

PULSE



WINTER 2013 | A PUBLICATION *for* ALUMNI & FRIENDS *of* TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER

Best and Brightest

First-year medical student Puja Nakrani's choice of how to spend her first year out of college is just another example of why she's a Top Scholar.



PULSE



16

TOP SCHOLAR

Puja Nakrani traded her blue surgical scrubs for a pair of green ones and a position managing TTUHSC's new cancer research biobank for a seat on the School of Medicine's Class of 2016 roster. It was a day she had worked toward since TTU System Chancellor Kent Hance recruited her to become a Red Raider.

12



THE MISSING LINK

Within the labyrinth of offices and treatment rooms is an environment where research and patient care peacefully coexist and strengthen each other. This collaborative problem-solving approach is the hallmark of the Center for Speech, Language and Hearing Research.

22



HI-TECH HELP

The West Texas Health Information Technology Regional Extension Center (WTxHITREC), one of four such programs statewide, is leading the way in assisting primary care providers across the area to adopt and embrace the use of electronic health records.

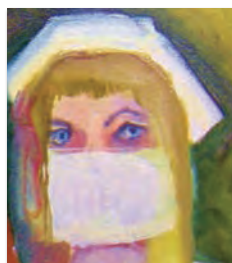
26



POCKETFUL OF WHAT?

Top 10 items you are likely to find in the pocket of a white coat.

28



WHISTLEBLOWERS OF WINKLER COUNTY

The actions of two School of Nursing alumnae who blew the whistle on a physician in the rural hospital where they were employed were admired and supported by their colleagues nationwide and led to legislation protecting other nurses who choose to champion patient advocacy.

departments

2 | **PRESIDENT'S MESSAGE**

3 | **ROUNDS** *Grand*

11 | **DISCOVERIES**

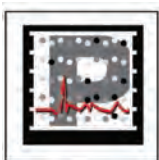
Research and Scholarly Activities

31 | **ROUNDS** *Alumni*

34 | **ALUMNI PROFILES**

39 | **THE LAST WORD**

Leslie Shen, PhD



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ON YOUR MOBILE DEVICE.

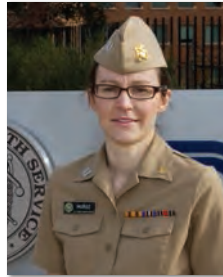


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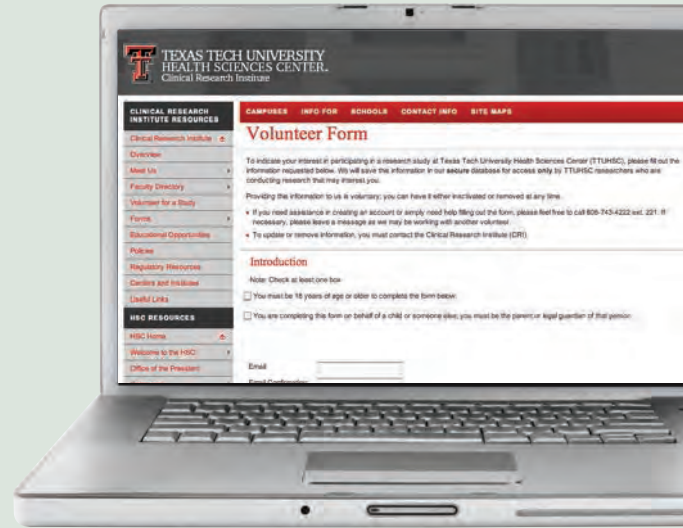
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Clinical Research Institute launches new website

The Clinical Research Institute, featured in the Winter 2012 issue (pg. 14-18), has created a new website, making it easier for potential volunteers to connect with TTUHSC researchers. The website will allow volunteers to register for the system and enter basic information about themselves, their health conditions and medications, which will be used to match them with research studies. Investigators, doctors, nurses and research coordinators all promote patient-oriented research and provide quality patient care.

➤ INTERESTED IN VOLUNTEERING?
Visit...
www.ttuhscc.edu/clinicalresearch/CRIVolunteer



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DELIVERING HEALTH CARE BEYOND OUR BORDERS

At TTUHSC, we are dedicated to training the future health care work force to meet the needs of Texans and beyond. In the past “beyond” was simply a reference to the reality that some of our graduates would find themselves working outside the state of Texas, but today, in our very interconnected world, our graduates can be found working in distant countries and with very diverse populations within their communities. Though the majority of instruction, patient care and innovation occurs within the walls of our seven campuses, our students and faculty are also actively engaged in expanding their learning and service experiences throughout the world.

Participation in international immersion experiences gives students the opportunity to become more globally competent health care providers. Research shows the benefits of these experiences include increased appreciation for interprofessional teamwork, awareness of the impact of culture on health, skills development for diagnosing illness and injuries with limited resources, and refined communication in a foreign language. Finally, students who participate in international programs return with a newfound confidence in their strengths and abilities.

The Office of International Affairs, in collaboration with the various TTUHSC schools, has made substantial gains in providing global health experiences for our students. During the 2011-2012 academic year, we had more than 50 students participate in TTUHSC-sponsored international programs. From the Paul L. Foster School of Medicine, a faculty-led group of 26 medical students traveled to Honduras where they saw more than 3,100 patients. Also, 14 medical and nursing students from Lubbock participated in clinics and community health education in Nicaragua where they saw approximately 4,000 patients.

We anticipate continued growth of similar programs in the coming years as we finalize several memorandums of understanding with international institutions. We live in a globalized world that is far more interconnected than most would have imagined almost 50 years ago, when the School of Medicine was established. This interconnectedness has its challenges, but it also presents us with opportunities to prepare future health care providers for the dynamic world in which they will work.

Tedd L. Mitchell, MD
President

Learn more about our international immersion programs via PULSE online.

TTUHSC'S GOT TALENT!

America's got nothing on the talent pool at TTUHSC. Long before the NBC network began its nationwide search for the best in voice, dance and other entertainment, TTUHSC students were taking the stage. Although the university talent show took a long hiatus, it came back strong about six years ago. This year's event also welcomed new medical students to campus and served as a benefit for the South Plains Food Bank.



Second-year medical students perform in this year's talent show: above, Armin Khansari, and above right, Stephanie Vander-Plas accompanied by Andy Cruz.



One of the early episodes, circa 1990, featured Harrison Ford, Goldie Hawn, Lily Tomlin and George Carlon, aka second-year medical students.



Varma receives recognition for outstanding work as clinician, academician

This fall, Surendra K. Varma, MD, was honored with two awards acknowledging the contributions he has made to patient care and medical education.

Varma served as director of the School of Medicine's Pediatric Residency Program for 33 years until stepping down in 2012. He holds the UMC Ted Hartman, MD, Endowed

Chair for Medical Education and continues to serve the school as associate dean for Graduate Medical Education and Resident Affairs and as a University Distinguished Professor and vice chairman of pediatrics.

The Texas Pediatric Society presented Varma with the Charles W. Daeschner Jr., MD, Lifetime Achievement Award, the highest honor given by the society. Varma is a nationally recognized expert in pediatric endocrinology and graduate medical education. He changed the lives of children diagnosed with diabetes and endocrine-metabolic disease by establishing the Endocrine-Metabolic Division in the School of Medicine's Department of Pediatrics and was influential with then Texas Sen. Kent Hance in getting the law passed for newborn screening for congenital hypothyroidism, which with early detection and treatment prevents mental retardation in children.

King George Medical University honored Varma, an alumnus, with a Doctor of Science Honoris Causa for his contributions to academia, patient care and medical education and for honorably representing his country. He has been recognized and awarded immeasurably throughout his career for his contributions to the well-being of his patients and for educating and mentoring medical students and residents.



Robin Donnelly, chair of the TTUHSC Permian Basin Advisory Council, and Gary Ventolini, MD, School of Medicine regional dean at the Permian Basin, observe the completion of the adolescent treatment rooms at the Jenna Welch Women's Center. The project, launched in 2010, includes an adolescent-friendly exam room with wireless technology designed to meet health needs of the region's teen population. A donor appreciation and dedication was held in late summer to thank those who made the project possible: Marshall Verne Ross Foundation, Helen Greathouse Foundation, Permian Basin Foundation and James A. "Buddy" Davidson Foundation.



TTUHSC gains state's first telemedicine resource center

TTUHSC's Telemedicine Program, a division of the F. Marie Hall Institute for Rural and Community Health, received a four-year \$1.3 million grant from the Health Resources and Services Administration to create the TexLa Telehealth Resource Center.

The center, a collaboration between TTUHSC and Louisiana State University's Health Care Services Division, will help improve the delivery of health care and education through telecommunications technology. The TexLa Telehealth Resource Center is a new addition to the telemedicine program that TTUHSC first introduced in 1989 to connect the Lubbock, Amarillo, Odessa and El Paso campuses.

The U.S. Office for the Advancement of Telehealth funds two national and 12 regional Telehealth Resource Centers nationwide; this is the first award for Texas. TTUHSC was recognized for the work that it has provided to link rural communities to specialists in urban areas through telehealth communication.



minutes with the faculty..

OTC INSTRUCTION

DEEATRA CRADDOCK, PharmD | Traded Sweet Home Alabama for the Lone Star State

Deeatra Craddock, PharmD, came to the Lone Star State in 2001 with the intention of completing a one-year residency and then returning home to Alabama. Instead she stayed and accepted a joint appointment with the School of Pharmacy at Dallas and as a clinical coordinator for pharmacy services at Community Pharmacy in Denton, an opportune situation in which to establish a pharmacy practice somewhat reminiscent of the profession's pioneer days.

Craddock views the independently owned retail pharmacy as more than a work place. It serves as an extension of the physician's office for the city's residents and a real-world classroom for students.

The pharmacist's role is evolving, almost in a retrospective way, she said. "We are taking a step out from behind the counter to once again serve almost in a triage role."

Given the retail pharmacy will be the work setting for most students, it's important for them to experience that role as part of their educational experience, Craddock said.

At the pharmacy, she has been instrumental in expanding services to include an adult immunizations program, health screenings, medication consultations and therapy management as well as a variety of blood tests.

"I knew when I went into pharmacy that I wanted to be in a place where I was accessible to the patient. The beauty of this appointment is that I get to do that and work with the students. When they are here, I relate to them as colleagues. We are there side by side determining how best to approach each situation, which makes for a very conducive learning environment."



CAROLYN CRUZ

Originally a communications major, Craddock discovered pharmacy was a palatable mix of her interests in communications, math, science and helping others

Earned a Doctor of Pharmacy degree from Auburn and completed a Community Care Residency with the University of Texas at Austin and with Walgreens

Her position with TTUHSC and Community Pharmacy was designed to facilitate a real-world learning environment for pharmacy students

Self-described addict of Words with Friends and Scramble with Friends

Enjoys family activities with her husband and their two children, and visiting extended family back home in Alabama

JUST the facts...



145

steps connect the fifth floor and the basement in the TTUHSC building at Lubbock. Healthy Lubbock, a division of the Garrison Institute on Aging, reminds faculty, staff, students and visitors to take the stairs instead of the elevators – it burns five times more calories.



17 hours and 18 minutes

is how long it will take you to drive the 1,096 miles across Texas visiting each campus, beginning in Amarillo then driving to Lubbock, El Paso, Permian Basin, Abilene and ending in Dallas.



89,510

hours of clinical training were provided to students in 406 rotations of medicine, nursing and other primary care fields through the West Texas Area Health Education Center, a program of the F. Marie Hall Institute for Rural and Community Health.



7.25

percent increase in enrollment in the fall 2012 over 2011 setting a record high with 4,391 students.



17

students were in the first class of the Doctor of Nursing Practice degree program. To date, the School of Nursing has graduated 56 from the program, which was introduced in the summer of 2008.



743

books were collected by Class of 2014 physician assistant students in the program's first Reach Out and Read book drive. The books were donated to pediatric clinics in Midland and Odessa to help promote early childhood literacy in West Texas.



183

residents and fellows are expected to graduate from the School of Medicine in 2013. There are currently 172 first-year trainees enrolled in the school's 44 residency and fellowship programs.

MATTERS of the HEART

The efforts of mom and military wife, Christine Vanden Dries, have now made it easier to give back to the Gayle Greve Hunt School of Nursing Baby Café. After meeting with other Baby Café mothers and the TTUHSC at El Paso Office of Institutional Advancement, Vanden Dries suggested an online giving option to support the Baby Café.

“The military has a combined federal campaign that encourages military families to give back to their community,” Vanden Dries said. “My husband is big on giving to organizations that have had a direct impact on our family, and he’s the one that asked, ‘How can we give to the Baby Café?’”

The Baby Café, a drop-in center for women of any age to gather and give and receive peer-to-peer support about breast-feeding, opened four years ago in El Paso. It was the second of the now 17 Baby Cafés in the United States; there are 136 worldwide.

“The money that families save by coming to the Baby Café is huge, and the financial contribution that donors make to the Baby Café has a direct impact on mothers and their children,” said Vanden Dries.

Already a nurse, Vanden Dries is now pursuing her board certification in lactation consultation. She volunteers regularly at the Baby Café and will soon be joining the other skilled health professionals who offer their support to its clientele.

The online giving option has been successful in bringing in \$2,000 to date. Lizabeth Berkeley, MPH, IBCLC, RLC, faculty associate at the Gayle Greve Hunt School of Nursing and director of the school’s Baby Café, said the charity depends on the community for support. Thanks to Vanden Dries efforts, there is now an easier way for the community to support and donate to the Baby Café.

Do you want to help support the Baby Café?

Go to give2tech.com and click “Give Online.” Scroll down to the TTUHSC list and select the Baby Café – Gayle Greve Hunt School of Nursing El Paso and proceed with payment.

Matters of the Heart is a new 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.

Military spouse, mom proposes online giving to the Baby Café



Christine Vanden Dries, a volunteer at the Gayle Greve Hunt School of Nursing Baby Café, suggested an online giving option for the facility, which has brought in additional support says, Lizabeth Berkeley, MPH, IBCLC, RLC, faculty associate at the school and director of its Baby Café.

El Paso campus to gain new nursing building

The Medical Center of the Americas Foundation (MCA) has given TTUHSC at El Paso \$11 million to construct a new building for the Gayle Greve Hunt School of Nursing. The TTU System Board of Regents approved the construction of the 25,000-square-foot building to educate future nurses in El Paso. The new building will contain classrooms, specialized labs, faculty offices, support space, specialized training equipment and public art.

The school offers the Traditional Bachelor of Science in Nursing and the Second Degree Bachelor of Science in Nursing degree programs. With 66 students currently enrolled, the school expects enrollment to increase to 300 students by 2015.

MCA is an integrated complex of medical facilities anchored by the Paul L. Foster School of Medicine and is developing and implementing strategies to continue the advancement and success of border health care education and the region’s long-envisioned medical community in El Paso.

STATE GRANT support to establish p r e t e r m birth prevention C L I N I C

The state of Texas has awarded the Paul L. Foster School of Medicine's Department of Obstetrics and Gynecology a SmartStart grant to establish the first preterm birth prevention clinic in El Paso.

The preterm birth prevention clinic will implement interventions to reduce the rate of preterm births in El Paso County through education, support and lowering the health care costs associated with at-risk pregnancies. El Paso County's preterm birth rate of 14.2 percent is higher than the state and national rates of 13.1 percent and 12.7 percent, respectively.

The clinic is modeled after one initiated by Manuck and Associates in Salt Lake City, that resulted in a 28 percent decrease in preterm births. Paul L. Foster School of Medicine clinic administrators expect similar results in El Paso and have set a goal to see 400 patients during the first year. Patients will be referred to the clinic by their primary doctor and will be eligible regardless of funding services. Consultation from two board-certified maternal fetal medicine specialists also will be provided to enhance prenatal care.

New leadership on tap for pharmacy, biomedical sciences and nursing



Gayle Greve Hunt School of Nursing Founding Dean Jeanne M. Novotny, PhD, RN, FAAN

Jeanne M. Novotny, PhD, RN, FAAN, brings a wealth of experience and expertise to this new appointment. From 2001 to 2011, she served as professor and dean of the School of Nursing at Fairfield University in Fairfield, Conn. In this role, she led the school through successful reviews and accreditation visits

by the Connecticut Board of Nurse Examiners, the Commission on Collegiate Nursing Education (undergraduate and graduate), the Council on Nurse Anesthesia, and the North Eastern Accreditation of Schools and Colleges.

Novotny began her academic career as an assistant professor at Kent State University and served in various administrative and academic positions at the University of Virginia, Vanderbilt University and Case Western Reserve University. She earned her Bachelor of Science in Nursing and Master of Science in Nursing from Ohio State University and her doctorate from Kent State University.

The recipient of numerous honors and awards, Novotny has contributed to the field as an author and co-author of many books and articles. She also has served on several boards and professional committees. She continues to be active on the national and international levels with a number of successful consultations and special projects dealing with issues ranging from mentoring and program development/improvement to promoting excellence in health care delivery and professional education.



School of Pharmacy Dean Quentin Smith, PhD

In 1997, Quentin Smith, PhD, left his position as a section chief for the National Institute on Aging at the National Institutes of Health to become one of the first faculty members at the new TTUHSC School of Pharmacy at Amarillo. Fifteen years after making that move, Smith is now the second person to occupy the dean's office for what has become one of the

country's finest pharmacy programs.

"During my time at the pharmacy school, the faculty and I have developed courses and programs that have proven successful," Smith said. "It has been a privilege to play a part in the school's growth, and what an honor it is to now have the opportunity to lead our program."

Smith holds a bachelor's degree in chemistry from Oberlin College and a doctorate in pharmacology from the University of Utah. During his time at TTUHSC, he has received numerous awards for teaching and research, including a University Distinguished Professor designation (2007), the Grover E. Murray Professorship (2009) and a Chancellor's Council Distinguished Teaching and Research Award (2011).

"Texas Tech University Health Sciences Center produces the best-trained pharmacists in the state to meet the needs of the evolving pharmacy profession," Smith said. "In addition, we have outstanding graduate and resident training programs producing top-notch research scientists and clinicians to push back the frontiers of disease and develop new therapeutic agents. I want to sincerely thank Dr. Arthur Nelson for his phenomenal vision and effort that helped create these programs and for overseeing their expansion to four campuses across West Texas and the Metroplex. I have a bright vision for the School of Pharmacy, and I look forward to working with our students, faculty and staff to set the highest standards for pharmacy education."

SCHOLARSHIP TO HONOR FOUNDING DEAN'S SERVICE TO PHARMACY SCHOOL

The TTUHSC Office of Development has established a scholarship to honor the legacy and years of dedicated service to the School of Pharmacy by its Founding Dean Arthur Nelson Jr., RPh, PhD. Nelson retired from his administrative position in July and continues to serve on the faculty.

"The gift of a scholarship in his honor is a way to thank Dr. Nelson for his pioneering role in establishing the school and the Amarillo campus as well as assisting TTUHSC in becoming one of the leading health sciences campuses in the nation," said Jenni Gee, director of development for TTUHSC at Amarillo.

Contributions to the scholarship will directly impact student education on the Amarillo campus. For more information, contact the Office of Development at (806) 356-4614 or email jenni.gee@ttuhsc.edu.



Graduate School of Biomedical Sciences Dean Brandt Schneider, PhD

Brandt Schneider, PhD, has assembled a distinguished history of grant funding, research, teaching and academic service since joining the School of Medicine's Department of Cell Biology and Biochemistry in 1999.

He is now looking forward to focusing those experiences in his new administrative role as dean of the Graduate School of Biomedical Sciences (GSBS).

"I'm very grateful for this opportunity. The school is in wonderful shape due to the excellent leadership of Dr. (Douglas) Stocco, his associate deans and his superb staff," Schneider said. "In the past few years, we have recruited and hired outstanding new faculty, and the quality of our recent PhD and graduate students is tremendous.

"This also is an exciting time at TTUHSC as enrollment is growing at a fast pace, and the future is bright. The rebirth of the master's program in biotechnology, the exciting potential of the proposed Master of Public Health, and our rapidly growing pre-medical sciences master's program are just few a places where TTUHSC is leading the way."

Schneider received a bachelor's degree in microbiology from the University of Washington in 1986 and a doctorate in microbiology and immunology from the University of Arizona in 1993. His postdoctoral fellowship was completed at the Cold Spring Harbor Laboratory on Long Island, N.Y.

At TTUHSC, he has taught numerous courses and participated in many school committees and task force groups including serving as associate chairman of the Department of Cell Biology and Biochemistry.

"For me personally, this is an opportunity to really focus on continuing to grow this school. There are some challenges ahead of us in an era of difficult funding, but the 'family atmosphere' and quality of the GSBS faculty, staff and students will make the coming years full of rewarding potential."



Koul named to Fulbright Specialist Roster

Rajinder Koul, PhD, CCC-SLP, associate dean for research in the School of Allied Health Sciences Department of Speech, Language and Hearing Sciences,

has been chosen to join a select group of scholars with expertise in health and education on the Fulbright Specialists Roster. As a Fulbright member, he will be eligible for collaborative two- to six-week grant opportunities in more than 100 countries worldwide.

The Council for International Exchange of Scholars, which administers the Fulbright Scholar Program, receives requests from host institutions overseas seeking specialists and then matches those on the roster with relevant professional experiences to receive the grant opportunity.

Koul will remain on the roster for five years until he is matched with a request. He has been with TTUHSC since 1994 and has focused his research on severe communication impairments as a result of developmental or acquired disabilities, assistive technology, aphasia, perception of synthetic speech, and treatment efficacy.

Like the little black dress, living healthy never goes out of style

Acknowledging the proverbial women's fashion icon, the little black dress, and outfitted in their favorite rendition, community members gathered in August for drinks and dessert and to hear a word from Neiman Marcus President and CEO Karen W. Katz.

"Health is not only about feeling good, it's also about looking good," she said. "Fashion may change with the seasons, yet to look good you also have to feel good. Looking after your health is always in style."

James E. Skinner, executive vice president, chief operating officer and chief financial officer of The Neiman Marcus Group Inc., accompanied Katz as she presented a historic overview of the company's impact on trends, style and fashion. Skinner is a TTU alumnus.

The event, Lubbock's Little Black Dress, benefitted the Laura W. Bush Institute for Women's Health (LWBIWH) and its efforts in research, community outreach and education focused on improving women's health through scientific discoveries with regard to gender differences. Research proves diseases react differently in men and women, challenging health care professionals to focus on issues that are spanning disciplines throughout communities, gender and ethnicity.

The LWBIWH has offices on TTUHSC campuses at Amarillo, El Paso, Lubbock and the Permian Basin and at Angelo State University, which is part of the TTU System.



West Texas AHEC receives grant to attract future health professionals

The U.S. Department of Health and Human Services Health Resources and Services Administration granted the West Texas Area Health Education Center (AHEC) \$457,135, which will be used to encourage young adults to pursue careers in fields like nursing, medicine, allied health sciences and pharmacy.

The funds will allow the West Texas AHEC to advance programs such as Texas H.O.T. Jobs as well as community-based education, summer camps and clubs for young people interested in health care careers. The West Texas AHEC regional centers, located in Canyon, Plainview, Midland, Abilene and El Paso, assist in health care workforce development and support existing rural health providers by implementing programs to inform, engage and prepare rural and other underserved youth to pursue health professions education. The West Texas AHEC, part of the F. Marie Hall Institute for Rural and Community Health, also serves to motivate and engage current health profession students to gain exposure in rural and underserved populations. The students will make an impact on a community through health assessments and address priority health needs.

Discoveries

RESEARCH
& SCHOLARLY
ACTIVITY

At the Center for Speech, Language and Hearing
Research, clinical care and research coexist supporting
the overall mission of improving patient outcomes.

Clinical Discoveries

Within the labyrinth of offices and treatment rooms that comprise the Center for Speech, Language and Hearing Research is an environment where research and patient care peacefully coexist and make each other stronger.

“We do research related to the phenomena of speech, language, hearing and balance,” said Melinda Corwin, PhD, CCC-SLP, ('87, '89) who has served as director of the center for two years. “Our research covers a broad range of diagnoses, including intellectual disabilities, cochlear implants, autism and aphasia.”

Innovative work takes place virtually every day at the center, points out Rajinder Koul, PhD, CCC-SLP, chair of the School of Allied Health Sciences Department of Speech, Language and Hearing Sciences and the associate dean for research.

“We have two main areas we focus on,” he said. “We want to excel in research and promote the clinical care of patients.”

“From the academic perspective, excellence in research is demonstrated through peer-reviewed publications, external funding that supports research, and patents that have the potential for commercialization.”

In terms of clinical care, Koul said, the goal is to serve as a center of excellence for patients who have speech and language impairments as a result of neurological disorders; children and adults with autism spectrum disorders; children and adults with hearing impairment, including management of patients with cochlear implants; and evaluation and management of patients with balance disorders.

One example of patient-driven research is a study to prevent falls in the elderly. “Falls are significant risks of mortality and morbidity in the elderly population,” said Donald Lie, PhD, Keh-Shew Lu Regents Chair and professor of electrical engineering in the

Theresa Worthington, MS, CCC-SLP, (SOAHS '07), a doctoral student in Communications Sciences and Disorders, is studying the effect of background speech on adult working memory performance.

Integration between research and patient care strengthens allied health programs

By DOUG HENSLEY

TTU Whitacre College of Engineering, who is part of the team working on the project. *(Read more about this research in the Winter 2012 issue of Pulse.)*

“Our desire was to create an inexpensive device that will help us understand fall dynamics in different geriatric demographics and ultimately incorporate algorithms that will lead to early warning and even fall prevention.”

The project’s goals, Lie said, are to “identify characteristics of a person’s posture or gait that make them more susceptible to a fall and identify the pattern of response that is present when the person falls.”

“During my academic and clinical training, I was intrigued by the intricacies of evaluating the dizzy patient,” said Steven Zupancic, PhD, CCC-A, ('03, '07) an audiologist who has joint appointments as assistant professor of speech, language and hearing sciences in the School of Allied Health Sciences, surgery in the School of Medicine, and educational psychology and leadership at TTU’s Graduate School.

Zupancic said another aspect of the research that appeals to him is it requires multidisciplinary efforts. His research team is made up of physicians, audiologists and electrical engineers. “Without the involvement of each of these specialties, significant portions of our research would not be possible,” he said.

That type of collaborative problem-solving approach is one of the hallmarks of the center, where professionals from numerous disciplines complement one another. The center’s staff is made up of 18 full-time faculty and 15 PhD students as well as approximately 240 undergraduate students.

“It is incredible,” Corwin said. “You see ear, nose and throat specialists, plastic surgeons, social workers, University Medical Center staff and TTUHSC staff working together providing clinical expertise to our students.”

The results are as practical as they are impressive. For the past year, Theresa Worthington, MS, CCC-SLP, ('07), who is working on her PhD in Communications Sciences and Disorders, has been studying the effect of background speech on adult working memory performance. Her research is focused on investigating individual differences in working memory capacity among 20 adult participants using a computerized Reading Span Test (RST), which is administered under two different experimental conditions: reading aloud and reading silently.

Preliminary results reveal people recall more words in quiet and noisy conditions when reading silently than when reading aloud. “The human brain’s ability to adjust to change in its working environment and to direct resources to and from tasks fascinates me,” she said. “Human brains have a limited ca-

capacity to process, store and recall information, so our brains have to make trade-offs between these three functions.”

In addition to those projects, center personnel are involved in investigating communication problems associated with dementia, cerebral palsy and stroke.

“We look for ways to connect the research to the clinical practice,” said Koul. “We try to bridge that gap. Our department offers two professional clinical programs – the Doctor of Audiology and the Master of Science in Speech, Language Pathology. These programs produce clinicians who serve people with speech, language and hearing impairments. Our goal is to educate students so they can become clinical scientists, able to use research evidence to inform their clinical practice.”

These types of projects, though, require money, and the center staff has been able to secure funding from government and private sources to ensure the important research takes place. Just recently, Koul said, the center has secured two federal grants and clinical endowments were established by private foundations.

A National Institutes of Health grant has supported research by Sue Ann Lee, PhD, assistant professor of communication sciences and disorders. Lee’s research is focused on establishing developmental characteristics of speech production in bilingual children, which has potential to result in improved treatment for bilingual children with speech and language disorders.

Additionally, Koul is collaborating on a study looking at whether the use of animations helps children with autism understand pictorial symbols. His work is funded by the U.S. Department of Education, National Institute on Disability and Rehabilitation Research.

“This (the center) is a fantastic place to learn, to ask questions and to demonstrate how research affects and impacts the treatment of patients,” said Corwin.

UNDERSTANDING ROLE OF PROTEIN MAY PROVIDE INSIGHT INTO HYPERTENSION, STROKE

Science has understood for some time that hydromineral and cardiovascular homeostasis play key roles in the human health. Additional research has shown that the renin-angiotensin system, which regulates the body's blood pressure and fluid balance, is the most important regulator of hydromineral and cardiovascular homeostasis in humans.

Peptides called angiotensins are the bioactive entities of the renin-angiotensin system and are contributing factors in nearly all heart disorders and strokes. There are specific enzymes responsible for forming and degrading these peptides, and those enzymes are excellent therapeutic targets for researchers in this field.

Vardan T. Karamyan, PhD, has identified a specific membrane-bound angiotensin-binding protein known as endopeptidase neurolysin and its potential role as a crucial component in the renin-angiotensin system. Ongoing research in his lab is focused on uncovering and understanding the mechanical, physiological and biological significance of this protein in hypertension and stroke.



Vardan T. Karamyan, PhD, is an assistant professor of pharmaceutical sciences at the TTUHSC School of Pharmacy in Amarillo. Results of his study were published earlier this year in the Journal of Biological Chemistry, the most highly cited biochemistry and molecular biology journal.

The immune system is designed to recognize and destroy invading pathogenic organisms such as bacteria and viruses. Because immune cells must be able to recognize thousands of different pathogenic microorganisms, they develop the capability of recognizing millions of different protein fragments that may be associated with the multitude of foreign pathogens.

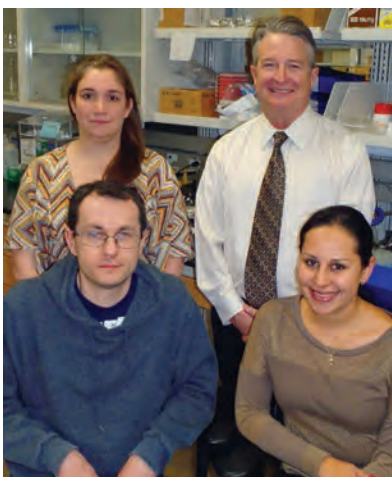
Although it is a wonderfully protective system, the immune system is not perfect. An inherent danger of the body producing immune cells is that some of these cells may recognize and respond to proteins localized on tissue within the pancreas, joints, intestine or nervous system. This can result in the development of autoimmune diseases such as diabetes, rheumatoid arthritis, inflammatory bowel disease such as Crohn's disease and ulcerative colitis, or multiple sclerosis.

It is well known that a small but significant number of these "self-reactive" immune cells are always present within the blood stream of healthy individuals. So why doesn't everyone have autoimmune diseases? What protects us from this enemy within?

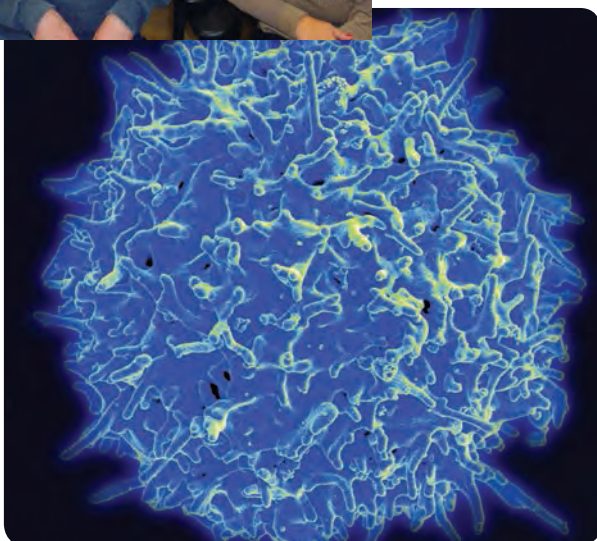
The immune system also has developed a safety net that continuously suppresses potential autoimmune responses by self-reactive immune cells. One of the mechanisms by which the immune system limits or suppresses self-reactive immune cell responses is by the action of a small but highly efficient white blood cell population called regulatory T cells or Tregs. These cells are required for preventing the development of autoimmune disease in rodents and humans; loss of Tregs or their function results in these systemic and devastating autoimmune disorders.

The question then is if Tregs are so effective at preventing the development of autoimmune disease in healthy rodents and humans, would they be effective in treating patients with autoimmune disorders?

Matthew Grisham, PhD, and his research team have shown that injection of purified Tregs or those grown in the laboratory are very effective at suppressing the chronic inflammatory tissue injury observed in mice with experimental Crohn's disease. They are working on defining the mechanisms by which these immune cells mediate their protective effects in order to generate new and more potent therapies to treat autoimmune diseases. Their work is funded by the National Institutes of Health.



Matthew Grisham, PhD, is professor and chair of the Department of Immunology and Molecular in the Graduate School of Biomedical Sciences and holds the Vernon and Elizabeth Haggerton Chair in Gastroenterology in the School of Medicine. His research team is composed of Kathryn Furr, MS, Iurii Koboziev, PhD, and Cynthia Reinoso Webb, graduate student.



BATTLING THE ENEMY WITHIN: POTENTIAL PREVENTION, TREATMENT OF AUTOIMMUNE DISEASES

GENE THERAPY STUDIED AS NEW STRATEGY FOR TREATING HIV

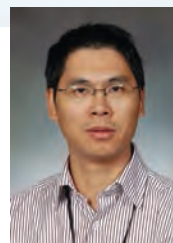
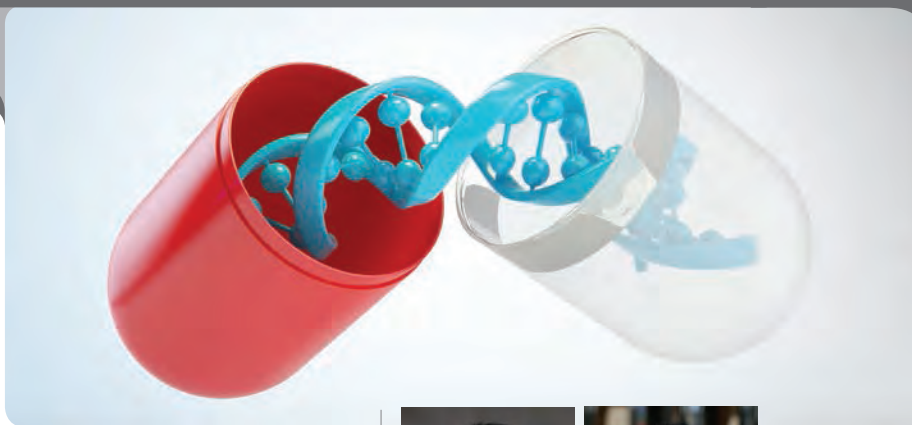
More than 33 million people worldwide living with HIV are being treated mainly with a cocktail drug that keeps the virus in check but does not eliminate the infection. This prospect of life-long antiretroviral therapy poses practical problems of adherence, toxicity and development of drug resistance.

Gene therapy provides an attractive alternative as it can reconstitute the immune system with HIV-resistant cells that could lead to a potential cure. Haoquan Wu, PhD, and Premlata Shankar, MD, are investigating the clinical benefit of knocking down the CCR5 gene, which is the major entry co-receptor used by the virus. This gene is an attractive therapeutic target as individuals with a natural delta32 deletion of the molecule have no immunological deficits but are protected against HIV.

Wu and Shankar used recently developed Zinc Finger nuclease technology, engineered DNA proteins that can bind and cut, to edit the CCR5 gene in hematopoietic stem cells. These stem cells are derived from the tissue that produces blood cell types and contains cells with long-term and short-term regeneration capacities.

Specifically, the researchers are trying to determine if temporary expression of ZFNs achieved by the use of mRNA is destructive enough to permanently disrupt CCR5 gene in the cells as this will offset the undesirable toxicity associated with long-term ZFN expression.

Knowledge gained from their work could establish a clear translational path to harness ZFNs for HIV gene therapy.



Haoquan Wu, PhD, assistant professor, and Premlata Shankar, MD, professor, in the Department of Biomedical Sciences, are researchers in the Center of Excellence in Infectious Disease at the Paul L. Foster School of Medicine. They received a grant from the National Heart, Lung and Blood Institute of the National Institutes of Health to fund their study.

FETAL ALCOHOL SYNDROME AND FLAWED PROTEIN SYNTHESIS



A woman who drinks any amount of alcohol at any time during her pregnancy risks having a child born with fetal developmental abnormalities. This prenatal alcohol exposure results in differing degrees of severity and developmental patterns, known as fetal alcohol spectrum disorder (FASD). The rate of prevalence of FASD is 10 in 1,000 live births and, according to the National Institute on Alcohol Abuse and Alcoholism, costs the nation several billion dollars annually.

Since the discovery of fetal alcohol syndrome (FAS), one of the many afflictions on the spectrum disorder, researchers have made significant progress toward understanding the problem. Children with FAS express lifelong developmental disabilities that can result in severe memory, learning and behavior abnormalities.

These cognitive impairments are largely dependent on either global or local protein synthesis. The mechanism of how alcohol intercepts this process in the fetal brain remained elusive until recently. The research team led by Lenin Mahimainathan, PhD, George Henderson, PhD, and Madhusudhanan Narasimhan, PhD, has identified a gene, Programmed Cell Death Protein 4 (PDCD4), believed to be responsible for mediating alcohol-induced dysregulation of protein synthesis in animal and neuronal experimental models.

This discovery holds great promise for possible effective intervention that can help to better manage the brain defects associated with flawed protein synthesis in FAS.



Work on the PDCD4 gene led by Lenin Mahimainathan PhD, research assistant professor, George Henderson, PhD, professor, and Madhusudhanan Narasimhan, PhD, senior research associate, all in the School of Medicine's Department of Pharmacology and Neuroscience, was published online July 3, 2012, in Alcoholism: Clinical & Experimental Research. To access the study, go to <http://goo.gl/v7SD7>.



TOP

over the

P

First-year medical student recruited to TTU System through chancellor's Top Scholar program

BY HOLLY KITTEN

As the rhythmic sound of Pomp and Circumstance played through the speakers, Puja Nakrani walked into the United Spirit Arena carrying the College of Human Sciences banner. She recalls the encouraging words from classmates outlining her path to the decorated stage.

"They were all smiling at me," she said, "and saying, 'You go Puja.' I didn't even know these students knew my name. I just felt like I was representing all their hard work, too. It was amazing."

It was, however, Nakrani's own hard work that was spotlighted during the ceremony. Not only did she complete her undergraduate degree in three years, but she also did so as one of TTU System Chancellor Kent Hance's Top Scholars and as a member of the Undergraduate to Medical School Initiative (UMSI) program. In addition, Nakrani was the college's highest-ranking graduate in her class.

Outwardly, Nakrani looked like the confident pre-med student she was, ready to enter the next stage of her life; in reality, she said she felt quite the opposite.

"I've never been scared in my life about anything," she said, "except the day I was walking across the stage at graduation."

Although many of her classmates would leave that day for the "real world," Nakrani stayed behind contemplating what she was going to do for the next 12 months: take the next year off, work, stay on campus or travel while waiting to enter medical school. The UMSI, a reciprocal program between TTU and TTUHSC, provides an alternate avenue for academically talented and highly motivated students to pursue a medical degree, but it requires a student to spend four years in an undergraduate program.

Nakrani had graduated in three.

She said her parents initially tried convincing her to return home to Austin and use her year off to travel or be with friends.

"To me, that sounded great," she said, "but I wanted to do something that would help me and help others in medical school."



First-year medical student Puja Nakrani conducted research under Bradley Miller, MD, PhD, before entering medical school.

So, the search for a job began. With a large stack of resumes in hand, Nakrani walked through the halls of TTUHSC, knocking on doors. She told the health care professionals that she was looking to gain experience in research and was willing to learn about anything. Eventually, she found an opportunity in cell physiology where she learned researching basics, how to carry out cell cultures, and how to read sequences.

After about three months, she transitioned into a research position under Bradley Miller, MD, PhD, The CH Foundation Regents Endowed Chair in Parkinson's Disease Research and a neuropathologist at the Garrison Institute on Aging. With ambitions to someday become a neurosurgeon, Nakrani said she was excited about the opportunity to work with Miller. However, after realizing that Nakrani was interested in the clinical side of medicine, Miller asked if she would like to begin a new project that he and C. Patrick Reynolds, MD, PhD, director of the School of Medicine Cancer Center, had in the works. TTUHSC had recently become one of the three centers in the Texas Cancer Research Biobank (TCRB). The TCRB carries out biobanking for cancer in multiple institutions across the state and will conduct state-of-the-art genomic profiling of many of the banked cancers. The hospitals in Lubbock, Amarillo and El Paso affiliated with TTUHSC as well as Covenant Health System in Lubbock are part of the university's biobank center.

Miller and Reynolds needed someone to begin working on the effort; and Nakrani seemed like an obvious choice, Miller said.

"She seemed to be somebody who had a lot of go-getter to her," he said. "So, I thought if we are going to start this up, we could really use somebody who, rather than wanting something to be handed to them, has kind of the personal attributes to set things up."

When Miller offered her the job, Nakrani said she knew it would be right up her alley, because cancer and the brain were two topics of great interest; in fact, many of her science projects and research papers at Austin ISD's Westwood High School dealt with those subjects.

So with Miller's help, Nakrani began the research project that would consume her open year. She said her friends questioned her decision at first, wondering why she would spend so much time working during her year off. And for a little while, Nakrani wondered the same thing about herself.

“But that was just a very temporary thought,” she said, “because I enjoy being in the hospital, and I enjoy research. It’s just something that I’ve always liked.”

It’s a good thing too because starting the cancer biobanking effort at TTUHSC was a fast and furious job, Nakrani said. To place a single tumor into the biobank, an integrative process was required. First, Nakrani met with members of the UMC Health System Tumor Board Conferences to understand the difficult cases. Then, she previewed the operating room schedule and spoke to the appropriate doctor about the specimen and including it in the biobank. Next, Nakrani received the patient’s consent and then consent from the surgeon and pathologist.

Once all consent was given, Nakrani double checked to make sure all nurses, surgeons and pathologists understood the tumor’s ultimate destination; from the time the tumor was removed in the operating room, Nakrani only had about 15 minutes to collect, freeze and place it in the biobank.

“It was hard getting everything done,” she said, “because there are so many people you have to go through once you establish a system.”

Even with the tight time constraints, Miller said Nakrani did an excellent job communicating with everyone in the process, especially considering she was an undergraduate equivalent performing a medical student’s responsibilities.

“She knows what needs to be done, but she can ask for it in a way that doesn’t ruffle any feathers,” Miller said. “She has very good people skills.”

Those people skills were completely necessary for another position Nakrani took during her year off from school. After she expressed to Miller an interest in neurosurgery, he gave Nakrani contact information for Harold Smith, MD, a neurosurgeon with Neurosurgical Associates LLP in Lubbock. Nakrani immediately took advantage of the opportunity and began shadowing Smith in her spare time.



Meet Puja Nakrani ...

Currently a first-year medical student at TTUHSC School of Medicine

Serving an ongoing internship with the American Heart Association

Continuing with neurodegeneration research to complement career choice in neurosurgery

While waiting to matriculate into the TTUHSC School of Medicine, worked in the newly established biobanking center under the guidance of Bradley Miller, MD, PhD, and C. Patrick Reynolds, MD, PhD. Also created and was the first person to hold the position of surgery tissue advocate for the South Plains Oncology Consortium, while working under Miller and Reynolds.

Highest Ranking Graduate, Top Banner Bearer and Honor Graduate for the College of Human Sciences

Graduated TTU in three years with a Bachelor of Science in human development and family studies with a minor in chemistry

Entered TTU as an UMSI student (Undergraduate to Medical School Initiative Program)

Selected to attend TTU and TTUHSC through Chancellor Hance’s Top Scholar program

He too was impressed with Nakrani's motivation. "You don't see a lot of students that really go out of their way to work that hard," he said. "It's not easy. It's pretty impressive for her to be that dedicated to pursuing something."

Smith said he gave Nakrani an assignment to complete prior to each observation, which ranged from learning the arteries of the circle of Willis to learning all the pituitary hormones and their functions.

On the days Nakrani shadowed him at the hospital, Smith said he let her experience a variety of cases. She had the opportunity to observe the doctors review an imaging study, speak with patients about treatments, and eventually experience the operating room.

"Slowly, I began to allow her to assist with some of the simple things," Smith said, "like drilling a burr hole, or sewing up wounds and so forth."

Nakrani said she loved the experience.

"The OR is so exciting," she said. "It's people moving around all the time. You never know what's going to happen. It just keeps you on your toes. I like that. It changes and challenges all the time."

It wasn't until this fall that Nakrani was able to compare that feeling to something else – medical school. Even after coordinating a cancer biobanking effort and performing simple brain surgery techniques, Nakrani said beginning medical school was one of her biggest challenges, but also one of the best.

"I've loved every second of it," she said. "The professors are absolutely amazing. We're like a family. Everyone watches out for each other."

However, it was those who mentored Nakrani before medical school that she said made all her experiences worthwhile. She includes Hance in that list. It was, after all, Hance who personally called Nakrani during her senior year at Westwood High School to recruit her to TTU because she had an almost perfect score on her SAT.



Puja Nakrani tries to meet with TTU Chancellor Kent Hance each semester to keep him updated on her academic progress.

Since then, Nakrani has met with Hance once every semester to let him know what and how she is doing. She said he always remembers her latest endeavors.

"He's just awesome," she said. "And that's not just me. A lot of Texas Tech students really, really like him. It makes a difference when your chancellor knows you and takes the effort to know the students of the campus."

Hance had nothing less to say about Nakrani.

"She is an extremely hard worker. She concentrates on what she's doing. She has excellent focus, whether it's academics or an extracurricular activity – when she's going to do something, she's going to do it right."

Miller said he could not agree more. All he had to do, he said, was give Nakrani the resources and she ran with them making the best of every opportunity and, in the process, creating an impressive resume for future endeavors.

TTUHSC's cancer biobanking effort is one of the leading submitters in the state now; thanks to Nakrani, the program really took off, he said.

"There are not a lot of people you could drop into something that was unformed and have them build it straight up," Miller said. "It's unusual for someone who hasn't even entered into medicine to be able to function at that level."

"She definitely speaks very well to the Texas Tech undergraduates in general, and to Hance's program in particular."

Nakrani said every task she experienced was nothing but beneficial for the upcoming challenges in medical school. Ones that over the next four years, Miller said, will seem quite familiar to her.

"She started almost at a resident level and now is going back to medical school," he said. "She got a real good idea of what it is that you are supposed to learn in medical school, because she got to see when the system falls down and when the right knowledge saves the day. Now she's going back to the future."

About the Top Scholar and UMSI programs



TOP SCHOLARS

Established in Fall 2007

Helps advance recruitment efforts
and overall academic quality of students

TTU System Chancellor Kent Hance
personally recruits top high school students

Funded by private donations
through Chancellor's Council

The 2011 entering class had 19 Top Scholars

More than 75 students have enrolled in
the program between 2008 and 2011



UNDERGRADUATE TO MEDICAL SCHOOL INITIATIVE (UMSI)

An early admissions program to the TTUHSC School of Medicine in which eight students per year are guaranteed admission based on high school academics/accomplishments and an interview with the USMI selection committee

Students must be enrolled in TTU Honors College

Preference given to the top 10 percent of high school graduates

Must have health-related activities in hospital or clinical setting before entering medical school

Waives the MCAT requirement

Must complete Honors College requirements

Must maintain a 3.7 GPA overall and a 3.6 GPA in science courses

conversion cohort



Deb McCullough, DNP, RN, (SON '12, '93, '87) administrator with the Andrews County Health Department, said her organization was among the first of the West Texas providers to make the switch from paper to electronic records, transitioning just more than a year ago.

By Doug Hensley

The challenges surrounding patient medical records - such as lost, misplaced or illegible documents - have stacked up over the years, but now, thanks to a growing and vibrant partnership led by the West Texas Health Information Technology Regional Extension Center, that paperwork may soon just be a few mouse clicks away.

The West Texas Health Information Technology Regional Extension Center (WTxHITREC) is leading the way in assisting primary care providers across the area to adopt and embrace the use of electronic health records (EHRs).

"This program has three particular aims," said Billy Phillips, PhD, executive vice president of the F. Marie Hall Institute for Rural and Community Health. "First is to enroll what we call primary care providers. What makes them a priority is the fact that they serve populations scarcely represented by other providers."

The other two primary objectives, he said, are to mount a systematic strategy for management of specific diseases and conditions, such as diabetes and obesity, and to assist primary care providers in reaching a set of standards that make up "meaningful use" of the EHRs.

The WTxHITREC serves as a bridge between vendors and the federal government, explained Bruce Edmonds, director of the center's El Paso regional office. He said the initiative began with the HITECH Act of 2009, part of the American Recovery and Reinvestment Act. The HITECH Act, or Health Information Technology Economic Clinical Health, earmarked \$19.2 billion to increase the use of EHRs at clinics and hospitals and established 62 regional extension centers across the country, including four in Texas.

The WTxHITREC serves an area covering about 130,000 miles and 108 counties, which is roughly the western half of the state. Eight regional coordinators support providers in their respective areas: two serve in Lubbock; one in each of the communities of Anson, Abilene and Tyler, which also oversees the Wichita Falls region; Amarillo and El Paso each has its own coordinator, and one serves in Andrews and covers the Permian Basin.

With that model in place, the next order of business was to begin enrolling primary care providers.



The Andrews County Health Department has upgraded its patient files to electronic health records.

“Most all of our counties are involved because they have severe shortages of providers,” Philips said. “What we are trying to do is help family physicians and other primary care providers across West Texas identify a good electronic health record product, purchase it, get it installed and learn to use it.”

The WTxHITREC, one of the four centers in Texas, includes 17 employees and serves more than 1,000 clients across 41 hospitals, said Travis Hanson, Lubbock-based executive director. The end goal, he explained, is to achieve a higher standard of patient safety through the use of electronic records.

For Edmonds, the initiative has real impact. He said his father died nine years ago following back surgery when a physician prescribed an alternate pain medication that adversely reacted with his high blood pressure medication and stopped his heart. Had electronic records been available and accessible, such a mistake would have been avoided, Edmonds said.

“Now (with electronic health records), if you prescribe medication, the physician is allowed to analyze patient data records instantly,” he said.

“That’s why I got into this. It’s a simple story about my father, but it paints a picture of what the ultimate goal is. If you are in a car accident in Florida, and your personal care provider is in Lubbock, the emergency room there has the ability to request your health record and see if you might be allergic to anything – and better treat you even if your personal care provider is thousands of miles away.”

Bringing the collaborative forces together is a work in progress; connected to that, though, is the ultimate objective, which is to achieve the meaningful use standard.

If you are in a car accident in Florida, and your personal care provider is in Lubbock, the emergency room there has the ability to request your health record and see if you might be allergic to anything - and better treat you even if your personal care provider is thousands of miles away.

“We are currently in stage one (of this process),” Philips said, “and shortly moving into stage two. Stage one focuses on demonstrating capabilities to use features such as decision support tools and establishing best practices for certain patients with certain risk profiles such as cardiovascular risk or hypertension.”

The next stage, he explained, would be to expand use of the technology to manage conditions such as diabetes and obesity. “Basically, we started a system that did not exist 27 months ago,” Philips said, “with the aim of helping primary care providers use these products.”

Providers receive incentive bonuses to put EHR systems in place, Philips said, and likewise will be penalized by losing a percentage of Medicare and Medicaid claims if they are not using them by 2014. The government wants 500,000 providers using EHRs nationwide; the latest figures indicate about 120,000 are on board, Philips said.

Deb McCullough, DNP, RN, (SON '12, '93, '87) administrator with the Andrews County Health Department, in the Permian Basin area, said her organization was among the first of the West Texas providers to make the switch from paper to electronic records, transitioning just more than a year ago.

“We went from 100 percent paper one day to 100 percent electronic the next day,” she said. “We didn’t throw all the paper records out, but we knew if we tried to do a gradual change, we would have slipped back to using paper.”

She said the transition has been smooth, thanks in large part to the continuing support of the WTxHITREC. “They have been tremendous,”

McCullough said. “They helped us assess our needs in order to move from paper to electronic records. They set up online demonstrations with three vendors to view their products with our staff, which is not a large staff, we made the choice, and we’ve been very happy with how it has gone.”

The ambitious project will help do away with bulky, illegible paper records and give providers a clear picture of patients and their needs. “The real intent is eventually to have systems that will communicate with each other,” Philips said. “We will have health information exchanges. If you are referred to a specialist, they won’t have to go through all those records. They can look at them right there. It makes for greater efficiencies in patient referrals and better management.

“And it’s a whole lot safer and more secure than carrying around paper copies of things.”

McCullough fully agrees with Philips’ assessment. “I know this,” she said. “We will never go back.”

10 Most Common Items You Carry in Your White Coat Pocket

Spend a few minutes in the halls of TTUHSC and you'll more than likely see a student, resident or faculty member wearing one of those familiar white coats. Interestingly, when we asked them to reveal the contents in their coat pockets, we found most people carry the bare necessities. After that, well, there were a few surprises.

Visit [PULSE](#) online to see the other items.

Car Keys



Business Cards



Smartphone/Pager



Reflex Hammer



Pocket Edition Reference Books



Patient lists

Admit	Discharge	TEXAS TECH PHYSICIANS - PEDIATRICS	UMC	Covenant
INITIAL INPATIENT HOSPITAL CARE				
99221 Low		99222 Mod		99223 High
SUBSEQUENT HOSPITAL CARE				
99231 Low				
99232 Mod				
99233 High				
DISCHARGE				
99238 ≤ 30 min		99239 ≥ 30 min		
OBSERVATION				
99218 Low		99219 Mod		99220 High
OBSERVATION/INPATIENT ADMIT/DISCHARGE (same day)				
99234 Low		99235 Mod		99236 High
PROCEDURES				
62270 Lumbar Puncture				

Ped Admit/Discharge 8/15/20 Rev 4/08



Stethoscope

Personal Notes/Notecards

Learning 2 Cardio stuff
for Pain Center
(Nothosida)

- Better new tech & treatments
- Already good resources here
- Maybe 3-50 million (would help push a lot)
- All new/Not a diabetes treatment center market



Pens/Pencils



Wallet/Money

truth be told

[A commentary by PULSE Editor Danette Baker]

Illustration by Julianna Paradisi, an artist and oncology nurse who followed the court case through her blog, jparadisirn.com.

The Winkler County Nurses Trial blew through the media in 2009-2010 like a West Texas sandstorm. When the dust finally settled more than a year later, one would have hoped that justice prevailed with an outcome as optimistic as the cerulean skies that follow the storms.

To a degree that was what happened, at least for the nursing profession; but for Vickilyn Galle, BSN, RN, (SON '03) and Anne Mitchell, BSN, RN, (SON '91), life won't ever be the same.

They were the nurses at the center of the Winkler County Nurses Trial, a whistleblower case that erupted after Mitchell and Galle submitted a complaint in 2008 to the Texas Medical Board about questionable practices of Rolando Arafiles, MD, a physician at the Winkler County Memorial Hospital in Kermit, Texas.

In April 2009, Galle was head of the hospital's quality assessment program; Mitchell was the compliance officer. Many believe the nurses' actions were simply following the industry principles set forth by the Bureau of Nurse Examiners, which require that nurses report possible patient endangerment.

There are two sides, however, to the proverbial coin. On the flip side, there was Arafiles, who had been recruited to the hospital by Ted Wiley, hospital administrator, and Robert Roberts, Winkler County's sheriff, who had not only a physician-patient relationship but were also golf buddies and business partners. Roberts and his wife sold Zrii, a nutrition supplement, as distributors under Arafiles. And Scott Tidwell, the county attorney, also served as personal attorney for Roberts and Arafiles. Roberts also was friends with Bill Beckham, hospital board president. In a rural town the size of Kermit, it's not uncommon for physicians, attorneys and administrators to be friends. But here the relationships seemingly got in the way of justice.

Arafiles suspected that Galle and Mitchell had sent the letter to the medical board and asked the county sheriff to investigate. The sheriff issued a search warrant to confiscate the nurses' work computers, which he then searched and found the letter in question. The hospital administrator, who had gone to bat for Arafiles on several occasions with the hospital board, fired Galle and Mitchell; within two weeks, the county attorney had a case before the grand jury on third-degree felony charges for misuse of official information.

The 776-page trial dictation, which is posted on the Texas Nurses Association's website, is an interesting read reminiscent of the stance in Sir Walter Scott's work *Marion* in which he penned, "Oh what a tangled web we weave ..."

Charges were dropped against Galle shortly before the case went to trial, and the jury took less than an hour to acquit Mitchell.

Upon an inquiry from the Texas Medical Board, the Texas Attorney General's office then opened an investigation against the physician, county sheriff, district attorney, and hospital administrator, ironically, for misuse of official information. The physician and the hospital administrator plead guilty; juries in separate trials found the sheriff and district attorney guilty.

Mitchell and Galle also won a federal lawsuit filed against the hospital and other defendants in August 2010, settling for \$750,000.

By November 2011, all parties had their day in court and to the observer it seemed as if justice had prevailed not only for Mitchell but also for the entire nursing profession.

Susy Sportsman, PhD, RN, then president of the Texas Nurses Association, was quoted in a Feb. 11, 2010, news release via PR Newswire. “If anything was to be gained from the absurdity of this criminal trial, it is the reaffirmation that a nurse’s duty to advocate for the health and safety of patients supersedes all else.”

The case did more than just vindicate Galle and Mitchell, however. It brought together the nursing profession in support of their own and changed the face of health care ... and not just in Winkler County.

PULSE first met Mitchell and Galle in the fall of 2010 when they were honored with the rare awarding of the School of Nursing Distinguished Alumni Dean’s Award for Advocacy.

Mitchell and Galle initially agreed to an interview with *PULSE* in January 2011, but then upon counsel from their attorney asked to wait until all of the trials were held. The nurses did grant an interview to the *Texas Observer*, which published a story in March of that same year. *PULSE* again asked the nurses for an interview in July 2011, to which they responded that the Texas Attorney General had requested they do no more interviews until after the trial. Following Arafles’ sentencing in November 2011, *PULSE* made another request for an interview in January 2012 to no avail. From a journalist’s standpoint, this silence brought about several speculations: perhaps they had given an exclusive to a larger media or sold rights to their story or maybe they were tired of the spotlight and just wanted life to return to normal.

Why then has *PULSE* chosen to write about this story and why now? Their story was not only intriguing from the beginning but also was one that we believed should be shared for a number of reasons, most notably that their case set precedence in Texas as being the first for nurses to be charged with criminal activity for acting on behalf of their patients.

More importantly, the Winkler County Nurses Trial resulted in stronger legal protection and a financial and emotional support system for nurses such as Mitchell and Galle who act on behalf of the patient.

In addition to existing Texas whistleblower laws, which include the Nursing Practice Act, Board of Nursing Rule, Health and Safety Code, Medical Practice Act and the Public Employee Whistleblower Law, Senate Bill 192 strengthens the laws protecting nurses from retaliation in regard to advocating for patient safety by increasing financial penalties and providing immunity from criminal prosecution. The bill went into effect Sept. 1, 2011.

According to information on the Texas Nurses Association website, “... no nurse should be retaliated against — initiated, coerced, threatened, harassed, demoted, written up or fired — for advocating for a patient.”

The American Nurses Association joined the state association in criticizing the criminal charges brought against Mitchell and Galle, both of whom are members of the Texas Nurses Association, issuing the following statement: “Nurses play a critical, duty-bound role in acting as patient safety watch guards in our nations’ health care system.”

During the course of trial, more than 375 individuals (100 of which lived in 34 states other than Texas) and 17 organizations contributed more than \$40,000 to a legal defense fund established by Texas Nurses Association for Mitchell and Galle’s defense.

More importantly, Galle said in a statement issued by the Texas Nurses Association, “We could have never gotten through this without nursing’s support.”

Mitchell and Galle said they had planned to retire from nursing at Winkler County Memorial Hospital where they had worked for decades. Instead they were forced out of the profession by a “scarlet letter” and neither have worked full time since they were fired in 2009.

The American Nurses Association reported in early January that Mitchell now works part time in disaster preparedness; Galle is still unemployed.

In the journalism world, publication of a breaking news story is critical. While *PULSE* strives to be a journalistic publication, we also balance that with the best interest of our key stakeholders.

The actions of these two alumnae will forever be a part of the nursing profession and our institution’s history, and their story deserved to be on the pages of this magazine.

Alumni

CALL OF THE WILD

BY DANETTE BAKER

NEWS & NOTES 32-33

FRIENDS WE'LL MISS 33

PROFILES 34-38

Any seasoned health care professional knows to reach for a rhino rocket to stop a nosebleed. Arthur Islas, MD, (SOM '98) knows in a pinch that a feminine hygiene product will work just as well.

“That’s what wilderness medicine is all about – learning to think on your feet. It’s about taking your clinical skills and stepping outside, literally and figuratively, of the physician’s comfort zone.”

Last April, Islas spent almost a month at the Mount Everest Base Camp leading a group of 21 health care professionals in a continuing medical education course for the Wilderness Medical Society. His trip came near the conclusion of his yearlong stint as president of the world’s leading organization devoted to wilderness medical challenges.

“Being at base camp is almost a surreal experience,” said Islas, a sports medicine specialist with the Department of Family and Community Medicine at the Paul L. Foster School of Medicine and director of the school’s sports medicine fellowship. “At night, you can hear the glacier that the base camp sits on crackle as it shifts, which is very disconcerting. Probably the one thing people find hardest to comprehend is the camp’s size. It’s about a mile long, and during peak climbing season, there are 800 to 1,000 people; climbers from all over the world all speaking their own language.”

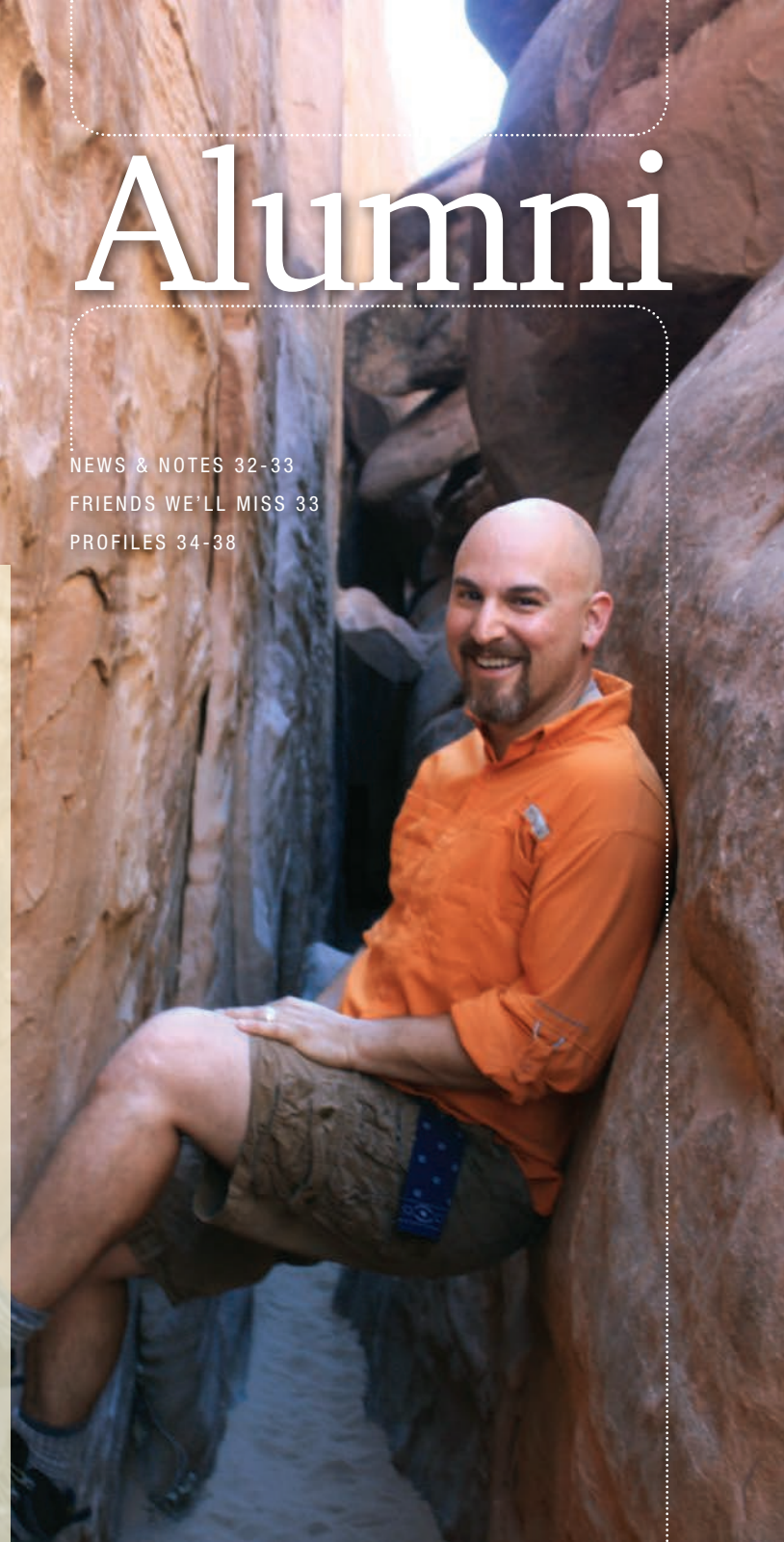
On this, Islas’ first trip to the stopover for those attempting to scale the infamous peak, his group worked with the Himalayan Rescue Association and base camp physicians. When one of the trekkers came to him for a nosebleed, Islas had to get creative. Back home in the clinic or even on the San Elizario High School football field where he served as the team physician, a nosebleed would have been an easy fix. But at 17,000 feet and minimal medical supplies, the situation was quite different.

“I knew I had to get pressure in there,” he said. “Long story short, the young lady had to walk around with a tampon stuck up her nose for about an hour, but afterwards she was great.”

For Islas, combining his career as a physician with his passion for outdoor adventure has created another avenue in which to hone his skills.

“Working in a wilderness environment is probably one of the best ways to challenge your clinical skills because you don’t have the luxury of calling up a colleague or sending the patient in for an MRI, you have to base it upon your clinical skills and what you took in with you.”

As a young boy, Islas developed a love for nature and adventure. He lived for the weekends and the opportunity to explore the mountainous terrain of the Guadalupe and to backpack through New Mexico’s Gila National Forest. On several occasions, the basic first aid Islas had learned as a Boy Scout came in handy for the expected minor cuts and sprains and for the unexpected night he and a group of friends once spent in the Gila Wilderness after taking a shortcut to explore a cave. They easily survived



EL PASO PHYSICIAN
DISCOVERS A WAY TO MIX
HIS PASSION FOR WORK
AND PLEASURE IN THE
GREAT OUTDOORS

alumni

ROUNDS



Lawson selected for national nurse fellowship The Robert Wood Johnson Foundation (RWJF) Executive Nurse Fellows has selected Linda Lawson, DNP, RN, NEA-BC, (SON '12) administrative director of Nursing Operations for Del Sol Medical Center in El Paso, to accompany 19 other nurse leaders in a world-class leadership development program. Lawson is responsible for planning, developing and executing strategies for quality and patient safety, clinical performance measurement, and process improvement initiatives. She also holds leadership positions with other health care associated programs at the state and national levels. RWJF Executive Nurse Fellows (ENF) program

is the largest philanthropy devoted exclusively to health and health care and works with a diverse group of organizations and individuals to identify solutions and achieve change. For her ENF research, Lawson will develop a strategic partnership with the University of Texas at El Paso to create an executive leadership program to help prospective nurse leaders grow professionally and personally and connect with established health care leaders in the El Paso Del Norte region.

Anesthesiologists' society honors Lydic's work

The American Society of Anesthesiologists has recognized the work of Ralph Lydic, PhD, (GSBS '79) with its 2012 Excellence in Research Award. The award is regarded as the highest honor given to an investigator by the society. Lydic's work in neurobiology of sleep and anesthesiology research, supported by numerous National Institutes of Health grants, has produced significant advancements in patient care.



Arthur Isals, MD, (SOM '98) led a continuing education expedition last spring to the Mount Everest Base Camp.

Amazon doing all this stuff they did and actually doing research while they were there helping to increase the science and understanding what happens to our bodies when exposed to extreme environments," he said.

"Then they would turn that around and use the science and information gained to better not only the adventure or sports performance or expedition success rate but also the experience."

Soon after, Islas had a clinic in San Elizario, on the outskirts of El Paso, and also provided sideline medical care for the school's football team. Through knowledge gained at these conferences, Islas began to see a correlation between the high school athletes and the trekkers and kayakers in the research studies presented at conference.

"What's the difference in looking at a knee on the football field and one on the banks of a river you just floated?" said Islas. Not surprising, the sports medicine fellowship at the Paul L. Foster School of Medicine that he leads has strong influences of wilderness medicine, even including training with park rangers in the Guadalupe National Park to learn advance wilderness life support and first aid.

Islas in turn has helped the Wilderness Medical Society develop a fellowship program and a Diploma of Mountain Medicine, a certification for mountain rescue squads that is recognized worldwide. The organization also produces a peer-reviewed journal of basic and clinical science research, *Wilderness and Environmental Medicine*, published by Elsevier.

Like most of the health professionals in the society, Islas continues to make his living caring for his patients in a traditional setting but uses places such as the great mountains of Wasatch, the Maroon Bells and the Rockies to quench academic interest.

"There's just the sheer beauty of being in a place, like the Middle Fork of the Gila River or walking into the bowl in the Guadalupe National Park. But there is an added satisfaction of self-reliance and a little rush of adrenaline when you are relocating a shoulder in an austere environment than in the emergency room."

the night and walked back into camp the next morning, but the memory was one that didn't easily fade.

"That was a sentinel experience in my life. It wasn't anything out of a Stephen King book, it wasn't that epic sort of deal but it was something out of the ordinary. I remember the most beautiful sights and the infatuation with the environment, but I also remember this feeling of self-reliance of knowing how to take care of ourselves."

Fast forward to the late '90s where Islas was a family medicine resident in El Paso. Still an outdoor enthusiast, Islas would turn to his medical textbooks and trade magazines to learn more about safety and emergency medicine in austere environments. His research eventually led him to the Wilderness Medical Society conferences and a whole new community of colleagues.

"I remember sitting there and watching these guys talk about trekking to Everest or running around in the



School of Pharmacy names 2012 Distinguished Alumni Award recipients

The School of Pharmacy named Raj Chhadua, PharmD, (SOP '02) and Lisa Chastain, PharmD, BCPS, (Resident '07) as its 2012 Distinguished Alumni, presenting them with the Excellence in Pharmacy Practice and Excellence in Leadership awards, respectively.

Chhadua, who started his career with Walgreen Co. as a photo clerk, is now a district pharmacy supervisor, overseeing 42 stores, 126 pharmacists and about \$185 million in revenue. He also was instrumental in establishing Walgreen stores into immunization centers by executing a program to provide training and certification to 675 pharmacists working in the 296 stores in North, Central and West Texas. Additionally, Chhadua is developing a website (www.onerxvoice.com) to create one professional voice for the industry that has the power to affect legislative decisions in Texas and nationwide.

Chastain is an assistant professor in ambulatory care at the School of Pharmacy at Dallas and also serves as director for the Post-Graduate Year 2 Ambulatory Care residency program. She is active in the local American Diabetes Association and has helped organize and manage screenings at local diabetes expos. She also has volunteered at a local diabetes camp for the past six years. Additionally, Chastain serves as president of the DFW Chapter of the American College of Clinical Pharmacy (ACCP) and is past membership chair, secretary and president-elect. She also has served ACCP on a national level as an active member of the organization's networking committee of the Endocrine and Metabolism PRN and is an active on the national and state levels with the Society of Health System Pharmacists.



1 At the annual Scrub Camp, first-year medical students receive a complimentary pair of scrubs from the Office of Alumni Relations. Executive Vice President and Provost and School of Medicine Dean Steven L. Berk, MD, and several members of the school's administration were on hand to welcome students and distribute scrubs. **2** In just one year, the School of Pharmacy Alumni Association Board met and then exceeded its original \$10,000 fundraising goal to establish the Alumni Pioneers Endowed Scholarship Fund. Josh Rodgers, PharmD, ('03) presented a check for \$11,000 to Dean Arthur Nelson Jr., RPh, PhD, at the school's hooding ceremony in May, which will fund one scholarship to be awarded in 2013. To make a gift, visit www.give2tech.com and select the School of Pharmacy Alumni Pioneers Scholarship Fund. **3** TTUHSC alumni and current students tailgate before the Texas Tech versus the University of Oklahoma game in October at an event hosted by the Office of Alumni Relations. **4** School of Medicine Class of 1984 celebrated its 20th reunion in October at a downtown Austin venue; the festivities were sponsored in part by the Office of Alumni Relations and the School of Medicine.

James Allen Boger, MD, died July 13, 2012. He was a faculty member in the School of Medicine at Amarillo where he taught and trained pediatric residents.

David Eisner, MD, died Aug. 19, 2012. He was the first associate chair of surgery for the School of Medicine at El Paso.

H. Elizabeth "Beth" Hoover Mavromatis died Oct. 14, 2012. She served as a librarian for 12 years at the Preston Smith Library of the Health Sciences.

Christopher Powers, MD, (SOM '98, Resident '02) died June 21, 2012. He was on faculty at the School of Medicine at El Paso for seven years.

Valerie Robinson, MD, (SOM '75) died Sept. 21, 2012. She was on faculty in the School of Medicine at Lubbock for nine years.

Carol Willis Strahan, MSN, CCRN, RN, died Oct. 13, 2012. She was an instructor in the School of Nursing.

Harry Weitlauf, MD, died Oct. 11, 2012. He served as chairman of the School of Medicine at Lubbock Department of Cell Biology and Biochemistry for more than 30 years and was a champion of cancer research.

Robert Paul "Bud" Yost, MD, died Aug. 10, 2012. He developed and served as director of the Division of Sports Medicine in the School of Medicine at Lubbock. Yost was on faculty for 25 years, including as professor and interim department chair.

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.

friends we'll miss

Christopher Metsgar, MS

EMS Education Supervisor, HealthONE EMS | Englewood, Colo.

Graduate: Clinical Services Management, 2005; Clinical Practice Management, 2009

Looking on the horizon: Christopher Metsgar, MS, gazes into the future of EMS education and likes what he sees – partly because of his role in shaping the path future EMS providers will travel. “The biggest thing I enjoy about my job is the development and advancement of EMS education. When I look at that as an allied health profession it is very young, but I see the advancements occurring in the profession.”

An accreditation advocate: Metsgar oversees approximately 1,500 students per year and also coordinates development of online continuing education. He is an advocate for the national accreditation of paramedics, and Jan. 1 marked the date the National Registry of Emergency Medical Technicians required that paramedics graduate from a nationally accredited paramedic program to be eligible to take their certification exam. “It’s important because educational accreditation makes it more of a reputable profession like other allied health fields where national accrediting is required.”

Committed to education: Metsgar said TTUHSC played an important role in the mark he has made on health care education. “Texas Tech helped me realize the importance of staying current in the EMS field, especially with all of the changes we are seeing nationally with health care. I have always thought education is my field, and the reason I’m in the field is I’ve been a proponent of quality education. EMS typically is an associate’s degree program, so I want to look for opportunities for people to pursue a bachelor’s degree, and we’ve recently done that here through our consortium with Arapahoe Community College and Colorado State University’s global campus.” —*Doug Hensley*



Monica Munoz, PharmD

Safety Evaluator, U.S. Food and Drug Administration | Silver Spring, Md.

Graduate: 2009

Who she is: Munoz has served two years as a pharmacy officer in the U.S. Public Health Service (USPHS). In her current assignment, she is responsible for analyzing drug safety data. Once identified, "We evaluate their significance and level of severity in the context of all data streams. Based on the analysis, we make recommendations and regulatory actions are taken if needed."

A path less traveled: After a PGY1 pharmacy residency with University Hospital/University of Texas in San Antonio, Munoz was selected for a collaborative academic program that eventually led to her current position. The collaborating entities included the USPHS, the FDA's Center for Drug Evaluation and Research and the University of Florida. She also spent one summer at the FDA working directly with her advisors from the center.

Life's little rewards: To know that what she does has an incredible public health impact brings Munoz great satisfaction, and she considers wearing the USPHS uniform an honor. Outside of work, there's her girlfriend, Allison, and their dog, Lucy, and a newfound obsession with a hard-hitting game of fantasy football for the self-described sports fan.

Basic training: TTUHSC's comprehensive pharmacy program positively impacted Munoz's professional career by teaching the art and science of the discipline. "I didn't realize how advanced the school was in that aspect until I compared my experiences with graduates of other pharmacy schools. The rotations gave me a solid background in core areas of clinical practice and, perhaps equally important, they helped me figure out what areas I didn't want to work in.

"Aside from the core curriculum, grand rounds and case studies helped me develop valuable communication and teamwork skills. I remember case studies as both enjoyable and frustrating, but it was fun to play detective to determine what was happening in a case. In fact, piecing together data is one aspect of my current position. More importantly, case studies forced us to work long-term with a randomly selected team. TTUHSC gave me the opportunity to cultivate an ability to adapt to different personalities and work ethics — a skill I view as a critical part of my success." — *Mark Hendricks*



Charlie Fox Simpson, ACNP-BC, MSN, AACC

Acute Care Nurse Practitioner, cardiology specialty
Seton Heart Institute at Highland Lakes, Burnet, Texas

Graduate: RN to BSN, 2004; MSN-Nurse Practitioner Program, 2007

Who she is: This mid-level provider purposefully moved beyond Austin's city limits to serve patients with cardiovascular diseases, practicing a long-held belief that one's choice of residency shouldn't reduce the standards of, or access to, quality health care. "It has been profoundly rewarding to be able to offer diagnostic testing and specialized care for individuals in rural areas without them having to leave their community."

What lies ahead: Simpson was selected in August to serve as a trustee for Seton Clinical Enterprise Board and a member of the Clinical Quality/Credentialing Committee, which will allow her to contribute at the administrative level to the quality of outpatient services offered through Seton's ambulatory clinics. "A tremendous task lies ahead to impact the burden of disease by prevention, lifestyle modification and health literacy."

In her little black bag: Eighteen years in health care has given Simpson the skills to competently provide a broad spectrum of cardiology care – from preventive screenings to diagnoses and treatment of advanced diseases – developed through formal education, on the job training, and a passion to bring advanced health care closer to home.

To maintain her own health, Simpson relies on an innate ability to recognize when her own batteries need recharging. "I have a strong foundation in my faith, but I also find time on the local lakes helps too ... When the going gets tough, the tough go jet skiing!"

— Danette Baker

David Lake, PT, PhD

Professor of Physical Therapy | Armstrong Atlantic State University, Savannah, Ga.

Graduate: 1987, Physiology

His role in education: David Lake, PT, PhD, enjoys teaching and working with students; seeing them catch certain concepts is rewarding. "It is particularly enjoyable to see them have the 'ah-hah' revelation, and you know that they now understand it."

Triple duty: Lake is right at home when it comes to challenging young medical minds. In July, he returned to the role of professor of physical therapy in the Department of Rehabilitation Sciences at Armstrong Atlantic State University in Savannah, Ga., after serving as the founding department head of the Physical Therapy Program. Armstrong Atlantic, an 8,000-student campus, is part of the University System of Georgia. He is teaching undergraduate and graduate courses in pathophysiology and research design. About two decades ago, he started the Physical Therapy Program as a master's degree and transitioned it to the doctoral degree in 2006.

All in a day's work: "Teaching, scholarship and service are the 'holy trinity' of academics. My time is spent with one of these three activities." Lake outlined back-to-back days in which he taught classes (undergraduate and graduate), participated in conference calls, worked on a newsletter, hosted a movie showing as part of a campus Common Read program and moderated a panel discussion. Oh, and he took in a jazz concert as well.

Home sweet home: Lake and his wife, Linda Wright, PhD, a psychology graduate from TTU, enjoy living on Tybee Island just outside Savannah, Ga., where they can sit on the deck of their home and watch ships and dolphins go by. "This is truly a perfect area to work and live, and yes, we will retire here."

— Doug Hensley

Patricia Evans, MD

Director, Neurodevelopmental Disabilities Residency Program
Associate professor, neurology and pediatrics
Children's Medical Center, University of Texas Southwestern
Medical Center/ Dallas, Texas

Graduate: 1983; Pediatric Residency 1986

Distinguishing characteristics: Fewer than 100 physicians nationwide have completed a fellowship in neurodevelopmental disabilities (NDD), and Evans is one of them. In 2009, she also began a NDD Fellowship at University of Texas Southwestern Medical Center, one of only nine in the country.

The practice: On a daily basis, Evans sees about 40 patients at the Children's Medical Center NDD clinic; most have an array of autistic spectrum disorders including Fragile X Syndrome, a genetic disorder that inhibits the brain's ability to grow and develop. Evans works on a national level with the Fragile X Consortium, which advocates for those with the condition as well as supports research for diagnosis and treatment. Six weeks out of the year, she also covers the pediatric inpatient general neurology clinic at Children's.

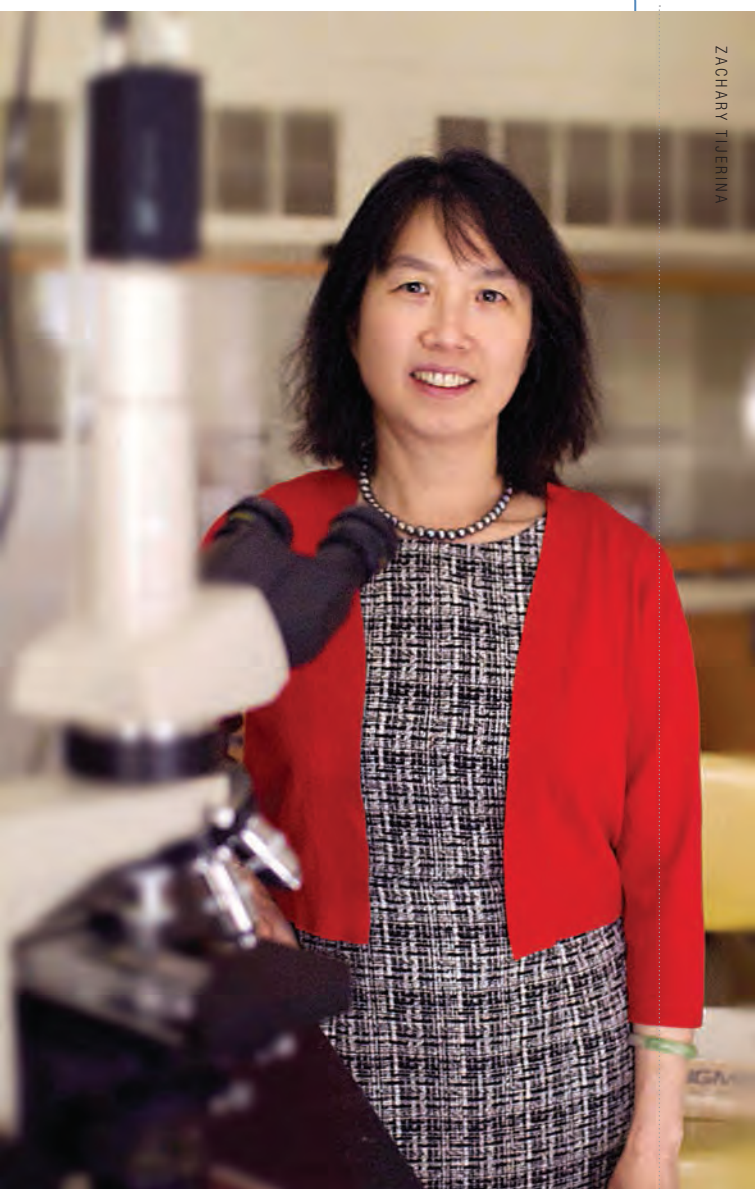
Memorable moments: Dissecting B.F. Skinner's behavioral techniques with her mother and twin sister; her \$7.50 an hour job in medical school playing at a local piano bar; and engaging conversations with Martha Denckla, MD, over the *New York Times'* Tuesday science features. "She was a national treasure," Evans said of the NIH-funded research scientist with whom she worked during her neurology fellowship at Johns Hopkins. "On Tuesdays, I still drive by Starbucks and get a copy of the *Times*."

Educational psychology: The learning process is one in which the roles are often reversed. "I continue to be taught by the medical students, my patients and their families. I may be the doctor, but they show me how they make their lives work. I feel so honored they would come and see me." — *Danette Baker*



Seed grants produce opportunities for federal funding

BY LESLIE SHEN, PHD



Compared to a basic scientist on the traditional academic career track, I have had a relatively unusual path here at TTUHSC. My overall research interest is in translational research, taking observations in animal studies and applying them in human clinical trials. Specifically, my research focus is managing chronic diseases, primarily osteoporosis and osteoarthritis.

Through my training as a basic scientist, I gained significant bench laboratory skills. Once I became an assistant professor in pathology, a clinical department with limited resources for a bench researcher, I realized the need to differentiate my work to compete for funding.

During the initial years of my work, I was fortunate to collaborate with physicians and scientists in complementary and alternative medicine, exercise physiology, toxicology, rehabilitation sciences, epidemiology, health research services, and health care engineering to compose a multidisciplinary research team. As a result, this team has demonstrated its ability to compete at multiple levels; in the past five years, we have received two grants from the National Institutes of Health (NIH).

I also have been blessed to receive a number of other grants through the years that have played an essential role in developing my work in complementary and alternative medicines. Among these were seed grants from the Laura W. Bush Institute for Women's Health, TTUHSC, TTU, Helen Jones Foundation, South Plains Foundation and Winthrop-University Hospital. These seed grants provided for the initial data collection through animal and human pilot studies necessary to advance our work in green tea and bone health. Additionally, these studies demonstrated our capacity to conduct translational research, leading to our first NIH grant funding a human clinical trial pilot study on the use of green tea supplements to positively impact bone loss in postmenopausal women.

In the fall, I received a second NIH grant to extend this study. The \$1.6 million preparation grant will allow us to look for an optimal dose for short-term use of green tea supplements in this population. The human body is constantly replacing deteriorating bone mass with new bone. During menopause, however, estrogen levels drop significantly, which interferes with the body's ability to continue the process of replacing bone mass.

We have confirmed the positive correlation between green tea intake and bone protection; this study will help identify an optimum dosage to support bone formation and slow deterioration. We will then use this dosage to

study the long-term benefits. Ultimately, our goal is to develop complementary and alternative medicine interventions to support overall bone health particularly in degenerative diseases such as osteoporosis and osteoarthritis.

Our current work has received much attention in academic and mainstream publications throughout the past two years. While the attention is humbling, it would not have been possible without the seed grants, which provided the foundation of support for our initial query.

Leslie Shen, PhD, associate professor in the School of Medicine Department of Pathology, is the principle investigator for the NIH-funded study "Preparation for GTP Long-Term Clinical Study on Bone Health." Co-investigators include TTUHSC physicians Marjorie Jenkins, MD, Gordon Brackee, DVM, and Carol Felton, MD, and University of Georgia researchers Jia-Sheng Wang, PhD, and Xiao Song, PhD. Consultants from TTUHSC include Kelly Mitchell, MD, Dale Dunn, MD, and Barbara Pence, PhD, as well as E. Michael Lewiecki, MD, from the New Mexico Clinical Research and Osteoporosis Center.

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