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PARTNERS IN HEALTH, SERVING ALL OF WEST TEXAS

Texas Tech University had a health care vision for West Texas as far back as the 1960s, when the School of Medicine was founded in Lubbock. TTUHSC was established soon thereafter as an independent institution for graduate medical education. A satellite campus was then established in El Paso where the need for health education and health care



practitioner training in this teeming border city was great. The burgeoning population in this region and the increased need for quality health care suggested growth for TTUHSC too. It soon became clear that our El Paso campus needed to position itself to meet these demands in a much more significant way.

On May 18, 2013, Gov. Rick Perry signed Senate Bill 120, which established TTUHSC El Paso as the fourth component institution in the TTU System. Just as we always have, the two TTUHSC campuses continue to work together, capitalizing on our strengths, sharing ideas for how best to serve the health care needs of West Texas, and planning for a bright future.

Regardless whether you live east or west of the Guadalupe Mountains, there is a dire need for health care providers in the vastly rural geographic area we both serve. Meeting that need is a strong focus for each of us. We are recruiting the best students from across Texas and around the country, and our graduates are making their mark in health care in substantive and impactful ways. Our research initiatives are expanding the body of knowledge on important medical fronts in areas such as infectious diseases, existing and emerging border health issues, cancer, Alzheimer's and gender-based medicine, just to name a few. We are leading the way to better health for West Texas and the world.

TTUHSC El Paso is a natural extension of the determined, pioneering spirit that created TTUHSC almost 50 years ago. We are taking the lead in our respective communities through partnerships and collaborations with local and regional health providers for the good of the students and residents we serve. What you'll see beginning with this issue of PULSE is how we uniquely carry out our missions individually and in unison with a common theme of serving the health care needs of West Texas and beyond.

Richard Lange, MD, MBA President TTUHSC El Paso Tedd L. Mitchell, MD President TTUHSC



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TTU System details plans to add veterinary medicine school in Amarillo

Amarillo area community leaders voiced their support for and welcomed TTU System's plans to locate a school of veterinary medicine in the Panhandle.

TTU System officials shared their vision in early December for developing the state's second veterinary medicine program. Approximately 200 people gathered on the front lawn of the TTUHSC to learn about opportunities the school would bring to support animal health, food production and the agriculture industry.

Also speaking in support of the proposed school were Clay Stribling, president and CEO of the Amarillo Area Foundation; Mike Engler, chairman and CEO for Cactus Feeders; and Harry DeWit, owner and operator of High Plains Dairy. They all praised TTU System efforts indicating a veterinary school would positively impact the quality of veterinary medicine in the region as well as statewide through education and research.

Robert L. Duncan, TTU System chancellor, has stated the vision for establishing a veterinary school is "crucial not only because of the region's and state's deep-rooted history with agriculture and ranching, but also because of its continued prosperity."

Amarillo is situated in the middle of the country's leading livestock production area. Additionally, Texas is the nation's leading producer of cattle, a \$13 billion industry in 2012, according to the Texas Department of Agriculture. There also are more than 248,000 ranches and farms in Texas, the most of any state in the U.S., with large animals and foodproducing livestock.

Conversely, TTUHSC has expertise, facilities and regional support to offer. The university's faculty and numerous schools, particularly its School of Pharmacy, have the ability to collaborate on curriculum development, course instruction and research.

"When TTUHSC was founded, its primary mission was to bring more health care providers to West Texas and provide health care services to an underserved region and population that provides food, fiber and fuel for the world," said Tedd L. Mitchell, MD, TTUHSC president. "In honoring this promise, we are now making a global impact. Texas Tech University shares this principle and vision for addressing the needs of the agricultural industry, and we are a natural fit to help transform veterinary medicine education."





TTU System officials announced the proposed veterinary school Dec. 4 as a partnership between the Texas Tech University College of Agricultural Sciences and Natural Resources and TTUHSC in response to student demand and industry need.

The pre-veterinary program at the College of Agriculture Sciences and Natural Resources has more than 150 students, but the lack of veterinary schools prohibits many qualified students from becoming veterinarians.

Discussion and plans for the program will continue throughout 2016, and the TTU System will seek appropriate approvals by the Texas Legislature and the Texas Higher Education Coordinating Board in 2017.



Health Professions Student Selected to Serve on Coordinating Board

Gov. Gregg Abbott appointed Christina Delgado, a master's degree student in speech pathology, to serve as the student representative to the Texas Higher Education Coordinating Board (THECB).

Delgado's role on the board is to participate in THECB's quarterly and committee meetings and ask questions and speak on behalf of the students of Texas when they have concerns or questions regarding board decisions.

She takes on this leadership role in addition to serving as a TTUHSC Student Government Association senator.

Delgado received a bachelor's degree in interdisciplinary studies from North Greenville University and a master's degree in biblical studies from the Dallas Theological Seminary. She chose speech pathology as a career field to bring together her faith and a desire to empower people to communicate.



Read more of her story on the TTUHSC website at http://bit.ly/105pjwr.



Two Decades of Research Result in Patent for Vaccine

Afzal A. Siddiqui, PhD, received a patent in November from the U.S. Patent and Trademark Office for a vaccine to help reduce the number of infections caused by several types of open water parasites called scistosoma. The vaccine has the potential to eradicate the life-threatening disease that affects more than 200 million people in 74 countries.

The Bill & Melinda Gates Foundation and the National Institutes of Health have supported Siddiqui's work to develop an affordable vaccine.

"We worked to get the patent to deter others from making money off this vaccine,"

said Siddiqui, a Grover E. Murray Distinguished Professor in the School of Medicine. "It can be made for \$1 per vaccination and distributed to those in need. An effective schistosomiasis vaccine has the potential to impact one billion people."

According to the World Health Organization, there are no commercially available vaccines against schistosomiasis. Praziquantel, a drug developed more than 40 years ago, is the only effective treatment. However, re-infection frequently occurs following drug treatment. Symptomatic schistosomiasis can result in increased susceptibility to sexually transmitted infections including HIV, which is prevalent in many countries plagued by schistosomiasis, including Asia, Africa and South America.

Siddiqui's vaccine, SchistoShield[®], offers unique opportunities for organizations to market it as a way to eliminate this disease. The vaccine's advantages make it easy to sell because it eliminates the instances of re-infection common with the current chemotherapeutic drug, is easier and less expensive to distribute, and can be administered with a current chemotherapy regimen. Long-term vaccine efficacy will effectively reduce the transmission of schistosomiasis in endemic areas.

Schistosoma infection is transmitted through contact with contaminated water by parasites swimming freely in open bodies of water. Once contact is made with humans, the parasite burrows into the skin, matures into another stage, and then migrates to the lungs and liver, where it matures into the adult form.

Despite mass treatment with drugs, infection rates continue to increase. An additional 800 million people are at risk of contracting schistosomiasis. Vaccination is the only way to obtain long-term protection and durable and sustained reduction in the disease spectrum and transmission.

Nursing School Offers Graduate-Level Certificate Courses Focused on Rural and Global Care

Nursing professionals who work or plan to work in rural or global communities now have educational resources through two School of Nursing graduate certificates.

Each certification program is an interprofessional, online graduate-level program that includes 12 hours in coursework and completion of 67.5 hours of clinical experience in the principle area of interest (either rural or global health). The courses are consecutive, building over three semesters (fall, spring and summer) and culminating in either a Global Health Certificate or a Rural Community Health Certificate based on an individualized plan of study.

The certification programs accepted the first cohorts this fall. To apply or learn more about the certifications, visit the School of Nursing website at www.ttuhsc.edu/son/global or www.ttuhsc.edu/son/rural.

minutes with the faculty...

ACADEMIC ADVANCEMENTS

CRAIG COX, PHARMD | Innovative approaches to teaching | By Jo Grant Langston

Craig Cox, PharmD, (Resident 'oo) associate professor of pharmacy, is a walking, talking billboard for the adage 'don't let the grass grow under your feet.' His professional career is a study in looking for the next great thing.

Cox, born into a family of pharmacists, had no aspirations to follow in the family business. He was thinking perhaps something in sports. It wasn't to be. He said he soon realized pharmacy was "in his blood," so he finished his undergraduate education at Washington State University earning his Doctor of Pharmacy degree. He completed his post-graduate training at the TTUHSC School of Pharmacy at Amarillo and quickly realized his passion ... teaching.

Five years into his teaching career, he flipped his career and began working for the administrative side of academia as the



vice-chairman of experiential programs, overseeing student and preceptor activities associated with clinical rotation placements.

Additionally, Cox was elected to leadership positions with the American Association of Colleges of Pharmacy (AACP) and worked closely with others to find ways to incorporate innovation into the experiential component of pharmacy education programs. He has collaborated with individuals across the nation, learning how top-notch programs taught and succeeded in providing high-quality clinical rotations.

While managing experiential education opportunities for the School of Pharmacy, where students are paired with professional pharmacist preceptors, Cox realized that better training opportunities were needed to effectively train a diverse preceptor population who each approach learning in their own way. He began asking himself, "How can I help them be better teachers?" His creativity and dedication led Cox to develop a professionally produced video mini-series concept. To date, he has led the development of five individual series targeting pharmacists in a variety of clinical practice settings. His latest series was a collaborative effort with the TTUHSC Office of Interprofessional Education, along with faculty representing several professions to highlight the challenges of teaching in an interprofessional environment.

Each series consists of six to 12 individual video episodes. An episode ranges from five to 10-minutes in length. Each episode begins with a humorous 30- to 60-second introduction followed by a real-world clinical scenario. Throughout each episode, reflection from industry experts is provided. At the conclusion of an episode, viewers are encouraged to reflect on the "teaching pearls" or takehome points and how they could impact their teaching.

The series has won national praise and an honorable mention for an award from the AACP for its innovative approach to teaching. No grass under Cox's feet, though.

"I don't know what is next," he said. "I am always looking, always stretching my comfort zone. I am a lifelong learner, and I want to instill that both in our students and preceptors."

Did you know ...

- Craig Cox, PharmD, is married to Shalyn Cox, PharmD, ('02) also a pharmacist who precepts students
- He's a daddy to 2-year-old daughter, Aubrey
- Loves to travel and attend sporting events
- Has a passion for baseball



Community Partnerships Help Establish New Pediatric Positions

Thanks to support from Children's Miracle Network Amarillo and the Northwest Texas Healthcare System, TTUHSC at Amarillo will be expanding its pediatric services by adding three new specialists.

Children's Miracle Network announced its pledge in November of \$1 million to support two pediatric pulmonologists and one pediatric neurologist. Northwest Texas Healthcare System will provide up to \$600,000 in support for the first three years.

These specialists will help close the gap in pediatric sub-specialty care in the region and provide care for children without requiring them to travel to Dallas, Fort Worth, Houston or other cities for the specialized care they need. Children's Miracle Network has played a critical role in helping children get to their distant appointments by providing more than \$140,000 in travel grants in 2015.

The new pediatric specialty positions are the latest in Children's Miracle Network's support of the TTUHSC at Amarillo. Since 2013, the organization has provided \$510,000 for equipment, continuing education and patient resources.



Alumna Named Dean of School of Health Professions

Lori Rice-Spearman, PhD, MT, (SHP '86) has been selected as the new dean of the School of Health Professions.

Rice-Spearman joined the TTUHSC team as a student in the first full class of the clinical laboratory science program. She earned a Master of Science in Interdisciplinary Studies in 1991 and her PhD from the College of Human Sciences in 2010, both from Texas Tech University. She joined the School of Health Professions in 1987

as an instructor and has worked to achieve tenured professor and chair of the Department of Laboratory Sciences and Primary Care and associate dean for Learning Outcomes and Assessments.

Through her leadership roles in the school, Rice-Spearman has worked collaboratively in establishing opportunities and relationships within TTUHSC to strengthen the school and the university. She served as chair of the TTUHSC General Education Competencies Workgroup, comprised of faculty from the schools of Nursing and Health Professions and the staff from the Office of Institutional Planning and Assessment. They established processes and benchmarks for demonstrating compliance with mandates from the Texas Higher Education Coordinating Board. Currently, Rice-Spearman is a member of the Permian Basin Advisory Board and is the president-elect of the Texas Society of Allied Health Professionals.

Rice-Spearman began her new duties Jan. 1. She succeeds Robin Satterwhite, EdD, who left TTUHSC in May to become vice president for academic affairs at South Plains College in Levelland, Texas. Hal Larsen, PhD, has served as interim dean.

Allied Health Sciences Gets New Name to Better Reflect Disciplines

In August, the School of Allied Health Sciences became the School of Health Professions. TTU System Board of Regents voted to adopt a new name for the school following a longterm shift in health care away from the term "allied health."

TTUHSC believes the new name will better demonstrate the broad range of program offerings and the high level of education offered within the school to potential students. TTUHSC now joins five other state health science centers in Texas to house a school of health professions, which will ensure potential students will recognize TTUHSC as a possibility for entering their desired field.

MPH Online Degree Approved by BOR

The Master of Public Health program received approval in October from the TTU System Board of Regents to add an online generalist to the degrees offered.

Projected enrollment for the first two years, which will be a pilot program, is six to 10 students; afterward, school officials expect to increase enrollment by 15 to 20 students per year.

The Master of Public Health is part of the Graduate School of Biomedical Sciences. TTUHSC is seeking to establish a proposed School of Public Health, with anticipated opening in about five years.



READ more about the Master of Public Health program and its inaugural class in the Winter 2015 issue of PULSE online.

MATERS of the heart By Holly Leger

As a busy high school student, Cynthia Reyes didn't know the dangerous state of her kidneys. She struggled with eating, nausea and breathing, but figured the symptoms were due to a virus or school-related stress.

In 2010, Reyes went to the doctor for her upset stomach, which was causing her to vomit about five times a day. She said her pediatrician was shocked when the blood results came back, revealing very high levels of BUN and creatinine, indicating something was wrong with her kidneys.

"The doctor had told me, 'I'm surprised you're standing because a lot of people in this stage end up in a coma or not alive," Reyes said.

The 16-year-old was diagnosed with end-stage renal disease, the last stage of chronic kidney disease when the kidneys can no longer support the body's needs. She had emergency hemodialysis and then began regular dialysis treatments. When the new school year started, Reyes switched her treatment plan, so she could receive dialysis for 12 hours each night and not miss class during the day.

It was during that time Reyes was approached by Make-A-Wish Foundation, which grants wishes to children with life-threatening medical conditions. Reyes said her first reaction was to ask for a kidney, but she knew she would just have to wait her turn for a transplant. Then she thought she'd like to meet the members of her favorite band or travel to Japan.

In the end, Reyes asked the foundation for kidney disease research funding and a pediatric nephrologist for El Paso, something the city did not have.

"I thought if there was a way for a wish to be made so that people wouldn't have to suffer the way I did," Reyes said, "that would be amazing."

Within the next few years, Reyes watched with gratitude as her wishes came true. She received a kidney transplant in 2011. Then, in 2012, Make-A-Wish presented a \$4,500 check to the Paul L. Foster School of Medicine for nephrology research. Last year, Reyes, 20, received a call to "sign some paperwork" at TTUHSC El Paso but was met instead with a surprise Make-a-Wish Reveal party. There she met German Lozano Guzman, MD, a pediatric nephrologist who was hired by TTUHSC El Paso to teach and practice in the El Paso community.

"I could not believe it," Reyes said. "I wanted to cry. It was amazing to finally meet this person that I wished for."

Lozano Guzman said before his arrival the closest pediatric nephrology center was in Albuquerque, New Mexico, but because of Reyes's wish, El Paso families can find help locally now.

Teen sees selfless wishes come true



"She was so humble, she was able to give up this [wish] as a gift to the rest of the kids," Lozano Guzman said. "She wouldn't benefit from any of this. She just cared for the rest of the patients. I felt very proud of what she did."

Now a student studying biology at the University of Texas at El Paso, Reyes has another wish in mind, one she would like to fulfill on her own: attend medical school, specifically at the Paul L. Foster School of Medicine, and become a nephrologist.

"I feel so compelled to help people," Reyes said. "I have no doubt that being a physician is what I want to do for the rest of my life, because [my physicians] made such an impact on me and my life."

Matters of the Heart is a narrative in PULSE designed to highlight the passion for health, wellness and humanity shown through the work of our alumni, faculty, staff, students and friends. Story suggestions are welcomed.



Koul Receives Second Prestigious Fulbright Appointment

Rajinder Koul, PhD, CCC-SLP, shared his research on improving communication methods with colleagues in South Africa this

summer as his second appointment with the J. William Fulbright Foreign Scholarship program.

Koul, a professor and chair in the School of Health Professions Department of Speech, Language and Hearing Sciences and associate dean of research, received the prestigious Fulbright scholarship in public/global health. The award program is part of the United States Department of State.

During the 35-day assignment, Koul worked oneon-one with speech, language and hearing sciences graduate students at the University of Pretoria, South Africa. He assisted them with research and provided feedback on their dissertations pertaining to developmental and acquired impairments such as autism, aphasia, Parkinson's disease, amyotrophic lateral sclerosis and traumatic brain injury.

Koul's research at TTUHSC has focused on intervention in persons with chronic, severe aphasia and the variables that influence the outcomes of intervention and understanding factors that influence symbol learning in persons with developmental disabilities.

His goal was to share his research with University of Pretoria faculty and students to initiate collaborative research projects and grant applications.

Koul said that collaboration through the Fulbright program will benefit speech, language and hearing sciences graduate students at the University of Pretoria as well as their future patients.

"It is critical that South Africans with little or no functional speech become competent and empowered communicators," Koul said. "To do so, they may need greater access to expertise and technology from academic and research institutions in the United States."

In addition, Koul received the Neville Cohen award for his exemplary work in augmentative and alternative communication. In July, he presented at the Neville Cohen Memorial Lecture at the University of Pretoria. Cohen was one of the founders of the university's Centre for Augmentative and Alternative Communication and a visionary in the field of rehabilitation in South Africa.



School of Nursing Program for Veterans Receives Additional Support; Seats First Class

The School of Nursing Veteran to Bachelor of Science in Nursing (VBSN) program, which seated the first class this fall, has received a \$1 million federal grant and support from Texas Gov. Greg Abbott.

TTUHSC held a special announcement in November for the grant received from the U.S. Department of Human Resources and Services Administration (HRSA). TTUHSC President Tedd L. Mitchell, MD, and Melinda Mitchell Jones, JD, MSN, RN, associate dean for nontradiational undergraduate studies in the School of Nursing, welcomed Abbott along with Andres Alcantar, chairman of the Texas Workforce Commission, and Lt. Colonel David Johnston, director of strategic planning and partnerships for the Defense Health Agency's medical education and training campus at Fort Sam Houston, for a panel discussion about the importance of the program.

The HRSA Nurse Education, Practice, Quality and Retention grant is awarded to academic, service and continuing education projects designed to enhance nursing education, improve the quality of patient care, increase nurse retention and strengthen the nursing workforce. Many veterans have extensive military medical training and experience, but until now these individuals have found it difficult to translate the knowledge gained in the military into civilian course credit hours.

The VBSN program creates opportunities for veterans with military medical experience to earn a bachelor's degree in one year through an accelerated track. The School of Nursing, in partnership with Texas College Credits for Hero's, has created a competency based learning model to recognize up to 13 prior learning credits toward the awarding of a Bachelor of Science in Nursing. Recognition of prior learning will allow faculty to tailor the full-time, accelerated 12-month, 61-credit hour program to the veteran's learning needs

The new program was initially funded by a \$199,544 grant last January from the Texas Workforce Commission College Credit for Heroes program.

Eight students comprise the first class; however Jones said she expects enrollment to increase so that in five years approximately 475 students will have completed their degrees.



For more information about the TTUHSC School of Nursing VBSN program, visit http://www.ttuhsc.edu/son/vbsn/ or speak to an admissions coordinator at (806) 743-9235.

The Division of Nephrology and Hypertension at the Paul L. Foster School of Medicine will lead the TTUHSC El Paso team in the lupus study.

Nephrologists to Help Find Treatment for Lupus

Nephrologists at TTUHSC El Paso have been invited to participate in a national consortium to investigate the key causes of lupus nephritis, an autoimmune disease that can cause kidney failure.

"There have been no new treatments for lupus in the past 20 to 30 years," said S. Connery, MS, CCRC, who will assist with the project and is the director of research at the Paul L. Foster School of Medicine Department of Internal Medicine. "Many of the drugs have not panned out; they do not work for all patients or they cause negative side effects. We're part of a huge initiative to change that."

The nationwide research consortium was formed in hopes of creating a drug to treat lupus nephritis and potentially other autoimmune diseases. Other institutions in the consortium include the University of California, San Francisco; Temple University; the Feinstein Institute for Medical Research; Brigham and Women's Hospital; as well as various pharmaceutical companies.

Germán T. Hernández, MD, clinical associate professor of medicine and adjunct associate professor of biostatistics and epidemiology, and Hasan Salameh, MD, assistant professor of medicine, will lead TTUHSC El Paso's research effort in the Paul L. Foster School of Medicine, Division of Nephrology and Hypertension.

The five-year project will cost approximately \$42 million and is jointly sponsored by the National Institutes of Health and the pharmaceutical industry under the Accelerating Medicines Partnership. The partnership unites high-level government, industry and non-profit partners to accelerate the development of life-saving drugs.

GRANDROUNDS



Golf Tourney Proceeds Support Alzheimer's Research

The fourth annual Spike Dykes Charity Golf Tournament, held in July, raised \$85,000 in net proceeds to benefit Alzheimer's research and patient care at TTUHSC's Garrison Institute on Aging. The institute is TTUHSC's leading initiative focused on promoting healthy aging though cuttingedge research and innovative education and community outreach programs related to neurodegenerative diseases.

Since 2012, the golf tournament has brought in more than \$180,000 to support Alzheimer's through the Spike Dykes Charity Fund, established in honor of Sharon Dykes, who passed away in 2010 after a long battle with Alzheimer's disease.

Plans are under way for the 2016 tournament, which is scheduled for July 15 and 16 at the Horseshoe Bay Resort in Horseshoe Bay, Texas. For more information about participation or sponsorship, contact the TTUHSC Office of Institutional Advancement at (806) 743-2786.

TTUHSC at Permian Basin Granted Surgical Residency Program

The Accreditation Council on Graduate Medical Education has approved expansion of the TTUHSC surgery residency program to the Permian Basin. Residency appointments will begin in July for the 2016-2017 academic year. The program will match four categorical, four preliminary and four second-year residents.

At the Permian Basin, residents will have access to a broad range of surgical learning environments, including the Louise and Clay Wood Simulation Center. Additionally, they will work closely with core academic and adjunct faculty at Medical Center Hospital in Odessa, Odessa Regional Medical Center, Scenic Mountain Hospital in Big Spring and Midland Memorial Hospital.

The residency also includes experiences in rural medicine and a specialized track for those interested in practicing in rural areas. Research will be an important focus in the department as well, with expertise in basic science and clinical research, said C. Neal Ellis Jr., MD, regional chairman for the School of Medicine Department of Surgery.



TTUHSC President Tedd L. Mitchell, MD, and Janet Tornelli-Mitchell, MD, with this year's President's Select.

TTUHSC Students Named to President's Select

The 2015-2016 President's Select was named in October. The program, established last spring, offers students the opportunity to represent TTUHSC at official university functions to connect with alumni, donors and community members. Students are selected annually to serve based on merit, volunteer experience and leadership capabilities.

This year's President Select members and the campuses they represent (Lubbock if not otherwise designated):

Graduate School of Biomedical Sciences: Monish Makena

School of Health Professions: Jackie Clark and Amanda Rodriguez

School of Medicine: Nicole Alavi-Dunn, Nathan Anderson, Katie Dowd (Amarillo), Leland Finley, Heather Patel, Bill Sessions, Adham Shoujaa, Bryan Wakefield and John Wilson

School of Nursing: Payton Lingle, Alicia Martinez, Darcy Neice, Lauren St. Tours, Jhordan Sisneros and Bailey White

School of Pharmacy: Cindy Adibe (Dallas/Laura W. Bush Institute for Women's Health); Sydney Kutter and Addie Young (both Abilene).

Family Medicine, Health Professions Programs Earn Top Rankings

The American Academy of Family Physicians ranked the School of Medicine 14th nationally for students going into family medicine programs. A rank order list of U.S. medical schools was created based on the last three years' average percentage of graduates who became family medicine residents, using the 2014 and prior academy census data.

U.S. medical schools continue to face struggles in producing a primary care workforce, according to the academy. An additional 973 family medicine and 727 nonfamily primary care graduates per year until 2035 are need to eliminate projected shortages.

To address the shortage, the School of Medicine established the Family Medicine Accelerated Track in 2010, allowing primary care students to complete their degree in three years at about half the cost of a standard four-year degree. The program was the first of its kind in the country for three-year medical degrees.

The School of Medicine received additional accolades in a nationwide survey of students. It, along with the occupational therapy program in the School of Health Professions, ranked among the top 10 graduate programs in 2015 by GraduatePrograms.com. The rankings are based on feedback from current and past students in the programs with respect to academic competitiveness, program value, student diversity and career support among others.

The occupational therapy program was the highest ranked in Texas. The School of Medicine was one of only two schools from Texas that made the list.

Board of Regents Approves Funds for TTUHSC New Building Projects

TTU System Board of Regents approved Stage 1 planning and design costs of \$3.2 million at the August meeting for three building projects that will provide additional learning space on TTUHSC campuses in Amarillo, Lubbock and Odessa.

The board authorized \$279,805 for the Panhandle Clinical Simulation Center on the Amarillo campus. The center will feature stateof-the-art technology and equipment, which will enhance training for students and health care professionals.

For Lubbock, the board approved \$2.4 million for expansion to the north and west sides of the existing building, to house a new gross anatomy lab as well as additional space for study and research.

Finally, the Permian Basin Academic Facility on the Odessa campus received a \$552,665 budget approval. The new facility will house lecture halls, classrooms, research laboratories, faculty, faculty and researcher offices, conference areas and other support space.

Construction cost estimates for the new projects total \$113.25 million: Panhandle Clinical Simulation Center at Amarillo, \$9.75 million; north and west side expansions at Lubbock, \$83.7 million; and the Permian Basin Academic Facility at Odessa, \$19.8 million.



New Community Health Center Opens in Abilene

With support from the Health Resources and Services Administration, the School of Nursing established the TTUHSC Abilene Community Health Center. HRSA awarded the center a grant to authorize it as Abilene's first federally qualified health center.

"TTUHSC's relationship with the Abilene community continues to thrive, and the new Abilene Community Health Center is a great testament to that," said TTUHSC President Tedd L. Mitchell, MD. "Centers like this one and its predecessor, the TTUHSC School of Nursing Larry Combest Community Health and Wellness Center in Lubbock, are an excellent resources."

The Abilene Community Health Center opened in August to provide primary care and management of chronic diseases for all ages. Nurse practitioners and an Abilene medical director staff the center, which also will serve as a clinical educational site for nursing, physician assistant and pharmacy faculty and students. A sliding fee scale is available for income-eligible patients, but no one will be turned away due to inability to pay.

Additionally, center's health care team will focus efforts on reducing diabetes, obesity and cardiovascular disease rates in Abilene. Randy Neugebauer, a member of the U.S. House of Representatives for Texas' 19th congressional district, has lent his ongoing support to the development of the center as a means of improving the health of the Abilene community.

University receives 'Gold Seal' Accreditation for Research Program

TTUHSC received a "gold seal" accreditation in September from the Association for the Accreditation of Human Research Protection Programs Inc. (AAHRPP), a worldwide independent oversight group.

AAHRPP accredits high-quality human research protection programs to promote excellent, ethically sound research. P. Michael Conn, PhD, TTUHSC senior vice president for research and associate provost, said with this recognition, TTUHSC becomes one of only 12 of the Texas academic health institutions to have received accreditation.

TTUHSC's "gold seal" accreditation from AAHRPP offers assurances to research participants, researchers, sponsors, government regulators and the general public of the quality of the human subjects program at the university.

"This accreditation demonstrates our commitment to excellence in clinical studies and our growth in research," said Conn.

The full accreditation followed a year of internal evaluation and process improvements conducted by an external site visit team sent by the AAHRPP. More than 40 administrators, Institutional Review Board members, researchers and research staff from the Lubbock and Amarillo TTUHSC campuses were interviewed during the site visit to ensure that those responsible know written policies and follow best practices.



TTUHSC EI Paso Receives Grant for TB Vaccine

The Robert J. Kleberg Jr. and Helen C. Kleberg Foundation awarded a \$375,000 grant to Subramanian Dhandayuthapani, PhD, an associate professor in the Center of Emphasis in Infectious Diseases at the Paul L. Foster School of Medicine, to develop genetically altered vaccines against tuberculosis (TB).

"Cross-border infectious disease transmission is a significant public health and border security concern because residents of the Paso del Norte Region are medically underserved, economically disadvantaged, and geographically isolated," said Dhandayuthapani. "Low health literacy and crowding may compound the spread of disease."

TB is caused by Mycobacterium tuberculosis and kills approximately 1.5 million people annually worldwide. Although TB is common in countries lacking resources such as Africa and Asia, the U.S. has significant numbers of TB cases.

"The Texas Department of State Health Services revealed in 2012 that Hispanics are affected most by TB," said Dhandayuthapani. "This ethnic group is the dominant population in cities along the U.S.-Mexico border, and the increased TB in this population may be due to their exposure to the Mexican population on either side of the border."

The emergence of a drug-resistant Mycobacterium tuberculosis strain poses serious issues because it is difficult to treat with existing drugs. "Bacillus Calmette-Guerin is the only available vaccine against TB, but it fails to prevent adult pulmonary TB, the most prevalent form of TB," said Dhandayuthapani. "Therefore, development of alternate vaccines against TB is greatly needed."

3,500

pounds of food was collected during the Christmas in July CanPaign sponsored by Texas Tech Physicians to benefit the South Plains Food Bank. An additional \$2,000 also was raised. The food bank serves more than 9,000 families each month.



6,500

girls and their mothers have heard the message to believe, hope and follow your dreams to become anything you choose at the Laura W. Bush Institute for Women's Health GiRL Power events held in multiple cities during the past seven years. The event provides an opportunity for girls in fourth- through sixth-grades and their mothers to dance, learn and bond on an extreme level. LWBIWH has hosted GiRL Power events in Amarillo, San Angelo, Plano, Dallas/Fort Worth, Dalhart, Pampa and Canadian.

re facts

LUCY For eight years straight, every graduating

Speech, Language Pathology student has mastered the Praxis on the first attempt.

Amount of private grants TTUHSC EI Paso received during fiscal year 2015, surpassing a goal of \$1 million in non-federal funding set by the institution last year. A big West Texas "Thank You" to our partners! research projects were presented in this summer at the School of Pharmacy Research Days. The projects focused on possible breakthroughs in brain and breast cancer, Alzheimer's and pneumonia.

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"Trust is one of the

desired outcomes from this study. The physician who trusts the nurse or the PA and vice versa, will be the team that earns the trust of the patient. The patient will feel properly cared for and in good hands,

> which is one of the reasons that most everyone is in health care to begin with."



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Individual Commitment to a Group Effort

Pilot study assesses outcomes of teaching health care professionals to work as a team

BY KARA BISHOP | PHOTOS BY NEAL HINKLE

Health care is a team process. Observing the workings of a health care setting with doctors, nurses, physician assistants, etc., it may not be so obvious, but teamwork and communication among these different professionals can be a steep learning curve for new graduates.

"I know on the medical student side, we don't do a good job of teaching teamwork and communication to our students," said Saju Joseph, MD, vice chairman and associate professor, School of Medicine Department of Surgery at the Permian Basin. "All of the schools on this campus work as a group, but in class we teach separately. While I understand this from a didactic standpoint of learning, I feel that the faster we incorporate students from different disciplines together, the easier the transition is for the student to become a hospital or clinic employee."

Joseph took his ideas of incorporating interprofessionalism in the classroom to Sharon Cannon, EdD, RN, regional dean for the School of Nursing at the Permian Basin and Medical Center Hospital Endowed Chair. They developed a pilot study to improve overall communication between pre-licensure health care students from multiple disciplines.

During Phase I of the pilot project, the investigation team collected quantitative data through pre- and post- activity surveys from participants, which included third- and fourth-year medical students and students in the Physician Assistant Studies and Sec-

ond Degree Bachelor of Science in Nursing programs. The initial survey asked eight questions assessing the student's comfort level when working with interprofessional team members, based on the TEAMSTEPPS model, a system designed by the Agency for Healthcare Research and Quality to improve patient safety using communication and teamwork. Students then completed clinical scenarios — trauma, operating room, preoperative, post-operative ---- that required clinical skills, problem-solving and clear communication between team members, utilizing the Louise and Clay Wood Simulation Center. The scenarios were recorded and analyzed by programmatic faculty proctors. Following, the participants completed a three question, post-survey, focusing on qualitative responses

PREVENTABLE MEDICAL ERRORS COST THE HEALTH CARE SYSTEM APPROXIMATELY \$17 BILLION TO \$29 BILLION PER YEAR. STAFF COMMUNICATION, TEAMWORK AND SYSTEM FAILURES ARE GREATER CONTRIBUTORS TO THESE ERRORS THAN IS POOR INDIVIDUAL PERFORMANCE.

Source: Chopra et al., 1992, Cooper et al., 1978, Mann et al., 2006 and Ternov and Akelsson, 2005.

Referenced in "A Review of Simulation-Based Interprofessional Education, {italics} Clinical Simulation in Nursing," {end italics} 2010





THE INSTITUTE OF MEDICINE RECOMMENDED **FUNDAMENTAL CHANGES IN EDUCATION** FOR HEALTH CARE PROFESSIONALS AND HAS CALLED FOR **INTERDISCIPLINARY TEAM TRAINING**.

Greier, A.C. and Knebel, E., 2003

Referenced in "A Review of Simulation-Based Interprofessional Education," Clinical Simulation in Nursing, 2010

to assess satisfaction level, benefits of the exercise and the student's willingness to participate in future exercises. Also, the students were allowed an opportunity to provide feedback to their colleagues from the other disciplines as to how each performed.

The faculty recorded videos of the students to get feedback on their experiences, which also proved enlightening, said Diana Goodwin, instructor and retention counselor with the Second Degree bachelor program for the School of Nursing at the Permian Basin.

"One of our nursing students is very soft spoken and doesn't have a lot of confidence," Goodwin said. "In one clinical scenario, she very quietly said, 'I think the patient's coding,' but no one listened to her, and she didn't speak up again and was very hesitant. Turns out she was right in her conclusion and realized that she needed to have more confidence and assertion with her team members."

The project also helped students learn more about themselves and mature professionally, Goodwin said.

"One of our PA students realized, while participating in a clinical scenario involving a difficult family member, that there is always an effective way to approach people. He said that it was important to remember that family members aren't being difficult just to be difficult. They are concerned about their loved one. He helped himself and his fellow students learn to approach the difficult family member therapeutically from the concern perspective, which effectively diffused the situation and built trust between the patient's family and the health care team."

Trust is one of the desired outcomes from this study, said Cannon.

"The physician who trusts the nurse or the PA and vice versa, will be the team that earns the trust of the patient. The patient will feel properly care for and in good hands, which is one of the reasons that most everyone is in health care to begin with."

This also builds on the commonality held by those who are learning and those who are teaching at TTUHSC, Joseph said.

"Whether you're in medical school, nursing school or health professions, you're a student. Everyone is learning, and students are going through the same stresses and issues regardless of what program or school they are enrolled in. Learning to share in that bond together while in school paves the way for true success in their careers."

There are many goals for the study, say those leading the investigation, but ultimately, they would like to see a change in curriculum that includes direct interprofessionalism instruction.

"The ideal goal is for full implementation of curriculum in about three years on the Permian Basin campus," Cannon said. "After piloting the program on our campus and ironing out all issues, we would like to see it branch it out to other campuses with lead faculty managing the program."

To date, the investigators have made several presentations on their research project, the latest in July at the 26th Sigma Theta Tau International Research Congress. They will also present at the Association of Academic Surgery meeting in February and are working to publish their work as well.

"Eventually this interprofessional curriculum will make a difference," Cannon said. "It's a slow process, and it won't happen overnight, but I think as we continue to take students through this pilot program we have here at the Permian Basin, we will see many positive results."

INVESTIGATIONS DISCOVERIES

VIOLENCE AFFECTS CHILDREN LIVING ALONG U.S.-MEXICO BORDER

At a time when Juarez, Mexico, El Paso's sister city, was dubbed the "most violent city in the world," Marie Leiner, PhD, collected data and published it illustrating the impact of violence on children from a lower socioeconomic status along the U.S.-Mexico border. The data, spanning from 2007, before the rise of extreme violence to its height in 2010, revealed that children living on both sides of the border were affected by the city's drug violence.

The reported findings indicated that children were playing 'narcos,' instead of army. "The bad would win; not the good," said Leiner. The barrage of stories children heard in their communities and saw on television increased anxiety among many children. "Stress in children is caused by what they do not yet understand," said Leiner.

Leiner said that children living in poverty were most affected. "Chronic stress and adversity were huge issues in these children. At a time when children's brains and organs develop most rapidly, the continuous stream of stress interrupted their normal growth.

"Children who did not receive the appropriate health treatment became sicker and angrier," she said. "The evidence suggests that these children will develop mental health problems and chronic diseases."

Leiner's advice to parents, especially during tumultuous periods, is to pay attention to what they discuss when their children can hear and to make sure the television shows, movies and games they experience are appropriate.

Visit PULSE online to read more about the study.



Marie Leiner, PhD, is an associate professor in the Department of Pediatrics, Paul L. Foster School of Medicine at TTUHSC El Paso.





Brad Bryan, PhD, is an assistant professor Center of Emphasis in Cancer, Paul L. Foster School of Medicine at TTUHSC El Paso.



COMMON HEART DRUG POSSIBLE TREATMENT FOR ANGIOSARCOMA

A recent study published by Brad Bryan, PhD, in the journal JAMA Dermatology suggests that a common heart drug can stop the progression of angiosarcoma, a cancer of the inner lining of blood vessels.

Bryan and William Chow, DO, from Mohs Micrographic Surgery and Cutaneous Oncology in San Leandro, California, treated a man in his 60s with an enlarging lesion on his left forehead and scalp which, after a biopsy, was diagnosed as angiosarcoma. The researchers said that after one week of treatment with a propranolol regimen, the tumor appeared to have ceased its rapid expansion with no evidence of clinical enlargement or extension of the angiosarcoma. Within six months of using propranolol, chemotherapy and radiation, the patient's tumor was undetectable.

The study, "Growth Attenuation of Cutaneous Angiosarcoma with Propranolol-Mediated Beta-Blockade," also has financial implications. Current prescription drug therapies for sarcomas can cost patients more than \$10,000 a month. Propranolol, however, costs about \$4 a month.

Bryan, along with oncology experts and other researchers at the PLFSOM, are currently running a Phase II clinical trial in breast cancer patients to test the efficacy of propranolol in decreasing tumor growth. Those results might extend the trial to include more common tumors.

Other authors in the study include Clarissa Amaya, MS; Steven Rains, MS; Michael Chow, BS; and Erin Dickerson, PhD.

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Visit PULSE online to read more about the study.

DISCOVERIES INVESTIGATIONS

REDUCING THE EFFECTS OF STROKES

Strokes are the fifth leading cause of death for Americans and are responsible for the majority of serious long-term disabilities. About a third of people hospitalized for stroke were younger than 65 years; as a result, strokes also lead the charts as one of the most expensive diseases.

During a stroke, the blood supply to the brain tissue is restricted, causing a shortage of oxygen and glucose needed to keep the tissue alive. Tom Abbruscato, PhD, and his research team are studying the mechanisms by which the neurovascular unit responds to the restriction of blood supply with respect to transport protein expression, cell-to-cell interactions, and the transport of drugs, ions and nutrients that are vital for brain recovery after a stroke.

For stroke victims, there currently are very few viable treatment options to improve brain recovery after a stroke. Abbruscato's research aims to change that by focusing on preclinical discoveries that will become novel treatment options for stroke patients.



Tom Abbruscato, PhD, is professor and chair of the School of Pharmacy Department of Pharmaceutical Sciences and associate dean of the Graduate School of Biomedical Sciences.



Samuel Prien, PhD, is director of the clinical and research laboratories and a professor in the School of Medicine Department of Obstetrics and Gynecology. He has a joint appointment as associate professor in the College of Agricultural & Natural Sciences Department of Animal and Food Sciences at Texas Tech University. Lindsay Penrose, PhD, is a research assistant professor in the School of Medicine Department of Obstetrics and Gynecology. She has an adjunct appointment in Animal and Food Sciences at TTU.



NEW TECHNOLOGY PROVIDES AFFORDABLE OPTION FOR ANIMAL REPRODUCTION

Sex selection in animals has the potential to increase dramatically the profitability of dairies and beef cattle operations by producing a higher percentage of male or female animals as desired. But current technology is costly.

Samuel Prien, PhD, and Lindsay Penrose, PhD, have developed a way to make sex selection more affordable. They developed a method using simple chemical properties to affect sperm movement, which allows separation of X and Y type sperm for insemination in animals. Their research found the conception of a male could be as high as 72 percent.

"The course of our research allowed us to select for males first," Penrose said. "But with modification, selection for females is possible as well. We found that the cell would pick the preferred chemical pathway and follow it."

Flow cytometric sorting, the current available technology, can be used to separate sperm based on sex chromosome content. It's estimated annual market value is \$140 million, Prien said.

This new sex selection method, he said provides a more affordable option on a much wider scale and with a much larger market potential.

Prien and Penrose have received a patent from the U.S. Patent and Trademark Office for "Method and Apparatus for Gender Selection." The patent rights have been licensed to Reproductive Solutions Inc. SureBreed[™] is a trademark registered to Reproductive Solutions for the commercial product they have developed that uses the patented technology.

Dignitar

By Jo Grant Langston Photos by Neal Hinkle

NEW PROGRAM PROVIDES ADDITIONAL LEVEL OF PROTECTION FOR HIGH PROFILE VISITORS TO WEST TEXAS

West Texas sees its fair share of celebrities and dignitaries. It may be the new, fresh faces of country music, a star of television or film, or perhaps a visiting high-profile professional athlete. For the most part, emergency medical personnel travel with them. But, for political or governmental dignitaries who visit, this may not be the case.

Jason Cooper, PA-C, (SHP '06) while attending an event in Midland, Texas, with then TTU System Chancellor Kent Hance, realized the lack of emergency medical coverage should guests become sick or injured. The special guest at this particular event did not have medical personnel with him either. Cooper says his spirit of preparedness kicked in.

"I trained as a paramedic, and one of our professional attributes is to be prepared for medical emergencies of all types," said Cooper, director of Special Medical Programs for the School of Medicine Department of Family and Community Medicine. "We tend to carry equipment bags with us at all times, to be ready if needed. And as a physician assistant, I realized that evening that no emergency medical preparations were available. Many of the guests were older and susceptible to injury or acute medical conditions."

Cooper approached TTUHSC President Tedd L. Mitchell, M.D., with his concerns about the lack of medical preparations and how he and other physician assistants with emergency medicine backgrounds could provide those services. Cooper said he also explained the importance of having trained personnel available for medical needs. Additional conversations between Cooper and Mitchell led to the beginning of a program to provide dignitary medical support services for local police and federal security teams.

"One of our guiding principles is serving our communities, to see our presence in the areas we serve," said Mitchell. "This type of program gives us an opportunity to provide a unique service for this area and to showcase the talent we have in our faculty and staff. It is a bold example of our mission to serve."

In 2014, Cooper was at an event with then Texas gubernatorial candidate Greg Abbott and struck up a conversation with a member of Abbott's Midland security detail. The plainclothes agent was looking for an automated external defibrillator, and he and Cooper began talking about the need to have medical professionals available during such visits. The pair exchanged business cards. A couple of weeks later, Cooper received a call from the Midland Police Department, and they began to formalize a structured plan to include medical professionals in the security details of these types of visits, a practice becoming known as dignitary protection medicine. Dignitary protection medicine is an evolving area largely built on the experience of White House, state department and other physicians who have traveled extensively with dignitaries, according to an article published in 2012 in the American Journal of Emergency Medicine. It stems from an increase in international travel of business executives and political dignitaries, particularly in regions that are socially unstable or have minimum medical services. Dignitary protection medicine programs are emerging nationwide, and TTUHSC is a part of that national dialogue about this new field, said Cooper.

"Other health science centers are looking at our program with the Midland Police Department and seeing how as an institution TTUHSC brings the power of our network to this new field," Cooper said. "We cover such a large travel area and can utilize clinicians throughout our area to provide this type of medical service."

The primary objective of this program is to protect the dignitary from medically related threats. It includes several steps. A medical threat assessment determines emergency contact information; environmental risks such as exposure to weather; hospital locations; infectious disease risks; and pre-existing medical conditions of the dignitary. Logistics and supplies are reviewed, including needed medications and emergency supplies. Additionally, evacuation procedures are reviewed, accounting for travel time to the nearest hospital, anticipated road construction, and weather alerts, according to the American Journal of Emergency Medicine article.

"As members of the medical team, our job is to stay behind the scenes and be ready if a need arises," Cooper said. "We determine areas of concern and prepare for those. We look for injury risks and take note of any disease processes we see in the travel party. We are ready should they become injured or need medical treatment of any nature."

As the medical expert on the scene, Cooper's role is to triage a medical situation and determine next steps, including if the medical condition can be handled on site or transportation to a local emergency room or clinic is needed. He says most often the medical needs are minor in nature, but having a physician assistant available will help the team determine the next step for the visitor-patient.

Cooper Named Chairman of state pa board

In November, Gov. Greg Abbott named Jason Cooper, PA-C, (SHP '06) chairman of the Texas Physician Assistant Board. Cooper was appointed to the board in 2013 for a four-year term. His tenure as chairman will last two years. 1221

The Physician Assistant Board's mission is to protect and enhance the public's health, safety and welfare by establishing and maintaining standards of excellence used in regulating physician assistants and ensuring quality health care for the citizens of Texas through licensure, discipline and education.

Cooper is director of Special Medical Programs for the School of Medicine Department of Family and Community Medicine and has served as assistant professor and director of Clinical Education for School of Health Professions. Additionally, he has experience as a physician assistant in emergency and primary care and is a licensed paramedic.



Including medical service in the security details has been a success for the Midland Police Department program, said Lt. Alfredo Grimaldo. He sees the addition of Cooper's services as a major step in quality preparation for dignitary visits.

"Including medical services gives us an added dimension of preparedness for our detail," Grimaldo said. "It has given us a level of care we did not have before. Jason is like having another set of eyes as we prepare. He sees things we aren't trained to see."

Grimaldo says this level of medical support isn't common but is much appreciated by groups traveling to Midland. He explained that medical support in the past consisted of knowing where the nearest hospital was and having an ambulance available. Thanks to the service Cooper provides, the unit stands ready for a myriad of medical conditions that could occur.

"Our biggest challenge is transporting our dignitaries," he said. "The motorcade could be involved in a traffic accident or a weather incident, and with Jason in our detail, we could immediately handle medical needs."

Additionally, Grimaldo said he is seeing more elderly dignitaries visiting Midland, which presents the opportunity for medical emergencies such as trips, falls or disease-related events, such as heart attack or stroke. Cooper's presence and preparation are a quality bonus for the guests and the security detail as well, Grimaldo said.

And the program appears to be a success. Security details coming to Midland applaud the program, Grimaldo said, and Mitchell hears feedback that the security details and the visiting dignitaries "love it." "The early success of this program is evidence of its need and worth to those involved," Mitchell said. "It has blossomed as more and more dignitaries visit this area due to the current political calendar. Trained medical personnel in a security detail isn't common, so we are giving them a much-needed layer of protection for their dignitaries and participants at events."

Cooper is thriving in his "behind the scenes" work for visiting dignitaries. He sees this a natural extension of his desire to serve patients.

"What I do for these teams has very low visibility and is very low key," Cooper said. "I add calm to the environment because the members of the detail know I am there to handle the medical issues not included in their training. These visitors have an impact on people's lives, and we work to keep them healthy and get them to the next stop."

Cooper sees his work as public service, and an opportunity for TTUHSC to continue its mission to provide medical care. "We have started a national dialogue for dignitary protection medicine," he said. "We can use the power of our network to put clinicians in the field. That is what we are meant to do."

Mitchell acknowledges that this fledgling program is creating a national dialogue. "We are growing this program and designing a model that we can use at other TTUHSC campuses," he said. "Our hope is that other health science centers in Texas and across the nation will use this model to create programs in their service areas as well. We are creating a patient/service model that will serve many and could save lives. That is what we do."

AN OPPORTUNITY

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BY DANETTE BAKER NPNR

At 3:15 on a Tuesday afternoon, Frank Perez, MAT, ATC, (SHP '06) had been at work just more than an hour when it was time for his first scheduled consult of the day. He meets Eric Henderson in the training room, and guides him through a conditioning sequence including squats, box jumps and weighted ball throws. Thirty minutes later, they are downstairs in the 1,950-seat auditorium at the MGM Grand, home to KA by Cirque du Soleil, for the show's storm scene rehearsal.

"So this is about Frank?" asks a Brazilian gymnast who was stretching his frame along the audience handrail, warming up for the rehearsal. "He's good. Really a great (athletic) trainer, and he takes good care of us."

"Us" is a cast of about 80 performing artists from across the globe who must stay in peak shape year-round in order to meet the demands of two 90-minute shows five nights a week. Perez celebrated his fourth anniversary in July as a performance medicine therapist with KÀ, a somewhat ubiquitous career for a West Texan inspired by athletic trainers from his high school football days.

"Most everyone who chooses athletic training got hurt either in high school sports or at some point and that's the person who helped them, me included," said Perez, who tore an ACL his freshman year. "I had three athletic trainers throughout high school who were actually very instrumental in me choosing athletic training, Texas Tech University and TTUHSC."

Troy Hooper, MPT, ATC, LAT, (SHP '15, '01) was one of them. "I can still see Troy (assistant professor, School Health Profession) standing in the athletic training room in my high school and how eager he was to learn," Perez said. The other two athletic trainers were Mindi (McPherson) Bingham, a Texas Tech

PHOTOS BY LINDA QUACKENBOSS/ Linda Q Photography

alumna, and Dennis Pruss, MAT, a former School of Health Professions faculty member.

It was their passion and a discovered reverence for the human body and how it works that swayed Perez from his initial path in physical therapy to athletic training. The "intricacies and what you can push (the human body) to do" was the pearl he was searching for in a career and was also what led him from the traditional sports arena to the world of performing arts.

After earning his bachelor's from Texas Tech in exercise sports science, Perez took a typical athletic training career path working for a university athletics department as a graduate assistant and then followed that with an entry-level position at a rehabilitation clinic.

In 2008, Arizona State University hired Perez as the assistant athletic trainer for its track and field program. In his first year, the team won multiple NCAA championships, giving them a ticket to the White House and to meeting President George W. Bush. It was then Perez also met Kerry Gordon, MS, ATC, who was an assistant athletic trainer at the University of South Carolina. Gordon later joined Cirque du Soleil, where she is now senior head therapist for Cirque du Soleil resident shows division.

After her first year with Cirque du Soleil, Gordon began trying to recruit Perez. "I fought her off for a couple of years," he said. "I guess I didn't really think about performers as athletes, but I also didn't know



much about *Cirque*. At that time, I hadn't ever seen a show. Plus, I enjoyed working with the track athletes, helping them train and reach their peak performance for competitions.

"Kerry just kept telling me about what she did, inviting me out to Vegas to see it in action."

Curiosity finally got the best of Perez, and on a weekend trip to Vegas about six years ago, he saw his first show, Mystère by *Cirque du Soleil*. He was mesmerized by the circus-style acrobatics. "I remember thinking, 'Oh my god, look at this. They're incredible. What these performers can do; how they move and hold their bodies and others in stunts; their strength is inspiring."

That feeling never quite left even as Perez went back to his athletes at Arizona State. "It took me back to my real passion; my intrigue with the human body and how it moves and works."

Two years later, in late spring of 2011, Perez contacted Gordon to throw his name in the hat should a position with *Cirque du Soleil* be available. Three months later, he was hired at KÀ.

NEW PLAYING FIELD

Perez quickly discovered the value of what he learned in his academic career — athletes are athletes, their sport is only the venue.

"For me the biggest difference is that I now get to work indoors," he said, following with a laugh. "Really, the biggest difference is the biomechanics of it, and that here, there is no offseason. We have breaks, the longest one is about two weeks; otherwise, it's competition season year round."

This new position forced Perez mentally back to the classroom at Texas Tech University and TTUHSC, remembering the teachings of C. Roger James, PhD, professor and director of the Center for Rehabilitation Research in the School of Health Professions, about biomechanics and how Perez would apply them to this new team of athletes. KÀ is an athletically challenging performance with acrobatics, martial arts, pyrotechnics, life-size puppetry and aerial feats, according to the description on the show's website. It tells the story of imperial twins, separated after their parents' assassination; their journey of self-discovery and ultimate reunion plays out on a 360-degree rotating stage that transforms characters between horizontal and vertical planes.

The performers and the countries they represent are diverse as their roles in the production, and that does make a difference, Perez said. "That was a huge learning curve but one that presented a great educational opportunity for me. *Cirque* pushes the envelope in their productions and, as clinicians, we have to stay with them. The athletes are continually learning new things, and so it drives me to better myself as a professional too."



"Cirque pushes the envelope in their productions, and as clinicians, we have to stay with them. The athletes are continually learning new things, and so it drives me to better myself as a professional too."

ALL IN THE DAY'S WORK

Perez's workday starts in mid-afternoon. He is part of a team of coaches, artistic directors and therapists that ensures the cast is healthy – physically and physiologically – for each performance. The first order of business each day is a review of medical reports to determine any restrictions on cast members and report to the artistic team so they can make necessary adjustments in the show's lineup. Next, he does a variety of tasks that relate to the care, prevention and rehabilitation of athletic injuries. Perez also attends scene rehearsals, both on stage and in the training room, as well as provides therapy up until show time and between curtain calls. He alternates coverage responsibilities with the performance medicine staff members, and of course, there are responsibilities of documentation, updating medical files and communication with medical personnel that has to be completed daily.

"Each performer's needs are different; one of our focuses is prevention, so one particular performer's training might involve Pilates or to see the massage therapist. Physicians give us their guidelines, and we integrate the plan so that the performers can physically do the portion of the show they were hired to do," Perez said.

He vividly recalls one of his first consults after coming to KÀ. Aerial strap acts have performers flying over the audience from one side of the massive theater to the other. "Everything I knew about overhead shoulder and arm stress had to do with volleyball or baseball players or the javelin throwers back at Arizona State," Perez said.

"That was when I realized this job was taking me back to my grad school days, back to the mechanics to understand the workings of the shoulder, arm and upper body and how to go about making sure that stress doesn't cause injury."

The learning curve between sports and performing arts could have been steeper, but Perez credits a solid foundation in biomechanics from his graduate work at TTUHSC and a knowledge foundation in manual therapy. He is certified in active release techniques for lower extremities, and in corrective exercise training from the National Academy of Sports Medicine — skills beneficial to working for *Cirque du Soleil's* performance medicine department.

Instead, one of the greatest challenges was to understand the cultural differences regarding training and adapting to those techniques, Perez said. "That's what made coming to *Cirque* so attractive; this was new and different, and I knew I was going to learn something."

He did so in a baptism-by-fire pace. Shortly after Perez began, he filled in temporarily while his supervisor was on maternity leave. In the first year, Perez knew *Cirque du Soleil* policies and procedures, all 80 characters and the half-dozen cues for each one, all to reach his goal of being able to develop the integration plans for the performers to maintain the epic performances audiences expect from *Cirque du Soleil* shows.

IT'S SHOW TIME

On this particular Tuesday, Perez is covering the KÀ performance of the night. He watches from backstage as the expertly choreographed storm scene takes place on stage. The performers jump, tumble and dive from bow to stern of a 1,800-pound boat structure humanly manipulating the teeter tottering to simulate it being tossed to and fro on a stormy sea. One by one, the performers "fall" overboard, landing a floor below the stage onto a catch net. As they exit backstage, Perez and several stagehands nearby form a victory line and reward them with celebratory high fives and fist bump. Another crowd-pleasing act successfully and safely completed.

Throughout his shift, Perez takes the stairs for four perfectly synchronized trips between the performance medicine clinic on the second floor to various places backstage while another therapist watches the show on closed circuit from the office.

As with any sport, the potential for injuries exists. However, according to a 2009 study published in the American Journal of Sports Medicine analyzing five years of data from *Cirque du Soleil*, the rate of serious injuries is lower in the company than for many NCAA sports. Repetitive overuse injuries are common, Perez said, and present some of the greatest challenges for the performance medicine team. "It's 10 shows a week, and many of these guys are doing the same movements they've done for many years, not only here in the shows but as gymnasts and circus artists before this.

"We don't have an off-season that gives their bodies time to recoup so there has to be a greater emphasis on prevention."

Perez's job is to understand physiology and know the demands the performers will be putting on their bodies as well as their physical history. "I can still hear Dr. (Jean-Michel) Brismee (PT, ScD, associate professor of physical therapy in the School of Health Professions) all the time saying, 'Just because you have a knee problem, don't just look at the knee.' Working here, you have to take a step back and look at what is going on." Perez said. "And Larry Munger, (PhD, assistant professor of athletic training in the School of Health Professions) would say the same thing. In fact, I still talk shop with him if I need some help or advice on a treatment plan."

The workday is nearing an end as Perez steps quietly into the theater just before the twin sister's aerial strap act to observe the artist's techniques and mechanics on the holds and lifts. Perez pauses before his final trip back to his office and initiates the much-deserved applause for the aerial act as it has seemingly stunned the audience. Do you reward the awe-inspiring performance with applause or reverent silence?

"Sometimes they just need a little direction," Perez comments as he quietly slips backstage. "With any athlete, and for us too, one of the greatest rewards is all the appreciation and admiration. The performers are generous with that to us.

"I tell them they are lucky to have us. Of course they know I'm joking. That's one of the things I enjoy most about being here. I don't say working because it really doesn't feel like work. It's like we are all family."



"With any athlete, and for us too, one of the greatest rewards is all the appreciation and admiration. The performers are generous with that to us."



ONE BIG HAPPY FAMILY

Throughout the afternoon and between performances, cast and production crew were celebrating August birthdays, complete with a poster-board sized cake. Birthdays are not the only milestones marked. Chalkboard notes offer well wishes to an artist leaving the company. The family atmosphere, Perez said, held great appeal when he interviewed and is a big part of what has kept him with *Cirque du Soleil*.

A year ago, there were jokes about Perez's newfound love for coffee, particularly Starbucks, after the birth of his twin sons. "There were a lot of sleepless nights," Perez said, laughing.

But fatherhood, he said, was like walking into heaven. "Seeing my boys for the first time was an emotion I'd never felt before. There was this indescribable love for them and then for my wife, and then we got double that pleasure.

"It also gave me a whole new meaning and respect for the sacrifices my mom and dad made for my sister and me and the dreams and goals they set to make things good for us.

"That's what I want to do for my sons and my Cirque family."

Perez is driven by his self-imposed goals to this the epic show that continues to sell out even after a decade on stage. And he seems well on his way. Perez can talk shop with just about anyone on the KÀ team, from the artistic team to the carpenters. He knows, for example, how much granular cork it takes to cover the massive stage for the popular beach scene (350 cubic feet of imported Portuguese cork) and that it has to be cleaned for every performance and hydrated to specific conditions for the performers to have proper footing.

Cirque du Soleil will no doubt continue to push the envelope for its audiences, and Perez said he plans to be at stage right doing his part to ensure it is successful.



HEALTH CARE New hospital establishes public-private partnership that

New hospital establishes public-private partnership that will support expansion of the Paul L. Foster School of Medicine and enhance health care for El Paso region.

By Veronique Masterson | Photos by Raul De La Cruz and Warren Love

As the sun rises on The Hospitals of Providence Transmountain Campus, the teaching hospital's intricate steel structure is impressive. What's more striking than its size is the impact the hospital and 110,000-square-foot medical office building will have on health care in El Paso.

"This partnership opens the door to tremendous opportunities for the region, as well as educational support and growth for our students and medical residents," said TTUHSC El Paso President Richard Lange, MD, MBA.

Since 1975, TTUHSC and TTUHSC El Paso residency programs have accredited 967 resident physicians in El Paso. Of those, 25 percent or about 250 residents have stayed in El Paso. The Transmountain Campus will add new residency programs and provide 75 to 90 new residency slots.

"El Paso is woefully underserved and understaffed in most areas across the spectrum of providers, from technologists to specialist physicians," said TTUHSC El Paso Associate Dean for Clinical Affairs Michael Romano, MD, MBA. "This singularly unique opportunity allows us to 'grow our own,' meaning retain skilled, trained workers and meet the growing and unmet health care needs of the region."

Once completed, the 140-bed teaching hospital will become an additional TTUHSC El Paso clinical site, which is important for the continued accreditation of the Paul L. Foster

School of Medicine, and to support the expansion of its class size.

Under the medical school's nationally recognized teaching curriculum, students graduate patient ready and culturally sensitive. They begin interacting with patients by the second week of their first year in medical school, and they are required to learn Spanish. The curriculum also places a high premium on an appreciation and integration into care of the psychosocial determinants of health. "It is critical that our students have clinical experiences in a diverse patient population to fully appreciate the challenges and barriers to care and well-being," said Romano. "This new medical office building will provide diversity from a geographic and socioeconomic perspective."





Left: TTUHSC El Paso President and Paul L. Foster School of Medicine Dean Richard Lange, MD, MBA, participates in the ceremonial beam signing before it is placed on the building. Middle: Nicholas Tejeda, CEO, The Hospitals of Providence East Campus; Sally Hurt-Deitch, market CEO, The Hospitals of Providence; Henry "Hank" Hernandez, CEO The Hospitals of Providence Transmountain Campus; Monica Vargas-Mahar, CEO, The Hospitals of Providence Sierra Campus; and Richard Lange, MD, MBA. Right: The final beam is hoisted into place.

"Together, we will offer outstanding quality and exceptional service to northwest El Paso, southern New Mexico and Juarez, Mexico," said The Hospitals of Providence Market CEO Sally Hurt-Deitch. "The collaboration will facilitate the sharing of best practices among clinical leaders to further drive improvements in care."

The investment in new technology and medical research will enhance educational training in specialties such as emergency medicine, family medicine, internal medicine, obstetrics and gynecology, orthopedics, pediatrics, psychiatry and surgery. This collaboration will also provide patients with opportunities to participate in cutting-edge research, and faculty physicians will provide their expertise while they train those in residency. The Transmountain Campus also positions El Paso into becoming the regional health care hub, which translates into local economic growth. The new hospital will provide exceptional care for the area and create more than 300 jobs with a median income of \$45,000.

The campus and partnership were celebrated during a topping out ceremony, considered to be a construction milestone, Oct. 12, in far west El Paso. Hundreds gathered to sign a massive beam that displayed the American and Texas flags, along with a pine tree. More than 500 leaders representing TTUHSC El Paso, The Hospitals of Providence, Robins & Morton and the community watched as the final beam was placed on the 2,050 ton steel structure. Robins & Morton is managing construction of the project, with design by HKS Architects.

The Hospitals of Providence and TTUHSC El Paso have also recently collaborated to develop the city's first acute care based geriatric behavioral health unit at Memorial Campus. The \$2.1 million unit features 12 private rooms and community space for patients 65 years of age and older who require both acute care and psychiatric support. The unit also provides an additional site for TTUHSC El Paso's Department of Psychiatry residency program.

"This is an exciting time for health care in our region," said Lange. "We look forward to providing excellent educational opportunities, quality training and superior care."

The Transmountain Campus is expected to open in early 2017.



EASE ON

Judy Davis is somewhat of an expert when it comes to weight-loss solutions. From diet drugs and exercise programs to low-calorie liquid and whole food Mediterranean diets, she has tried just about all of them to combat her weight problem.

But unlike most people, Davis' weight never went away. Instead, the pounds continued to increase over the years. She was diagnosed in her mid-20s with polycystic ovarian syndrome (PCOS), one of the most common endocrine disorders in women. She was prescribed known treatments for PCOS, but no one knew the best way to treat the weight problem.

"I knew that what worked for other people didn't work for me," said Davis, a public health nurse for the City of Lubbock. "I also knew from continually researching PCOS that no one had a solution."

At 62, Davis weighed 309 pounds and walked with a cane for support. Despite her constant efforts to lose weight, Davis knew she was losing her health and quality of life.

"I was morbidly obese, facing early retirement, always tired, not sleeping well and very discouraged," she said. "My vital signs were in the critical zone and were worsening. My (body mass index) BMI was off the charts. My life expectancy rate was dropping rapidly. I was unable to play with my grandchildren or even do some basic activities of living. You can imagine the toll the weight was taking on my 5'2" body and joints. I was praying hard for an answer and considering bariatric surgery as a last resort."

While reading the Lubbock Avalanche-Journal one day in 2014, Davis learned about a diet designed for women with PCOS. Jennifer Phy, DO, (Resident '01) assistant professor in the School of Medicine Department of Obstetrics and Gynecology and a physician in the school's Center for Fertility and Reproductive Surgery, is the source behind the diet. (Phy's research was featured in the Winter 2014 issue of *Pulse*). Davis contacted her office for an appointment, hoping this was the answer for which she had been praying.



Pinpointing the Problem

According to the PCOS Foundation, 5 to 10 percent of women of childbearing age are affected by PCOS. It is the No. 1 cause of irregular menstrual cycles and is responsible for 70 percent of infertility issues in women who have difficulty ovulating.

Women with PCOS tend to have high testosterone levels, which can also lead to symptoms such as male-pattern hair growth, scalp hair loss, acne, increased appetite, impulsive behavior and weight gain.

Phy, who has researched the disorder for several years, said because of the contributing factors in PCOS, many women find it hard to shed the pounds.

"About 80 percent will have insulin resistance that causes them to gain weight without them doing anything wrong," Phy said. "The suggestion of diet and exercise has been there a long time, but to find a successful diet has been tricky."

Like Davis, Ali Pohlmeier, PhD, knows firsthand what it's like to have PCOS. She was diagnosed when she was 21 years old.

"The quality of my life is dramatically improved," Davis said. "I'm better able to do my job. My vital signs, BMI, and sleep have improved a great deal. I feel better physically and mentally and enjoy life again."



"The doctor, she didn't tell me anything about it," said Pohlmeier, women's health medical science liaison for Teva Pharmaceuticals. "She just said, 'You're going to have to watch your weight."

Studying nutrition at Texas A&M University at the time, Pohlmeier began researching PCOS-related weight issues to create a special diet plan for herself. Eventually, she read about the insulin resistance many PCOS women experience.

"So I started thinking, 'Well, what specific foods cause you to spike insulin more than other foods?'" Pohlmeier said. "So I started slowly cutting a lot of those things out."

Pohlmeier eliminated foods such as milk and bread from her diet and instead focused on lean meats, fruits and vegetables.

"It's prevented me from really having any of the issues associated with PCOS. And I thought if it works for me, maybe it would work for other women, too."

She approached Phy in 2011 while considering a dissertation for her doctorate in nutrition at Texas Tech University. Pohlmeier wanted to test the diet on other women with PCOS to see if they could also reduce weight and decrease symptoms associated with the disorder.

Phy agreed to the proposal, and she and Pohlmeier, along with Phy's research team, studied 28 women of reproductive ages over a two-year period. The participants were asked over the course of eight weeks to cut dairy products and grains from their diets but were allowed to consume as much as they wanted of lean meats, non-starchy vegetables, fruits, nuts and seeds.

Phy knows that cutting dairy products and grains is a tall order, but the reasoning behind it is worth the challenge.

"For most women with PCOS, their bodies just can't handle those things, and they almost triple store them as fat," Phy said. "Their bodies just can't break down the dairy and grains properly."

Phy and Pohlmeier's theory proved correct. Of the participants, 24 completed the program and on average, lost 19 pounds in eight weeks.

The success of the study was noted in the Lubbock newspaper in August 2014, which led Davis into Phy's office, excited to give the diet a try herself.

Prescription

Judy Davis, RN, refuses to call her new lifestyle a diet but instead thinks of it as a prescription for treating PCOS.

Here are a few of her strategies for success:

Find Your Favorite Foods. Judy's include:

Burger with cheese on lettuce leaves for "bun;"

Steak with sautéed mushrooms and onions;

Scrambled eggs with ham or a little bacon;

Crab salad – mayo, imitation crab, diced celery/red pepper/black olives, spicy mustard, grated cheddar cheese, salt, pepper;

Fajita salad - lettuce, cheese, chicken/red peppers/onion, black olives, avocado, tomatoes, roasted red pepper dressing;

Laughing Cow Swiss cheese wedges smeared on an apple or pear;

Chocolate Smoothie - almond milk, unsweetened cocoa powder, frozen banana slices, cinnamon; and

Strawberry "milkshake" - frozen strawberry slices, almond milk, extra firm tofu chunks for creaminess, stevia and vanilla.

Avoid Pitfalls:

"Hidden" sugar in foods. You have to read the label;

Not eating when hungry will negatively affect your metabolism; and

Not eating enough protein and fats to feel full and satisfied.

Establish Habits that Make Life Easier:

A grocery list and weekly menu for easier shopping and food preparation;

An "emergency stash" – frozen and canned ready to eat meats/ vegetables/fruit and cheese/nuts/dried fruit/almond butter;

Preselecting your menu items before dining out;

Adding avocado or guacamole as a side dish; and

Meet your calcium needs with almond milk or soymilk, cheese, vegetables and tofu (tofu makes smoothies very creamy).

Present Challenges:

Increasing exercise levels to build my muscle, support joints and enhance mobility and balance;

"Keeping on keeping on" to lose the remaining 70 pounds; and

Finding even more ways to enjoy life as my body heals and changes.



A Changed Life

Upon their first meeting, Phy immediately noticed the extent of Davis' poor health.

"She just looked deflated," Phy said. "She was barely able to walk. So we helped her in and helped her sit down in my office. She had to use a cane, and her blood pressure was terrible."

But there was something more that Phy noticed about Davis, and that was her optimistic outlook.

"I definitely could see a spark in her," Phy said, "and I felt like she was going to be motivated, and she was serious about this."

So Phy told Davis more about the diet and the research. She explained the insulin resistance and how it was probably the cause for Davis's failed diet attempts in the past.

Davis said she broke down in tears because someone finally understood. "It all made sense," Davis said. "I was so relieved and so grateful that these two brilliant professionals had put all this together."

Phy gave Davis a booklet about the diet, which included insight into PCOS, what to eat and not eat, and recipe examples. Like the participants in the study, Davis was instructed to cut all dairy and grains from her diet, but to eat as much she wanted of lean meats, non-starchy vegetables, fruits, nuts and seeds.

After only a couple of weeks, Davis said she began to notice a difference in her health. So much so, that eliminating dairy and grains wasn't as hard as she originally thought it would be.

"It doesn't feel like a diet, to be honest," Davis said. "Dr. Phy said, 'Eat when you're hungry, but eat what's on my list.' And she's right. I've never been hungry."

Four months into the diet, Davis was able to get rid of her cane. After six months, she had lost 50 pounds. Now, 14 months since her first visit with Phy, Davis has lost 96 pounds and decreased her BMI by 19 points. Her mental well-being and self-esteem have improved as well.

"The quality of my life is dramatically improved," Davis said. "I'm better able to do my job. My vital signs, BMI and sleep have improved a great deal. I feel better physically and mentally and enjoy life again."

Since starting the diet in September 2014, Davis has visited Phy's office every three months for a checkup. Phy said her staff no longer has to help Davis inside; but instead, Davis greets everyone with a big smile.

"It's just been amazing, like watching a flower grow and bloom, to see her from visit to visit," Phy said. "It's been such an inspiration to see her change and get healthier."

Davis said she enjoys doing things now that she wasn't able to do before her weight loss, from basic activities of daily living to fun things like playing with her grandchildren. She said her family has been incredibly supportive. One of her favorite compliments was when her 9-year-



Judy Davis' health was failing, and she weighed more than 300 pounds in December 2013.

old granddaughter proudly explained that her "Ma-Ga" had lost the equivalent weight of her and her 6-year-old brother. One of her daughters proudly refers to her as "the incredible shrinking woman."

Davis admits that sometimes it is a challenge to eat the right things, such as when she cooks for her husband or when she goes out for lunch with friends. But to avoid temptation, Davis has learned strategies like keeping an " emergency stash" of healthy foods at home and looking at an online menu before arriving at a restaurant, already knowing what she will order.

She said the diet has become second nature to her, and she plans to lose another 70 pounds.

"You feel so much better, the temptation to eat things that are not healthy for you is much less," Davis said. "I'm not an extraordinary person in any fashion. The nutrition plan is extraordinary. It is made for and works for women with PCOS; my body loves being nourished. That helps me stay on it."

Davis's diet-hopping days are over. Finally finding the nutrition plan that treats PCOS, she said she wants to encourage others who are experiencing the same struggles.

"I'm really excited for young women and for girls entering puberty who are diagnosed with PCOS. There is now this wonderful option to help them live a healthier, happier and longer life," she said. "Now I am regaining my health and quality of life, thanks to Dr. Phy and Ali Pohlmeier."



Visit PULSE online to read the published research article about treating PCOS-related obesity and co-morbidities with low starch/low dairy diet.
ALUMN

Mhat's Best FOR THE PATIENT

Alumna Challenges Hospitals to Prevent Patient UTIs

BY NADIA M. WHITEHEAD

Urinary tract infections (UTI) are a serious problem. They're painful, uncomfortable and potentially dangerous.

Cindy Hernandez, BSN, RN, ('13) is especially troubled when she sees patients succumb to the unpleasant infections during hospital stays.

"If a patient gets a UTI, it causes a longer hospital stay, which is not good for the patient financially or health wise," said Hernandez, an intensive care unit nurse at University Medical Center of El Paso (UMC). "UTI complications can lead to sepsis and can be fatal."

Contracting a UTI in a hospital, however, is a common problem, she said. Urinary catheters, tubes placed in the body to collect urine, are the main culprit. Seventy-five percent of UTIs acquired in hospitals are related to urinary catheters, according to the Centers for Disease Control and Prevention.

After learning about the detriment of catheter-associated UTIs, Hernandez, an alumna of TTUHSC El Paso Gayle Greve Hunt School of Nursing, decided to create an action plan. "I thought, 'We need to find a way to prevent UTIs; it's within our power as hospital nurses," she said.

Hernandez and Mariam Yazdi, BSN, RN, also an ICU nurse at UMC, were soon sifting through journals to learn how to best tackle the problem at UMC. Their work resulted in specific guidelines for hospital nurses to reduce catheter-associated UTIs.

The guidelines include cleaning patients' catheters with antimicrobial soap at least three times per shift and never letting urine collection bags get more than two-thirds full. The two also recommended labeling the bags with the date that the urinary catheter was first put in.

"That serves as a reminder to doctors and nurses of how long that catheter has been in," Hernandez said. "If you're in the hospital for 10 days, we need to know if you've had

continued on page 36...

"AS NURSES, WE mud to advocate FOR PROMPT REMOVAL OF THESE CATHETERS IF IT'S GOING TO BENEFIT OUR PATIENTS; WE NEED TO KEEP IN MIND what's best for the patient."

the catheter in for that long so we can consider if you still need it; the less time it's in, the less likely you'll get an infection."

Hernandez and Yazdi were invited to present their work at the 2015 Nurse Residency Conference of the American Association of Colleges and Nurses (AACN). Theirs was one of only 40 research projects nationwide selected for display at the conference.

Hernandez said presenting at the conference was an empowering experience. Even though she was a rookie nurse, physicians and experienced nurses were listening to her advice.

But her work didn't stop there.

While in the nurse residency program at UMC, Hernandez presented the guidelines to local nursing educators, hospital nurses and physicians. Then, she took it a step further. She and Yazdi began auditing the hospital's nurses to ensure they were following the guidelines and properly maintaining patients' catheters.

"We wanted to make sure that we as nurses weren't instigating these infections," Hernandez said.

The approach worked.

In January 2015, the number of UTIs reported by the hospital dropped to zero.

Hernandez credits her education and involvement in student organizations at TTUHSC El Paso for making her a passionate and courageous nurse that's not afraid to speak up.

"I had to speak in front of nurses that have been working for 10 to 20 years; it was intimidating," she said, recalling her presentations at UMC.

As a student at TTUHSC El Paso, Hernandez was encouraged to get involved in the Texas Nursing Student Association. She eventually was elected vice president of the organization, which she says, gave her the confidence and experience to take on more leadership roles.

The nurse residency program at UMC continued challenging her after graduation. It set the tone of her career to take on an active role as a new nurse and go beyond "just clocking in and out of every shift," Hernandez said.

Laura Gorby, RN, a TTUHSC El Paso nurse educator, saw Hernandez grow as a caregiver and leader when she was enrolled at the university, calling her an exceptional student full of integrity.

Gorby said she had no doubt Hernandez would go on to become a great nurse.

And she was right; Hernandez's passion for patients still shows. Even though her research project ended in January 2015, she still advocates for better care of catheters at UMC.

Hernandez said, "As nurses, we need to advocate for prompt removal of these catheters if it's going to benefit our patients; we need to keep in mind what's best for the patient."

friends we'll miss

Marjorie Asbill, SLP, (SHP '53) died Aug. 8,
2015. Read more about her life and work in
the Summer 2015 issue of *PULSE*.Shaw
died StateCaleb Brown, MSN, (SON '12) diedof Psy
2015.Oct. 26, 2015.2015.Meredith Morton Kluck, SLP, (SHP '05)
died Oct. 6, 2015.nity r
worldBaseem Kudsi, PharmD, (SOP '11) died
June 12, 2015.Geral
died State

Shawna Thomas Nunez, PharmD, (SOP '12) died Sept. 10, 2015.

Vivek Singh, MD, chairman of the Department of Psychiatry at TTUHSC El Paso, died Oct. 31, 2015. He joined the university in June 2015, and during his brief time built strong community relations as well as the foundation for a world-class psychiatry department.

Geraldine Alexandra Trevino, MSN, (SON '10), died Sept. 21, 2015.

Gifts **in memory of** or **in honor of** are routed to the desired location of the donor through the TTUHSC Office of Institutional Advancement, 3601 Fourth Street, Stop 6238, Lubbock, Texas 79430.

Crisp honored by Texas Rural Health Association

Marcie Crisp, DNP, (SON '13), received the 2015 Texas Rural Health Association Rural Health Academic and Preceptor Award. Crisp is a family nurse practitioner at Eaker Family Medicine in Sweetwater, Texas, and an assistant professor for the University of Texas at Tyler.

ALUMNIROUNDS



Crenshaw Named to National Breastfeeding Committee

Jeannette Crenshaw, DNP, RN, (SON '11), assistant professor in the School of Nursing, began a three-year leadership position in August with the United States Breastfeeding Committee (USBC). She will serve consecutive years as chair-elect, chair and past chair for the organization. The USBC is a coalition of more than 50 organizations that drive efforts to support policy and practices for breastfeeding in the United States.

Nursing Alumna Completes Deployment

Army Capt. Rory Walton (SON '10) completed a six-month deployment in October aboard the USNS Comfort. Walton, an operating room nurse assigned to Walter Reed National Military Medical Center in Bethesda, Maryland, was part of a humanitarian mission to the Caribbean and Central and South America. The mission was a U.S. Southern Command-sponsored and U.S. Naval Forces Southern Command/U.S. 4th Fleet conducted deployment focused on civil-military operations. It included providing medical, dental, veterinary and engineering support, along with disaster response preparation, to partner nations. More than 130,000 patients were cared for aboard the USNS Comfort, which has a full spectrum of surgical and medical services.





Robinson to Serve on TMA Foundation Board of Trustees

The Texas Medical Association Foundation has appointed E. Steve Robinson, MD, (SOM '94) to its Board of Trustees. Robinson, a Lubbock family physician with Covenant Health System, began his three-year term this summer. He has been a member of the TMA for 20 years and has served in various roles. He currently chairs the committees on Rural Health and Membership. Robinson is also a member of several other medical organizations including the Lubbock-Crosby-Garza County Medical Society, where he served as president in 2011. The foundation is the philanthropic branch of TMA, established to support the public health and science priority initiatives of the association. It also serves to connect medicine, business and community groups that carry out programs at the local and state levels.

Parker Elected to Leadership Role of Emergency Physicians Organization

Rebecca Parker, MD, FACEP, (Resident '98) is serving a one-year term as president-elect of the American College of Emergency Physicians and will lead the organization beginning next fall. She set two goals for her term as president-elect: establish emergency medicine as the nucleus of a new acute care continuum and enhance generational, racial and gender diversity within the specialty.

Parker previously served as chair of the ACEP's board of directors. She is an attending emergency physician with Vista Health in Waukegan, Illinois. Additionally, Parker is senior vice president of Practice and Payment Integration for Envision Healthcare, a provider of physicianled, outsourced medical services, and executive vice president of Leadership Development and Education for EmCare, a division of Envision responsible for outsourced facility-based physician services. Parker also is a clinical assistant professor for the Paul L. Foster School of Medicine Department of Emergency Medicine.





1 Students tested their "surgical" skills by playing the board game Operation and learned about alumni activities during Welcome Back events held in early fall on each of TTUHSC's campuses. 2 About 1,000 "grooved" the night away in glow-in-the-dark gear at the TTUHSC EI Paso Groove & Glow 5K, which coincided with Texas Tech University's homecoming. 3 Sheriff Woody and Jessie joined a host of "famous" couples at the TTUHSC annual Halloween party hosted by TTUHSC President Tedd L. Mitchell, MD, and Janet Torneilli-Mitchell, MD. 4 TTUHSC EI Paso welcomed the holiday season in style with music and a light show for the community. 5 More than 70 Leadership Texas members from across the state visited TTUHSC EI Paso this summer. The organization is dedicated to developing women as leaders. Nine of the members were from El Paso. 6 TTUHSC alumni gathered in several Texas cities this summer for the annual receptions. These events provide alumni an



opportunity to network with colleagues as well as visit with university administrators. (7) Red Raider Reels, a new free movie series hosted by the TTUHSC EI Paso Office of Institutional Advancement, was a huge success with hundreds attending the outdoor public event every Friday in September and October. Families enjoyed movies like Big Hero 6 and Tomorrowland while student organizations raised funds. (8) Incoming medical students received their ceremonial first pair of scrubs at the annual Scrub Party, hosted by the Office of Alumni Relations and the School of Medicine. The event, established by Brad Snodgrass, MD, ('88) and Priscilla Carter Snodgrass, MD, ('88) has become a school tradition. It is held annually the day after the White Coat Ceremony. (9) Members from the School of Pharmacy Class of 2019 received support from alumni through the "Adopt a White Coat" initiative, spearheaded by the school's Alumni Association Board. The board strives each year to provide every incoming pharmacy student with a complimentary white coat. (10) Alumni and future alumni gather under the big top before TTU's homecoming game against lowa State for the annual tailgate party. (11) The Paul L. Foster School of Medicine at TTUHSC EI Paso welcomed 104 students to the Class of 2019 during its annual White Coat Ceremony. The event marks a student's transition from the study of preclinical to clinical health sciences.











TTUHSC Alumni Association National Advisory Board Holds First Meeting



The TTUHSC Alumni Association National Advisory Board met

for the first time in October. TTUHSC and TTUHSC El Paso Presidents Tedd L. Mitchell, MD, and Richard Lange, MD, MBA, appointed the inaugural board with input from each school's administration.

At their inaugural meeting, board members received a briefing from each president on the state of the universities. The first task for this team of 14, two representatives from each school, will be to adopt bylaws for the association. They will meet in April at the School of Pharmacy in Dallas, Texas.

Visit PULSE online to learn more about each of the board members.



Pictured (from left): Matthew Grisham, PhD, (GSBS '82); Bob Dent, DNP, MBA, (SON '10); Logan Price, AuD, (SHP '13, '09); Jason Ross, MD, (PLFSOM '13); Gregory Thompson, MBA, (SHP '02); Chris Schwab, PhD, (GSBS '02); and Amberly Hix, PharmD, (SOP '10). Not pictured: Tom Fogarty, MD, (SOM '80); Cynthia Garza, MD, (PLFSOM '14); W.H. Harris, MS, BSN, (GGHSON '13); Cynthia Jumper, MD, MPH, (SOM '88); Stephanie Lomuscio, BSN, (GGHSON '14); Cynthia Powers, DNP, (SON '14); and Sara Robison, PharmD, (SOP '04);







New Faces in Alumni Relations

Julie Doss, JD, and DaLana Williamson have joined the Office of Alumni Relations and, along with Laura Ray, will be leading efforts for the newly formalized TTUHSC Alumni Association.

Doss is the new senior director for Alumni Relations. She comes to TTUHSC from the Texas Tech University School of Law where she was the associate dean for external relations. She graduated from Texas A&M University with a Bachelor of Business Administration in Management. She earned her Juris Doctor from Texas Tech University School of Law.

Williamson will manage memberships for the TTUHSC Alumni Association. Previously, she was the senior administrator for Texas Tech Foundation Inc. for the TTU System. She received her Bachelor of Business Administration from Texas Tech University.

Ray has been with the Office of Alumni Relations for three years. She coordinates alumni events and activities and keeps alumni connected through the TTUHSC Alumni Association Facebook page. She received her Bachelor of Arts in Public Relations from Texas Tech University. The Building Futures campaign for the Legacy Plaza provides support for future alumni through TTUHSC endowed scholarships. As a permanent tribute to your donation, you can have your name engraved on a brick to be placed on the walkway or on a plaque for a bench or light post.

The plaza is located in front of the Preston Smith Library of the Health Sciences on the Lubbock campus.



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ALUMNI PROFILES SCHOOL OF HEALTH PROFESSIONS



Vinter 2016

EARNING HER STRIPES: Jessica Brashear, CPM, CLS, doesn't mind a challenge. During her enlistment in the Army in the late '90s, Brashear chose a division within combat engineering that was newly open to women.

"There were only about six females in the entire job category," Brashear said. "It was very interesting."

Though the training was tough at times, and few accommodations were made for women, Brashear said it was a great experience. She became the first female combat engineer to receive the commanding general's award.

FINDING THE RIGHT CAREER: After completing her military service, Brashear chose to pursue a college degree; Texas Tech University was her choice. However, she wasn't entirely sure what to study. To pinpoint an interest, she enrolled in a variety of classes eventually realizing her passion for math and science.

"I figured I probably needed to find a career that utilizes this," Brashear said. "I started looking into what (Texas) Tech offered, and I found the clinical laboratory science program (at TTUHSC). It seemed like a perfect match."

Brashear has worked in several labs in Lubbock, including at Covenant Medical Center, UMC Health System and the Veterans Affairs Community Based Outpatient Clinic. She said she truly enjoys the opportunity to play a vital role in clinical settings.

"I love the science behind (medicine)," Brashear said. "About 70 to 90 percent of what a doctor tells a patient or diagnoses them with comes from the lab. I think that's pretty neat."

GOING BACK TO WHERE IT ALL STARTED: Now Brashear is living her dream on the very campus she found it. In 2014, she was hired as the laboratory manager for TTU's Student Wellness Center, a department of the TTUHSC School of Medicine. She oversees daily operations of the center's clinical laboratory, including training employees, compliance, workload reports, quality assurance and proficiency testing.

Brashear's favorite part of the job is interacting with the patients.

"I like working with the future generation," she said. "It's neat to ask about their majors and hear how they got interested in what they're going into. It's a complete change of pace."

But most of all, Brashear said she enjoys being part of the Red Raider community once again.

"I am an alumni, and I love Texas Tech, so it seemed like a perfect fit," Brashear said. "It ended up being the perfect move."

BY HOLLY LEGER

Jessica Brashear, CPM, CLS

Laboratory Manager Texas Tech University Student Wellness Center, Lubbock, Texas Graduate: 2010, 2009

ALUMNI PROFILES SCHOOL OF NURSING



SWITCHING CAREERS: Originally, Vicente Martinez, BSN, RN, EMT-P, had plans to attend TTUHSC and become a paramedic. However, upon enrollment, he became interested in nursing and switched programs. After obtaining his bachelor's degree in nursing, he then enrolled in South Plains College and earned an associate's degree and his certification as a paramedic.

CHOOSING FLIGHT: "I received very good, hands-on training while in the School of Nursing, and, because of that, I grew to be very passionate about trauma care," Martinez said. "As a flight nurse, we mainly deal with critical care transports, and I knew that I wanted to be involved in helping with such cases.

"I have been very blessed in that God has led me to the career that I have now."

USING EXPERIENCES TO EDUCATE: Martinez serves as base manager and education coordinator for AeroCare Med-Trans in Lubbock, Texas.

"As the base manager, I have flight duties and responsibilities. I'm also a flight nurse and paramedic, so I work as a flight crewmember and paramedic at times. I am also responsible for the coordination of about 11 people under me, making sure operations are safe and compliant.

"However, I'm also the education coordinator, which means I help maintain organizational protocols and help coordinate our yearly education for our 80 employees. I make sure all protocols are reviewed and that the team keeps up with the latest standard care of practice, so I'm continually updating our evidence-based best practices and helping train employees every quarter."

Martinez is also a preceptor for the School of Nursing and said he enjoys helping TTUHSC students and serving the institution that provided him with a first-rate education and notable experiences.

BY KARA BISHOP

Graduate: 2001

ALUMNI PROFILES SCHOOL OF PHARMACY



THE BIG SWITCH: Despite the challenges of working with a start-up company, let alone in an area of the industry not as widely known, Amberly Hix, PharmD, says the rewards of moving to a compounding retail pharmacy have been worth it. "I feel like I've done a great deal more of learning and certainly more in the research realm," said Hix, who worked in retail pharmacy the past two years.

PERSONALIZED MEDICINE: Compounding is a process in which medications are customized for each patient. RSVP Rx is a retail pharmacy that specializes in non-sterile topical medications. Compounded preparations include but are not limited to hormone replacement, immunotherapy, topical antihistamines, topical pain and scar treatments. "One challenge with oral medications such as those used for pain is getting the body to metabolize it for efficiency with minimal side effects," Hix said. "And, of course, the possibility of addiction." Compounding these into topical agents helps minimize many of the side effects, making it a more advantageous alternative to traditional oral therapy, she added.

RSVP Rx also understands the importance of pharmacogenetic research, a form of genetic testing, to determine how a particular person will metabolize a particular medicine. With this information, Hix said, the physician can prescribe a medication for compounding that is more effective for the individual patient.

And the company assists in sponsored observational studies. One particular study records participants' perceptions of effects of using a topical pain medication on pain and daily activities. The results provide formative data for the industry, Hix said.

AMBERLY HIX, PHARMD Pharmacist in Charge RSVP Rx, Lubbock, Texas Graduate: 2010 TTUHSC Alumni Association National Advisory Board member

SISTERLY LOVE: Hix's sister, Staci Hix-Hernandez, MD, (SOM '03) is the reason she switched to pharmacy. During her studies in nutrition, Hix took a food-drug interaction class that captivated the sisters' conversations. She also had the opportunity to shadow her sister, who was in medical school at the time, and discovered an interest in the relational role a pharmacist has with the patient in addition to being a medication expert.

TAKING ONE FOR THE TEAM: Hix was within one semester of earning a degree in nutrition when she took a break from school after being selected as a Dallas Cowboys cheerleader. "It was something I always wanted to do," she said. "I knew I would have regrets if I didn't. I also knew I could complete my education when my time with the Dallas Cowboys was through; which is what I did."

RIGHT WHERE I BELONG: Hix said the research aspect of her current position has her right where she belongs. "I've never been known to turn down an opportunity to do something different, and this setting just felt like the right fit for me. I like the idea of putting data and numbers behind practices that we have been using for years," she said. "I like to think of it as bringing 'new light' to an 'old school method."

BY KARA BISHOP AND DANETTE BAKER

ALUMNI PROFILES GRADUATE SCHOOL OF BIOMEDICAL SCIENCES



SPREADING HOPE: Having three children of her own, Sunday Crider, PhD, understands the joys of motherhood. And as the chief scientific liaison at 3 Sisters Surrogacy, it is her goal to share that joy with other families hoping to conceive.

"There are so many wonderful aspects of being involved in surrogacy," Crider said. "For many families, this is the very last chance to have a child of their own. The reluctant hope becomes the overwhelming joy once that baby is born."

Crider said the families aren't the only ones who experience the elation from a baby's arrival.

"The gestational surrogates are so thrilled from the moment they get a positive pregnancy test," Crider said. "They feel incredibly blessed to be able to help the couple on this journey."

IMPROVING THE INDUSTRY: Crider and her business partner, CEO Mary Fusillo, RN, BSN, MS, started 3 Sisters Surrogacy in 2013. After years of experience in the clinical infertility setting, the two felt there was a lack of standardization in the third-party reproduction realm, and they set out on a business venture to improve it.

They work with an organization called SEEDS (Society for Ethics in Egg Donation and Surrogacy) to help write ethics standards for the surrogacy industry, which Crider says currently has no governing regulations.

"Surrogacy has often been seen as the Wild West of the assisted reproduction world," Crider said. "I appreciate seeing, and am excited to be a part of, third-party reproduction professionals coming together to create standards that will provide guidance for agency owners, clinicians, mental health professionals and attorneys that deal with surrogacy and egg donation."

USING PRIOR KNOWLEDGE: Before starting 3 Sisters Surrogacy, Crider worked as an embryologist in Dallas and became a boardcertified lab director. She managed a clinic for many years and still serves as an off-site director for a program in Phoenix.

Crider says that her years of experience working in the infertility program are valuable when meeting physicians and educating patients about the assisted reproduction process.

"Having a clinical background, we have a great understanding of what these families have experienced, often struggling for years with infertility and loss," Crider said. "The hardest challenge for me is seeing the disappointment on the faces of these families when fertility treatments don't work. Being a mother myself, I want all my patients to have that opportunity."

BY HOLLY LEGER

SUNDAY CRIDER, PHD

Chief Scientific Liaison 3 Sisters Surrogacy, Dallas, Texas Graduate: 2000

ALUMNI PROFILES SCHOOL OF MEDICINE



NO LONGER SOLO: Maurice Wilkinson, MD, is learning to enjoy Thursdays, her one day off from seeing patients at the Lavaca Family Medical Clinic in Hallettsville, Texas. For most of her 38 years in medical care, she has managed a solo practice, which included house calls; 35 of those have been just up the road in Shiner, Texas.

STILL MAKING HOUSE CALLS: Wilkinson hasn't, however, given up making house calls. The personal relationships with patients you see at the grocery store, post office and in your clinic were part of reason Wilkinson chose family medicine and, more specifically, to practice in a rural area.

"I can treat so many of my patients in their homes, and that alleviates many of the hardships on them. Many of them still farm and ranch, so their home is also their place of business. Taking time to see me means loss of time on the job. Some of my other patients are more than 100 years old, and a trip to the doctor is extremely tiring for them in addition to the hardship it places on their caregivers.

"It's just much simpler for me to go to them. I also get to see how they function in their home. More than once I've seen a patient with extreme weight loss only to find there was no food in the home."

HIGHER CALLING: After caring for multiple generations of family members, Wilkinson wanted to be more than a physician to her patients. In January 2014, she enrolled in the master's degree in chaplaincy and pastoral care at the Episcopal Theological Seminary of the Southwest in Austin. MAURICE WILKINSON, MD Family Medicine Physician Lavaca Family Health Clinic, Hallettsville, Texas Graduate: 1976 National Rural Health Practitioner of the Year 1993 School of Medicine Distinguished Alumni 2002

"I started feeling an intense call to be useful to people in a different way," she said. "I am especially concerned about the dying and how to respond to those in a crisis. Are they afraid? Are they in pain?

"You can't separate emotional and physical health. The two together is what makes a person whole again."

BACK IN THE SADDLE AGAIN: Having backup in her clinical practice has once again given Wilkinson an opportunity to get back in the saddle. With an equal amount of pride, she describes her other life passion: showing paint horses. She is a multiple World Champion Equestrian and, after a break to recover from an accident earlier this year, Wilkinson is ready to hit the trail once again.

BY DANETTE BAKER

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"Thank you not only for your unbelievable scholarship, but also for everything you have built here in El Paso. Every time one of the students helps a patient, it is in large part due to you."

- Michael Mullarkey, Class of 2019



"I am eternally grateful to be a student at this school and have this scholarship to support me. I don't think I can ever thank you for having such a significant impact on my life. Thank you from the bottom of my heart."

- Taylor Bramblett, Class of 2018

During a luncheon in September, 75 Foster Scholar recipients personally thanked Paul L. Foster, an El Paso business leader, for his contributions to the medical school that bears his name. They honored him with handwritten notes that described how his support has changed their lives.





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The making of a well-rounded student

MONISH MAKENA, PHD CANDIDATE, GRADUATE SCHOOL OF BIOMEDICAL SCIENCES

hen I first came to TTUHSC, I was the perfect example of the stereotypical research geek. I spent 13 hours a day in the lab, and then just went home and slept – seven days a week. That was such a contrast to the social kid I was back home in India. Here, I was very focused on my research work and would have told you that's how I planned to spend the rest of my life.

If you were to meet me today, however, you might find that hard to believe. Because of the opportunities in student engagement that I have been afforded at TTUHSC in addition to the excellent academic training, not only am I more like myself again, I have also gained a confidence that already has proven invaluable to my work in research.

When I was looking for a master's program, I wasn't certain if I wanted to continue in the course of my undergraduate work in biotechnology or pursue another area of research. I came across the joint program between Texas Tech University and TTUHSC where you complete your master's coursework and then work for a year in a research lab. It seemed like the perfect opportunity – other than it was 10,000 miles from my home in Visakhapatnam, Andhra Pradesh, India, and I had never been to school further than a 10-mile radius from there.

I was much impressed by what I learned about the joint program and the researchers working here at TTUHSC, thanks to Google! I applied, was accepted to the program and also received a scholarship, one of eight I have been awarded during my studies here.

Coming to Lubbock, Texas, was one of the best decisions I have made.

Following my master's coursework, I applied to join the lab of C. Patrick Reynolds, MD, PhD, director of the School of Medicine Cancer Center. I was drawn to his reputation nationally and internationally for his work in alternative treatment options for pediatric cancers and for his expertise in clinical trials. As a graduate research assistant in Reynolds' lab, I was involved in preclinical studies of novel treatments for rhabdomyosarcoma, a type of cancer that forms in muscle tissue. In preclinical models, we reported a better response to a novel formulation for a chemotherapy drug used in treatment, which is currently being tested through a Phase 1 clinical trial.

Fortunately, I found my research niche, and Reynolds liked my work and has allowed me to pursue my doctoral studies in his lab. I'm now looking at the effectiveness of combining an approved chemotherapy drug with a novel agent to improve survival rates for those diagnosed with T-cell leukemia and lymphomas. The research I have been involved with here at TTUHSC has already been published in two leading cancer journals, and additional publications are in the pipeline.

I totally love the high you get in research. There is a joke in this field that you may fail in 99 percent of your attempts, but that I percent you don't is enough to keep you going until that next high. That's why it wasn't hard for me to spend most of my waking hours in the lab.

As a graduate research assistant, I also learned about the Student Government Association (SGA) and had the opportunity to serve as a senator in 2014-2015. Before the end of the year, I had joined 12 SGA committees. This year, I was elected to serve as vice president of communications. With each of these experiences, I realized I was making a difference in the student body of



Monish Makena is a PhD candidate in the Graduate School of Biomedical Sciences. In addition to his service through the Student Government Association and Our Legacy Now Student Foundation, he also is on the President's Select, an ambassador program for TTUHSC.

this great university, and it was also making a difference in me. I have gained confidence in public speaking and the ability to concisely organize my thoughts to present them clearly to a group and discovered political correctness is more than just a buzzword.

These opportunities helped uncover skills I had buried and ones that will be great assets in my career as I present my research to colleagues and before grant-funding organizations. I've also discovered there are possible career avenues for me in research administration that I had never before considered.

Finally, my academic career at TTUHSC would not be complete had I not taken advantage to join Our Legacy Now Student Foundation, which I learned about through my involvement in SGA. I was most interested in this philanthropic opportunity because the funds we raise fill a void of support for TTUHSC students. Briefly explained, our organization provides emergency support for students outside of financial aid. You can read more about it on our website http://www.ttuhsc.edu/ourlegacynow/.

No doubt the education and research experiences I have gained at TTUHSC will serve me well as I add my contributions to the knowledge of cancer treatments. However, the overall student experience I have had the privilege to be a part of has deepened me both professionally and personally, and I want to make a difference in many lives. That's my purpose.

DONORPROFILE

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