowship, Dr. Bukulmez said, as well as for helping develop treatments for endometriosis and uterine fibroids, conditions that can cause pain and infertility.

Dr. Bukulmez, who began practicing in his home country of Turkey, trained under Dr. Carr during a UT Southwestern fellowship from 2004 to 2007. "It's a great honor for me to carry the title of Bruce Carr," said Dr. Bukulmez, Associate Professor of Obstetrics and Gynecology. "He was a mentor for me."



Dr. Orhan Bukulmez

Money from the endowment will allow him to continue developing the program he leads at UTSW's Fertility and Advanced Reproductive Medicine Clinic, he said. One goal is to add the ability to freeze ovarian tissue for transplant later – a service important for women undergoing cancer treatment, for example, or to those who

want to ensure their fertility at a later time. Research into ways to rejuvenate women's ovaries in order to extend female fertility is another area of interest, he said.

"I would like to see UT Southwestern develop the reputation as a center of reproductive technologies," Dr. Bukulmez said.

The clinic now offers in vitro fertilization (IVF), donor eggs, gestational carriers, egg and embryo freezing, and pre-implantation genetics testing.

After completing his UTSW fellowship and working three years at the University of Florida College of Medicine, Dr. Bukulmez returned as Chief of the Division of Reproductive Endocrinology and Infertility at UT Southwestern in 2010.

Since then, "Orhan has almost single-handedly rebuilt our in-vitro fertilization program," Dr. Steven L. Bloom, Chair of the Department of Obstetrics and Gynecology, said in recommending Dr. Bukulmez for the endowed professorship. "Our IVF program enjoys a reputation for providing care to the most challenging couples – especially those women who have significantly diminished ovarian function."

That condition is most common among women in their mid-30s and older, who have fewer viable eggs to be fertilized as they age. Dr. Bukulmez specializes in treating such patients without resorting to donor eggs. He recently wrote a book addressing how

best to treat these patients: *Diminished Ovarian Reserve and Assisted Reproductive Technologies*. The use of high doses of fertility drugs to stimulate production of more eggs is often counterproductive in these cases, he said, because it leads to eggs of poorer quality that do not result in a successful pregnancy.

Using his methods, the clinic has achieved a better than 27 percent ongoing pregnancy rate in women over age 42 with diminished ovarian reserve, compared with the typical national rate of around 5 percent, Dr. Bukulmez said.

Dr. Bukulmez, a father of two children, said he delights in the photographs patients later send him of themselves holding a newborn. "We see the look on the faces of the patients. Our reward is their happiness in having a healthy child."

Dr. Bloom holds the Jack A. Pritchard, M.D. Chair in Obstetrics and Gynecology.

Dr. Carr holds the Paul C. MacDonald Distinguished Chair in Obstetrics & Gynecology.

DOCS Program Scholars share insights, goals for improved patient care

By Patrick Wascovich

Dr. Sangeetha Reddy investigates how to improve breast cancer patient outcomes through immunotherapy. Dr. Lenette Lu's research largely revolves around studying tuberculosis, the leading cause of infectious disease deaths globally. Their commitment to advancing patient care has led to their selection as 2019 UT Southwestern Disease-Oriented Clinical Scholars (DOCS).

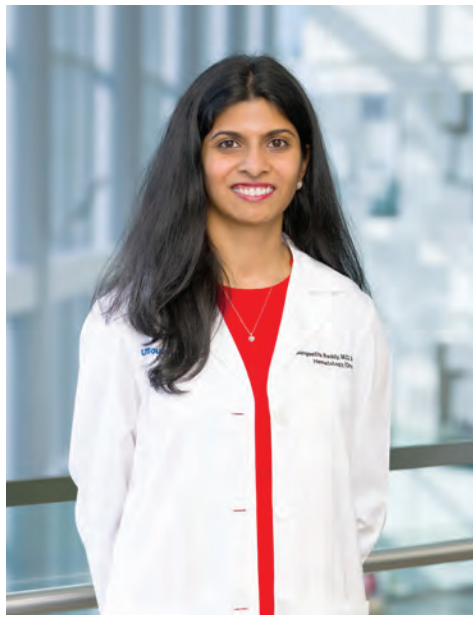
The goal of the DOCS Program is to grow clinical research. Scholars – who can receive as much as \$1 million in support over four years – must have held the rank of Assistant Professor for less than three years and devote at least half of their time to research. UT Southwestern currently has 21 DOCS.

Dr. Reddy, an Assistant Professor of Internal Medicine who was recruited to UTSW through Cancer Prevention and Research Institute of Texas (CPRIT) support earlier this year, specializes in treating patients who have the highest risk and special circumstances, including those with metastatic disease, triple negative breast cancer, and inflammatory breast cancer.

A Harvard College graduate, she earned her medical degree at the David Geffen School of Medicine at UCLA and completed a residency in internal medicine as well as a Master of Science in clinical investigation at Northwestern University, where she also served as Chief Resident. She then received advanced training in hematology-oncology through an MD Anderson Cancer Center fellowship before joining its faculty in 2017.

Dr. Lu, an Assistant Professor of Internal Medicine and Immunology, is an infectious disease physician-scientist interested in antibodies, an important part of our immune system that protects us from infections. She earned both her medical and doctoral degrees at Case Western Reserve University in Cleveland, Ohio, before completing her internal medicine residency at New York Presbyterian Hospital, Cornell Campus, and an infectious diseases fellowship at Massachusetts General Hospital.

As UTSW's newest DOCS, Drs. Reddy and Lu



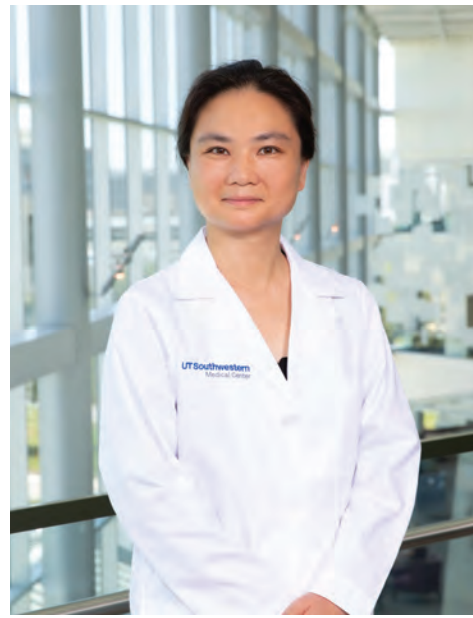
Dr. Sangeetha Reddy

recently shared some insights into their backgrounds, perspectives, and plans:

When did your interest in medicine and research begin?

Dr. Reddy: I've been interested in helping people since high school, when I was actively involved in community service. At the same time, I love problem-solving and trying to improve on current situations. As I grew older, medicine and more specifically cancer care seemed like the best way for me to help people in a truly comprehensive manner where I am treating them medically, socially, and emotionally. In addition, research is an important component of cancer treatment, so this field allowed me to embed my scientific interests into my patient care.

Dr. Lu: My grandparents were doctors and my parents were lab technicians. My grandmother was a short but fierce left-handed surgeon – no one could be more intimidating standing on a step stool than her. My mother had the ability to be equally intense, especially when scruti-



Dr. Lenette Lu

nizing solutions I made for her in the lab after school. But the most important way these women impacted my life was to let me be. I felt I had the freedom to be whomever I wanted, and that has led me here today.

Why are your areas of investigation important to you?

Dr. Lu: I get the opportunity to make basic science discoveries about how different beings and organisms relate to each other with the potential to have meaningful clinical impact. Antibodies provide a viewpoint that is fundamentally a critical component of how our bodies see microbes, yet there is so much we don't know about how they function. That's the exciting part – the unknown – because that's where the possibilities are endless.

Dr. Reddy: As a doctor, I am there to provide the best care possible for my cancer patients and help them and their family through this difficult time. I want to give patients treatments that are better than what we currently have available.

Immunotherapy is a type of cancer therapy that has significantly improved cancer outcomes in other tumor types, but we are only beginning to scratch the surface of this in breast cancers. I am therefore invested in figuring out how to get this type of therapy to work effectively in breast cancer.

What does the DOCS Program mean to your research?

Dr. Reddy: There is the highest caliber of basic science here at UT Southwestern, excellent clinical care, and a supportive administration to help me build a "translational" research program that bridges advances in science to clinical care so our patients can get the highest quality of care possible. CPRIT funding and opportunities like the DOCS give me the time and resources necessary to support my efforts.

Dr. Lu: Antibodies are exciting for the field of tuberculosis because they represent an area of research that could explain a lot of what we don't understand about the immune response to infection. One in 4 individuals worldwide is infected with *Mycobacterium tuberculosis*, the bacteria that causes tuberculosis. By improving our understanding of the relationship between us and *Mtb* through the lens of antibodies, we can begin to develop better tools to fight the disease.

Tell us more about yourselves.

Dr. Lu: I was born in Shanghai and immigrated to the United States when I was 4 years old. I grew up in San Francisco, then moved to the East Coast for college, the Midwest for medical and graduate school, and then back to the East Coast for residency, fellowship, and my initial postgraduate years.

Dr. Reddy: I was born in Baltimore, but grew up in Southern California. I am married with two little ones and enjoy spending any available free time with them. Outside of taking care of my patients, doing research, and spending time with family, I absolutely love hiking. My husband and I tend to take an international hiking trip every couple of years to experience nature in its most beautiful form.

Frisco Continued from page 1

care for adults and children in a dozen areas, including orthopedics, sports medicine, spine care, neurology, ophthalmology, gastroenterology, plastic surgery, and more. Texas Health Hospital Frisco will offer 24/7 emergency care, inpatient and surgical services, and neonatal care, among many other medical services vital to the community.

UTSW Frisco officially opened Dec. 3, followed by the hospital Dec. 16. UT Southwestern physicians will have full privileges at the hospital and the facilities will share medical records as well, creating a seamless experience for patients.

Frisco Mayor Jeff Cheney called the medical campus, which is visible from miles around, "a beautiful beacon of hope for Frisco." He also said the city and the academic medical center are a perfect match.

"You all are innovators and ranked nationally for your research and specialty programs, and we've received numerous accolades on a national basis, including the No. 1 city in the U.S. to live," Mayor Cheney said. "This is a natural fit. And the true winners here are the residents who are going to get extraordinary health care."

"This collaboration is an outstanding example of our common dedication to promote the health and well-being of the community of Frisco and the surrounding areas," said Brett Lee, President of Texas Health Hospital Frisco.

Following the dedication ceremony, primary care physicians and health professionals from the community mingled with UT Southwestern Frisco specialists and took tours of the building. Many people remarked on UT Southwestern Frisco's contemporary design, dynamic original artwork, and many patient-focused features, including a large rehabilitation gym and a colorfully designed pediatric waiting area.

The building also includes lab and imaging services and a retail pharmacy on the first floor.

Dr. Isha Mannering, a pediatrician who practices in nearby Plano, said she is excited her patients will have easy access to UT Southwestern specialists and subspecialists.

"When my patients need a specialist, they want answers quickly. So having that level of care and convenience so close to home, that's going to be huge," said Dr. Mannering, who was a resident at UT Southwestern before entering private practice. "I love that our patients will have access to this facility and the best subspecialists in the region."



The MCATS, a UTSW community jazz band, entertained the crowd during the celebration.



On Dec. 3, UT Southwestern Frisco opened its doors to clinical care in a new 120,000-square-foot, state-of-the-art medical building.

Frisco joins a growing roster of UT Southwestern medical centers in Fort Worth, Las Colinas, Richardson/Plano, and the Park Cities and is part of a continuing commitment to provide access to expert care throughout North Texas, said Dr. John Warner, Executive Vice President for Health System Affairs at UT Southwestern.

"About 1 out of every 8 patients that are seen at UT Southwestern now come from this area," Dr. Warner said. "So we are looking forward to doing what we always propose to do, which is meeting our patients and their families where they are with team-based, compassionate care."

UT Southwestern Frisco will also deliver on the institution's promise to forge innovation



Frisco Mayor Jeff Cheney addresses attendees at the ribbon-cutting ceremony.

through research, Dr. Podolsky said.

"Beyond what is available today in terms of cutting-edge care," he said, "UT Southwestern Frisco will partner in our research mission to provide access to the care of tomorrow."

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. 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.

CLASS NOTES

IN MEMORIAM

MEDICAL SCHOOL

Arthur W. Shannon Jr., M.D. ('45)
Richard E. Collier, M.D. ('48)
Robert L. White, M.D. ('64)

MEDICAL SCHOOL

Class of 1966: Kaye E. Wilkins, DVM, M.D., has participated in multiple outreach orthopedic education projects over his career. He has also lectured on pediatric orthopedics in 58 countries. Dr. Wilkins is Professor Emeritus of Orthopedics and Pediatrics at UT Health Science Center in San Antonio.

Class of 1994: G. Farah Rahman, M.D., has volunteered with CardioStart International to help the ongoing need for global cardiovascular care. She put her crafting skills to work, designing embroidered hats for the organization.

Class of 1996: Kristin Hahn-Cover, M.D., was named Chair of Department of Medicine at the University of Missouri (MU) School of Medicine in December. Since 2013, she had served as Chief Quality Officer for MU Health Care, providing executive leadership for clinical quality, patient safety, infection control, risk/regulatory affairs, and value analytics. She will continue to practice in her role as a hospitalist at MU.

For the latest updates on alumni events and news, visit engage.utsouthwestern.edu/alumni and follow @utswalumni on Facebook.

Please send your Class Notes contributions or address changes to the Office of Development and Alumni Relations, UT Southwestern Medical Center, 5323 Harry Hines Blvd., Dallas, TX 75390-9009, email alumni@utsouthwestern.edu, or call 214-648-4539.

Hack Continued from page 1

President Dr. Daniel K. Podolsky told those gathered for the Friday kickoff of the three-day event, tagged U-Hack Med 2019. It took place Nov. 8-10 on South Campus.

"A hackathon is defined as a group of people coming together with burning questions that might be solved computationally," explained Dr. Gaudenz Danuser, Chair of the Lyda Hill Department of Bioinformatics and Professor of Cell Biology.

A different kind of "hacking"

Such events began around the turn of the millennium and have become a rage among tech-talented youth. "This is a cool thing to do," Dr. Danuser said. "We had people from universities in California and New York who came here for this. It's a huge networking opportunity, and it gives our campus recognition as well."

At hackathons, the "hackers" – really just people adept at developing computer solutions and software code – sign up to spend long hours over a day or a weekend ferociously working around tables full of computers alongside fellow quick-minded computer geeks. Divided into competing teams, they chase a software app solution in hopes of impressing the event's organizers and possibly winning a prize. The goal might be to come up with a new phone app, a video game, or cloud-based software that offers a solution to a problem described at the event's beginning.

At the health care-linked hackathon organized by UT Southwestern, teams were carefully selected from applications and assigned to data-intensive clinical or basic science problems. "Our hackathon is distinct in that we have formulated the problems," Dr. Danuser said. "They're real problems, not Mickey Mouse."

And, he added, "We have one of the biggest computer systems in Texas that they can play with," referring to the research institution's Nucleus computing system, which has more than 65 terabytes of RAM and was accessible to the hackers via the University's Wi-Fi system.

From Abu Dhabi to Dallas

Among those hacking were two high school students from St. Mark's School of Texas, a private boy's school in Dallas. Meyer Zinn, a senior and member of his school's robotics club who plans to study computer science in college, returned after participating in last year's event.

This time, he brought a friend: James Singhal, who at 15 was the youngest "hacker." Both were assigned to Team 2, which faced the task of coming up with a tool that could more accurately tell benign thyroid lumps, or nodules, from cancer. "It's a bit more meaningful than other projects that I've been working on in my school," James said.

A Houston-based technology company, Mark III Systems, co-sponsored the event with UT Southwestern's Lyda Hill Department of Bioinformatics, helping to provide continuous meals and snacks as well as prizes. Lyda Hill, whose gift of \$25 million in 2015 established the Department of Bioinformatics named in her honor, donated travel scholarships for 28 participants.

Samridha Man Shrestha, who flew in from Abu Dhabi, received one of the travel scholarships. The senior majoring in computer science at New York University's United Arab Emirates outpost said U-Hack Med 2019 was his sixth hackathon.



Members of Team 10 discuss ideas for a tool to quickly determine which patients are at high risk for lung blood clots.



Lyda Hill (center) with Team 9's winners of the hackathon's top prize, named in her honor. Dr. Gaudenz Danuser, Chair of the Lyda Hill Department of Bioinformatics, stands to the right of her.

Participating in hackathons allows networking with other students and professionals, potentially leading to job opportunities later on, he said. Tackling medical subjects is more meaningful than other hackathon projects, Samridha added. "You're not just coming up with some little app – like some food app."

Playing off the theme of a marathon – a race over 26 miles – U-Hack Med 2019 stretched over 26 working hours. It ended Sunday evening with the 12 competing teams, each led by a UT Southwestern faculty member or researcher, feverishly making last-minute tweaks around tables strewn with apple cores, orange peels, and bowls of candy and popcorn.

The evening's finale was an awards dinner at which the teams, one by one, stood before the audience to describe their findings in flashy – code designer style – presentations.

Winning innovations

In the end, Meyer and James' team didn't win. Neither did Samridha's.

Instead, Team 9 claimed the top prize, the Lyda Hill Award, which came with up to \$1,500 per team member to travel to a scientific

or developer conference of their choice. The hackers had designed a faster way to evaluate children with congenital heart disease when using an MRI and catheter, shaving an estimated 40 minutes off the time it normally takes to evaluate patient data.

The award was presented by Ms. Hill, one of eight judges from the University and business and philanthropic communities who evaluated the developers' creations. Awards were judged based on the likelihood of a project leading to a grant for further study or development of a prototype, whether the solution advanced the field, and potential impact of the project on patient care – as well as a "cool science" factor.

"I appreciate you coming together for several days to solve the world's problems," Ms. Hill told the participants. "This has been very exciting – you arrived from many countries to work jointly on common challenges. The world needs more people like you."

Other prizes went to:

- Team 11, which received the Startup Success Award for developing a tool to more accurately diagnose glaucoma. Their prize was



UTSW Dr. Karanjit Kooner (standing, right) led Team 11, which won two awards at the November hackathon.

a dinner with health care investor and event judge Michael Gregory, co-Managing Partner of Avidity Partners Management, a Texas hedge fund. Other components of the award included UTSW vests for faculty leads and programming circuit board kits for hackers.

- Team 11 won a second prize, the Most Effective Visualization Award. The award included tickets to the Nasher Sculpture Center and gift cards.

- Team 7, which developed software to improve care for patients undergoing rehabilitation, won the Health Impact Award. Their prizes were Bluetooth circuit boards and books.

- One member of Team 5 won the prize for posting and drawing the most attention to his team's findings on GitHub, an online community platform to share code. His prize was a high-end graphics card and Jetson Nano developer kit.

Taking the next step

A representative from the National Institutes of Health who helped UT Southwestern organize its first hackathon returned for the event – Dr. Allissa Dillman, NIH's Biomedical Data Science Outreach Coordinator, who has a Ph.D. in computational neuroscience and teaches biologists and doctors how to code.

As the event neared its close, Dr. Dillman called on participants to share their findings with the code development community. "The whole point of building something really awesome is so you can share it with the community and we can continue to build it. ... You may not have gotten there, but you can at least get somebody else to hit the ground running," she said.

The life sciences and medicine are shifting to the use of computers to make sense of the massive amounts of data collected and are developing specialized software solutions to accomplish that, Dr. Danuser explained, underscoring why events such as the hackathon are important for UT Southwestern to take part in.

"As vast amounts of numerical readings accrue in the biomedical sciences, innovation depends on the ability to interpret those numbers and look for scientific clues within them," he said.

Dr. Danuser holds the Patrick E. Haggerty Distinguished Chair in Basic Biomedical 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.

Rare Continued from page 1

Mr. Cueto on a carefully planned treatment regimen of radiation and chemotherapy under the direction of medical oncologist Dr. Muhammad Beg.

"Patients need to fit very specific criteria before they are considered for transplant. Part of this process is a detailed discussion of their scans in a multidisciplinary tumor board," said Dr. Beg, Associate Professor of Internal Medicine.

Many patients in Mr. Cueto's situation do not make it to transplant because their cancer spreads, added Dr. Vagefi. After imaging, UT Southwestern doctors did an endoscopy to ensure cancer had not reached Mr. Cueto's lymph nodes.

"There were a lot of people involved

getting him to transplant," Dr. Vagefi said. "It was a true multidisciplinary effort."

The call comes in

In July, Mr. Cueto got the call. A liver had become available.

"I was super scared," he said. "You have to be strong and hope for the best."

The first phase of the surgery focused on making sure cancer had not spread elsewhere in Mr. Cueto's body. Any sign of spread would halt the operation, he would not get a new liver, and he would be back to square one.

"We inspected the entire abdomen to make sure there is no evidence of microscopic spread, and we sampled certain lymph nodes that surround the liver," Dr. Vagefi said. "We sent

those to the Department of Pathology, another area of expertise that we have at UT Southwestern that helped contribute to this team effort. They look at those slides right away and can tell us whether there is spread of the cancer or not. If there's spread, then we abort the case."

One after another, the results came back. No cancer had spread. Dr. Vagefi moved on to the transplant and surgical removal of the bile duct.

"We cut out the recipient's bile duct in its entirety. We didn't want to leave any of that behind for the chance of harboring cancer or developing cancer in the future," he said. "But we still needed a way to drain the donor liver bile duct so we had to reroute the bowel and connect it to the donor bile duct and allow it to drain. That added another level of complexity to

the case."

Dr. Vagefi said the patient's radiation oncologists had worked with tremendous precision; treatments were tightly focused in a specific area. This meant that blood vessels were not radiated any more than necessary, leaving an ample amount of blood vessels for reconnection. No bypasses were needed. Veins, an artery, and the new bile duct were delicately sutured in the surgery's final steps.

Hours later, Mr. Cueto woke up in the recovery room, and Dr. Vagefi came to his bedside. He was too groggy to remember Dr. Vagefi's exact words, but Mr. Cueto recalls him saying everything went well. He would have no restrictions going forward.

"I was so happy. It was like my second birthday," Mr. Cueto said. "I feel like I was in the right place at the

right time. It was a very professional team, very well organized."

Blood tests and follow-up appointments show Mr. Cueto enjoying a strong recovery. He looks forward to having his 21-year-old daughter home for the holidays and has begun building a vintage video game replica in the garage with his 15-year-old son.

"I feel great," he said. "I felt like somebody was looking out for me, and they were making the best decisions for me. I didn't have any doubt that I was in the right place at the right time."

Dr. Beg is a Dedman Family Scholar in Clinical Care.

Dr. Vagefi holds the Ernest Poulos, M.D. Distinguished Chair in Surgery.

A life spent pushing toward her passion despite stereotypes, others' expectations

By Nyshicka Jordan

In 1960s and '70s Pittsburgh, a young Shawna Nesbitt soon learned girls weren't expected to be doctors – especially not black girls.

"Girls are teachers and nurses, why don't you do that?" her mother asked when she talked about her dream. "Let your brother be a doctor."

Later, as a teen, her white family doctor also tried to dissuade her, saying she should have a family instead.

She didn't let either discourage her. Dr. Nesbitt is now Associate Dean for Student Affairs in the Office of Student Diversity and Inclusion as well as Medical Director of the UT Southwestern-affiliated Parkland Health & Hospital System's Hypertension Clinic.

In 1988, Dr. Nesbitt graduated from Hahnemann University College of Medicine (now Drexel University College of Medicine) in Philadelphia, then completed her residency in Pittsburgh. As a resident, she treated a cancer patient in his 30s who died before his family could make it to the hospital.

"After that, I felt empty in terms of power because I think as physicians we learn to think of ourselves as people who can change things," said Dr. Nesbitt, now a cardiologist specializing in the treatment of hypertension.

Dr. Nesbitt said she learned an important lesson – that you can't control everything, so make sure you prioritize the things you're actually passionate about. As an educator and a Professor of Internal Medicine at UT Southwestern, it's one of the lessons she tries to instill in her students.

Follow your passion

"I often tell them, if you follow your passion, you will never be tired



Left: Dr. Shawna Nesbitt gives the welcome address during the UTSW commemoration of Dr. Martin Luther King Jr. Day in January. Right: Dr. Nesbitt with her father, Townsend Smith Jr., at her medical school graduation from Hahnemann University College of Medicine in 1988. Mr. Smith died in 2013.



of what you do. If you follow someone's direction without your passion, you will be fatigued very quickly," Dr. Nesbitt said.

Passion is what kept her on track to become a doctor despite the naysayers. Science allowed her to understand why something occurred, she explained.

She later earned a master's of clinical research and statistical analysis from the School of Public Health at the University of Michigan, then spent several years conducting hypertension research.

"The research part of it opened my eyes to contributing in a different way. You'll take care of a few hundred thousand people during your career, but doing research addresses a problem many people who will never meet you have, and you may impact their lives in a positive way that is like a wave on



Dr. Nesbitt with her husband, Thomas Nesbitt, and daughter, Joy Nesbitt, a junior at Harvard University.

an ocean," Dr. Nesbitt said.

In 2001, because of that research, UT Southwestern recruited Dr. Nesbitt

to join the faculty. Soon after, the Associate Dean position became available.

Dr. Byron Cryer, Associate Dean for Faculty Diversity and Development and Professor of Internal Medicine, previously held Dr. Nesbitt's job. He encouraged Dr. Nesbitt to apply for the position because he recognized she had the passion, talent, and ability to motivate students.

Since assuming the leadership of the Office of Student Diversity and Inclusion, Dr. Nesbitt has developed the cultural competency curriculum to help medical students treat patients who come from different ethnic, economic, and geographic backgrounds. As part of that curriculum, Dr. Nesbitt teaches an elective called Healthcare in Underserved Communities. (See related story below.)

The confidence to succeed

One of Dr. Nesbitt's priorities when mentoring, she said, is instilling confidence.

"I find that confidence is the most important determinant of your success, because there are so many challenges that you will have to fight against, so many stereotypes and biases you will have to fight. If you're not internally confident in your own abilities, you can't do very much," she said.

In her own life, confidence has often made all the difference. When the white family doctor told her to start a family instead of following her dream, for example, Dr. Nesbitt became determined to prove him wrong. When her parents sent her to a mostly white private elementary school in the face of riots against public school desegregation at the time, the other children didn't want to play with her at first.

Dr. Nesbitt said she survived by learning how to make cultural adjustments to fit in, both at school and in her African American neighborhood.

"Isolation for anyone is a significant challenge to overcome in becoming successful," Dr. Nesbitt said. "Beating that really requires that you build a sense of community, both with people who are similar to you and have similar interests – but also to educate remaining parts of the community to help bridge that gap."

Dr. Cryer holds the John C. Vanatta, III, Professorship.

More online: To read the full story and watch a video, go to *Center Times Plus* at utsouthwestern.edu/ctplus.

Class exposes students to harsh realities of limited health care access

By Ashley Green-Jones

Food deserts, the LGBTQ community, correctional facility inmates, and low-income mothers all collide in a course designed to recognize and aid a diverse population in need of medical care.

Dr. Shawna Nesbitt, Professor of Internal Medicine, Associate Dean for Student Affairs in the Office of Student Diversity and Inclusion, and Medical Director of the Parkland Health & Hospital System Hypertension Clinic, teaches an elective called Healthcare in Underserved Communities. In this course, medical and health professions students venture away from the labs and lecture halls of UT Southwestern and into some of the harsh realities of Dallas' invisible patients.

"We have one of the most diverse communities in the country right here," Dr. Nesbitt said. "I want students to understand the social determinants of health that have an effect on when

patients can't do what we ask of them, or how these patients get to where they are when seen at our clinics."

The class involves collaboration with Dallas public health workers and county facilities. Students spend hours in environments such as the Lew Sterrett Justice Center and an HIV clinic as part of the curriculum to explore intersectionality in health care.

"We connect them with case workers, nurses, and health care social workers who are actually visiting homes," Dr. Nesbitt said. "They might visit the high-risk moms, which allows them to see how the moms are living with their children."

In another task, which Dr. Nesbitt termed an "eye-opening experience," students are sent on a grocery shopping trip in a food desert. "We give them an allowance of \$100, theoretically, that they have to use to shop and find healthy choices for a family of four to feed for a month," she said. At the end of the course, students select a



Medical students give a presentation in class for the elective Healthcare in Underserved Communities.

group community service project.

Dr. Nesbitt's advocacy for underserved populations through education is notably making an imprint on UTSW students.

"This class really helped me continue exploring that intersection between incarceration and medicine," said Nico Campalans, a Class of 2022

medical student. "As citizens going about our day, we don't really get to interact with this population that's involved with the criminal justice system – but it's a huge part of American culture."

Dr. Nesbitt also brings in guest speakers such as Leslie McMurray, Transgender Education and Advocacy

Coordinator at Resource Center, an LGBTQ organization in Dallas. Ms. McMurray, a transgender woman, transitioned in 2013.

"If I can make the new medical professionals a little more comfortable in dealing with someone who is transgender and help them understand the terms and how to address somebody, it leads to changes," Ms. McMurray said.

Despite access to the highest quality education available right on campus, Dr. Nesbitt wants students to burst the medical school bubble and step into life outside of UTSW.

"The first step is to take off the white-coat shoes of being the one in the room who knows everything, and be a learner," Dr. Nesbitt said. "I want students to recognize that people have lives that are real."

More online: To read the full story and watch a video, go to *Center Times Plus* at utsouthwestern.edu/ctplus.

Harris-Tryon selected as a Harold Amos Medical Faculty Development Program Scholar

By Nyshicka Jordan

Physician-scientist Dr. Tamia Harris-Tryon is among 10 professionals in medicine and science across the U.S. selected as Scholars in the Harold Amos Medical Faculty Development Program. The Amos Program, sponsored by the Robert Wood Johnson Foundation, supports faculty from backgrounds historically underrepresented in senior positions of medicine, dentistry, and nursing.

"A significant gap still exists for both women and minorities in leadership roles in science and medicine. This program provides the mentorship and resources required to ensure that physician-scientists from underrepresented groups transition smoothly through the early phases of their academic careers," said Dr. Harris-Tryon,



Dr. Tamia Harris-Tryon

Assistant Professor of Dermatology and Immunology.

The program is named after the late Dr. Harold Amos, an advocate for supporting minority and disadvan-

tagged students in academic medicine and science and the first African American to chair a department at Harvard Medical School.

As a Scholar, Dr. Harris-Tryon will receive an annual stipend of up to \$75,000 and an annual research grant of \$30,000 over four years. Scholars also receive mentorship from the organization's national advisory committee, whose members include leaders in academia, government agencies, and public policy.

Dr. Harris-Tryon completed her postdoctoral fellowship at UT Southwestern in the lab of Dr. Lora Hooper, Chair of Immunology. Their work, showing that the protein RELM α is bactericidal and requires vitamin A in the diet, was published this year in *Cell Host & Microbe*. Now as the Principal Investigator of her own lab, Dr.

Harris-Tryon and her team continue to use mouse and cell culture models to study the impact of the microbiota on skin and how the skin defends itself against infection. The Amos grant will support the study of a different antimicrobial protein expressed by sebaceous glands that directly kills bacteria.

"We've actually been able to show that this protein made by humans is able to kill MRSA (methicillin-resistant *Staphylococcus aureus*), which is one of the most frequent causes of skin infection in the emergency department. Our studies might help us understand why some people get those infections and potentially help us develop new therapeutics for skin infections," she said.

Dr. Kim Yancey, Chair of Dermatology, called Dr. Harris-Tryon a role model who has a tireless commitment

to excellence, discovery, and patient care.

"She has several traits that distinguish her, including a commitment to support the representation and development of women and underrepresented minorities in medicine and science as well as innate and refined personal characteristics that empower her professional performance," he said.

Dr. Hooper, also Professor of Microbiology with an additional appointment in the Center for the Genetics of Host Defense, 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. Yancey holds the Mary Kay Inc. Distinguished Chair in Dermatology.