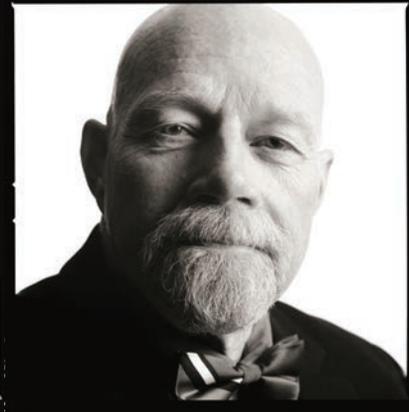




PULSE

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



WINTER 2015 • FACING THE FUTURE OF PUBLIC HEALTH 20

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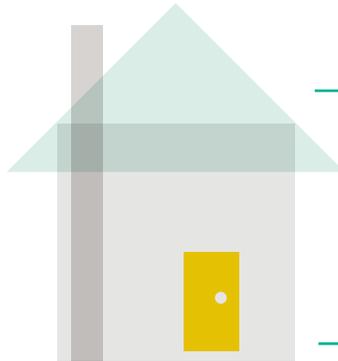


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UPDATES



Moved recently or just need to update contact information?

Change it with the TTUHSC Office of Alumni Relations by visiting <http://blogs.ttuhs.edu/alumni/update-your-information>



Class Notes

Class notes are back on our new blog: the Alumni Insider. Check it out on: blogs.ttuhs.edu/alumni/class-notes

READ ABOUT THE TTU System Board of Regents update online:

www.ttuhs.edu/communications/pulse

We want your feedback

Send your comments to Kara Bishop at kara.bishop@ttuhs.edu

Correction

The combined donation after the anonymous donor match totaled \$100,000 in the article titled, "The Lubbock-Crosby-Garza County Medical Society Presents Gift for Scholarships" in the Summer 2014 issue.



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Tedd L. Mitchell, MD, and his wife, Janet Tornelli-Mitchell, MD, enjoying the La Dolce Vita gala to promote the new "Your Life, Our Purpose" brand awareness campaign.

A NEW BEGINNING

We are looking forward to a great year at TTUHSC. Last year unveiled some exciting things for our institution.

Funding to establish the proposed School of Public Health in Abilene was announced in July. It will be the institution's sixth school and the fourth on the Abilene campus. According to the Association of Schools of Public Health, public health challenges have increased, while the public health workforce has diminished since 1980. To meet the increased demand, it is projected the U.S. will need more than 700,000 public health professionals by 2020.

The gift received to make this proposed school possible, which has been a major goal we've been working toward for many years, has helped secure our vision of improving the lives of West Texans. Through education, outreach and research programs, the proposed School of Public Health will address the growing needs of our region and state by providing professionals trained to study and preserve the health of communities. To read more about this exciting new venture and meet the inaugural class, see page 20.

The Department of Internal Medicine received a gift from the J.T. and Margaret Talkington Foundation Inc., to establish six endowed chairs. Because of the generosity of this gift and the impact it will have on West Texas communities, TTUHSC named the Department of Internal Medicine for J.T. and Margaret Talkington — the first TTUHSC department to be named.

We are excited about the possibilities we will now have in internal medicine. Having experts in different specialties will make our academic health center a referral magnet for the area, giving our West Texas citizens access to health care that previously was not available. To read more about the new possibilities for the J.T. and Margaret Talkington Department of Internal Medicine, see page 28.

Our School of Nursing and many of our faculty have received distinguished honors. Read more about these accomplishments and others in the Grand Rounds section starting on page 3.

In honor of the new year, I've begun my own new beginning on social media. Follow me on Instagram @TTUHSCPresident and on Twitter @TeddLMitchell. I'll keep you up to date on my many endeavors as president of the institution, and we'll have some fun along the way.

It's been an exciting 2014, and we look forward to an even better 2015. We wouldn't be able to accomplish all of these outstanding achievements without the help of our alumni and friends. We thank you and wish you a happy new year as we dive into 2015.

Tedd L. Mitchell, MD
TTUHSC President





School of Medicine Video Goes Viral for Charity

Second-year medical student Guo Yu, PharmD, (SOP '09) Steven L. Berk, MD, TTUHSC executive vice president and provost and School of Medicine dean, along with several others starred in a rap video titled, "I'm So Nerdy (Med School Parody of Fancy)" to raise money for the TTUHSC Free Clinic at Lubbock Impact.

"I was looking for a catchy song that was both popular and could be easily parodied with medical relevance," Yu said. "This song was No. 1 on Billboards for many weeks and it didn't take too much time to write new lyrics."

"I'm So Nerdy" has received more than 22,000 hits as of press time since it was posted to YouTube. Yu said he is excited that all of the hard work he and his classmates put into the video has turned into a great opportunity to do charity work for the community.

"It's extremely rewarding when people like the final product, since you're involved in every aspect of the project," Yu said. "I have recorded/mixed more than 50 songs. Out of all of my projects, this one felt the most special because I'm using a hobby to contribute to local charity."

The album, "Super Guo – I'm So Nerdy (EP)," which includes six songs, is available on iTunes. To watch the video, please visit: <http://bit.ly/1xV0xVN>. To donate to the free clinic, please visit www.ttuhs.edu/student-services/freeclinic/



Regents Establish Freestanding Graduate School of Biomedical Sciences in El Paso

The TTU System Board of Regents voted to begin the process of establishing a freestanding Graduate School of Biomedical Sciences at TTUHSC at El Paso. The process will include obtaining the required accreditation and related approvals from regulatory authorities including the Texas Higher Education Coordinating Board and the Southern Association of Colleges and Schools Commission on Colleges.

The freestanding graduate school will offer a master's degree and eventually a doctoral degree in biomedical sciences. Currently, the El Paso campus has a regional school offering a master's in biomedical sciences through the school in Lubbock.

"The establishment of this freestanding Graduate School of Biomedical Sciences at El Paso will complement and enhance the existing programs and expand educational opportunities," said TTUHSC at El Paso Founding President and Paul L. Foster School of Medicine Dean Richard Lange, MD, MBA. "Not only will the program benefit our university, but these biomedical sciences graduates will form an integral part of the workforce in El Paso, which is expected to make huge gains in the area of biomedical research in the near future."

The research performed by the graduate students will also address the health issues prevalent on the U.S./Mexico border. This new program will help facilitate interactions between basic science researchers and health care providers — or bench-to-bedside discoveries. The new graduate school will become the third school on the El Paso campus.



TTUHSC HOSTS COMMUNITY MEDICAL SCHOOL

This year's session of Community Medical School at Lubbock began Oct. 21 with TTUHSC President Tedd L. Mitchell, MD, and TTU System Chancellor Robert L. Duncan in a question and answer session on the state of health care in West Texas.

Citizens had the opportunity to submit questions prior to the event. Topics included the impact of the Patient Protection and Affordable Care Act, state of rural health care, future of state employee benefits, and opportunities that TTUHSC is taking to resolve the doctor and nurse shortage in West Texas. TTUHSC Executive Vice President and Provost and School of Medicine Dean Steven L. Berk, MD, provided a brief overview of the Ebola virus. Duncan explained the way the PPACA would affect Texans and speculated on the future of state employee benefits like teacher retirement.

Community Medical School was established five years ago and offers the surrounding community a hands-on look into the numerous TTUHSC schools over an eight-month period. Monthly, from October to May, participants hear interesting lectures on a variety of health care topics, from diabetes to technology to sports medicine.

"Community Medical School opens the doors of Texas Tech University Health Sciences Center to the Lubbock community and invites them to explore modern health care," said Rial Rolfe, PhD, director of the Community Medical School and executive vice president for Academic Affairs. "Additionally, Community Medical School will help the community become better health care consumers. The program gives students of all ages better insight into the medical field and teaches them the questions they should be asking their personal physicians."

For more information, visit: www.ttuhs.edu/communitymedicalscool.



Nursing Student Receives Prestigious Research Scholarship

Courtney P. Sherman, a School of Nursing student pursuing a Doctor of Nursing Practice degree, was awarded the Gary Stewart Scholarship for Research in Public Health.

The Association of Reproductive Health Professionals awards the scholarship to outstanding public health graduate students conducting a public health research project, specifically in the reproductive health field.

Sherman works as a women's health nurse practitioner in Round Rock, Texas, and is also a health policy fellow for the Texas Association of Business and has interest in research about pregnancy and neonatal outcomes in women after bariatric surgery.

5 minutes with the faculty...

A BIG MOVE

MICHAELA JANSEN, PHARM D, PH D | From Germany to TTUHSC | *By Laura Ray*

For Michaela Jansen, PharmD, PhD, moving from Germany to the United States for her postdoctoral research ended up becoming a career move as well. After a yearlong postdoc at the Einstein College of Medicine in New York City turned into five years, Jansen accepted a faculty position that brought her to TTUHSC.

“At the time I was hired, Dr. Luis Reuss was the chair of the Department for Cell Physiology and Molecular Biophysics. I really liked the vision he had for the department, and his approach of building a strong center of excellence focusing on membrane proteins, since this overlapped with my research interests.”



NEAL HINKLE

Jansen’s passion has always been to work in the lab. As assistant professor of Cell Physiology and Molecular Biophysics, she now manages two research projects. One focuses on vitamin transporters that play a role in neural tube defects that develop during pregnancy and in cancer chemotherapy. For the second project, Jansen studies a large class of receptors in the brain and other parts of the body that are involved in diverse neurological diseases and disorders such as stroke, epilepsy and Alzheimer’s disease. Being able to work in two different areas gives Jansen the variety she likes and the opportunity to challenge her students.

“I enjoy asking innovative and challenging questions in my research, and I want to inspire the future generation of scientists to have an open mind for ideas that may go against current knowledge and that challenge the field. Being a teacher is the best way of learning yourself.”

As for what the future holds for Jansen, her plans are to increase the size of her labs and continue to publish quality research and add an administration position to her resume. Jansen has found her professional home at TTUHSC and, with her expertise and passion, TTUHSC is benefitting from her pivotal move.

Michaela Jansen has received more than \$2 Million in research funding.

She has received the President’s Young Investigator Award, the Unsung Hero Award (Dean’s Award), both from TTUHSC, a Career Development Award from the National Institutes of Health; and an Outstanding Postdoctoral Research Scholar Award from the Belfer Institute for Advanced Biomedical Studies at the Albert Einstein College of Medicine, New York.

Jansen has written (or co-written) 21 publications. She also has 45 abstracts (posters and presentations).

Jansen is involved in the local running and triathlon community.

Jansen and her family travel back to Germany every one to two years to see her family.



Douglas Stocco, PhD, addresses the attendees of his retirement reception in October.

Stocco Recognized for 40 Years of Service

Douglas Stocco, PhD, tenured professor in the Graduate School of Biomedical Sciences, Department of Cell Biology and Biochemistry, was honored with a retirement reception in October for 40 years of remarkable service to TTUHSC. Stocco began his career at TTUHSC in 1974 when he joined the Department of Cell Biology and Biochemistry.

“Dr. Stocco’s contributions to research have earned him the utmost respect from his peers,” said Steven L. Berk, MD, TTUHSC executive vice president and provost and dean of the School of Medicine. “His work and leadership has impacted generations of the many students and faculty who have worked with him through the years.”

Tedd L. Mitchell, MD, president of TTUHSC, celebrated Stocco’s tenure by saying that “no individual better exemplifies the commitment to excellent research and the discovery of new knowledge.”

The National Institutes of Health (NIH) has funded Stocco’s work since 1984. His research has focused on the mechanisms involved in steroid hormone synthesis. His achievements include the identification and characterization of a novel protein, which his laboratory named the Steroidogenic Acute Regulatory, or StAR, protein.

Stocco was a model institutional citizen, never refusing to serve in any role or meet any challenge that was asked of him. In 2008, he was named executive vice president for research, and in 2010 he was asked to assume the additional role of dean for the Graduate School of Biomedical Sciences. Most recently he served as interim chair in the Department of Cell Biology and Biochemistry following the death of Harry Weitlauf, MD.

In recognition of his distinguished service as an academician and researcher, Stocco was the recipient of numerous national and international honors and awards throughout his career. He is widely published with more than 200 peer-reviewed scientific articles, book chapters and abstracts. He also has been an invited guest presenter at numerous national and international conferences.



Calvert to Lead TTU System Development

Lisa Calvert has been named vice chancellor of Institutional Advancement for the TTU System. She began her duties Feb. 23.

“I look forward to Lisa joining our team,” said TTU System Chancellor Robert L. Duncan. “She brings nearly three decades of fundraising experience to the TTU System. She has the vision and skills to create a culture of sustained philanthropic excellence across the TTU System.”

Calvert has led fundraising efforts at three universities; most recently she served as vice president of development at Purdue University. During her tenure there, she reorganized the university’s development efforts to double the annual dollars raised from \$200 million to \$400 million, simultaneously shifting the traditional mix of gifts toward more cash.

“I am extremely excited about the opportunity to lead the institutional advancement team and to work toward achieving the system’s strategic goals,” Calvert said. “The Texas Tech University System has enjoyed unprecedented fundraising success, and the system is positioned for even greater accomplishments in the future under Chancellor Duncan’s leadership.”

At Purdue, Calvert oversaw fundraising efforts that quickly resulted in the second and fourth most successful years in school history, \$298.8 million and \$227.3 million, respectively, exceeding annual goals. Her leadership also secured two of the largest donations in the institution’s history: a \$65 million gift in 2013 and a \$61.2 million gift in 2012.

Her track record of success led to her being one of only 10 advancement officers across the country featured in a national study that became the basis for the book, “Making the Case for Leadership: Profiles of Chief Advancement Officers in Higher Education.”

Prior to her time at Purdue, Calvert served as vice president of university relations at Creighton University from 2003 to 2010. Her vision and leadership for Creighton’s fundraising campaign led the school to achieve its largest campaign goal more than a year ahead of schedule. From 2000 to 2003, she served as vice president for institutional advancement at William Jewell College. The school exceeded its campaign goal one year ahead of schedule and enjoyed two of the three largest giving years in school history during her tenure and was selected as the Liberal Arts College of the Year by TIME magazine for 2001-2002. Calvert also has held fundraising positions with Wichita State University and Kansas State University.

MATTERS

of the heart

By Holly Leger

Serving Another Dimension

David and Laurie Vanderpool Move Their Practice to Haiti

After 20-plus years of practicing medicine in Brentwood, Tenn., David Vanderpool, MD, (SOM '87) and his wife, Laurie, decided it was time to move.

They were ready to leave the Volunteer State. In fact, they were ready to leave the United States altogether.

So in 2013, the couple sold their home, most of their belongings and Vanderpool's medical practice, Lave MD. They headed for Thomazeau, Haiti, to start Live Beyond, a non-profit humanitarian organization.

"Our move to Haiti has been wonderful," Vanderpool said. "It's a little different from our previous life, but it's been fantastic."

The couple currently lives in a 12-foot by 16-foot room with no air conditioning in a country that primarily has no running water, no sewage system and no electricity.

Although the living conditions may be hard, the decision to move was not.

Vanderpool originally traveled to Haiti after the 7.0 magnitude earthquake hit the country in January 2010. He and his Mobile Medical Disaster Relief (MMDR) team arrived within 48 hours. According to the Live Beyond website, 330,000 people were killed and one million were injured.

He and his wife began traveling to Haiti one week out of every month after that, until they made the move permanent in May 2013.

Along with the shortage of electricity and clean water, Vanderpool said Haiti also lacks operating rooms, which makes it difficult to treat common cases like appendicitis and breech babies. He said they also see cases of tropical medicine diseases, malaria, tuberculosis and AIDS.

In order to improve health care facilities for Haitians, the organization began construction in 2013 on the Live Beyond Base, which once completed, will feature a surgical hospital and clinic, as well as a vocational school, primary and secondary schools, chapel, soccer field, orphanage, guest house and farm.

Although these projects have taken the Vanderpools away from their Tennessee home that has not stopped the volunteers from coming to them, including their son and daughter-in-law, who recently moved to Haiti, too. Vanderpool said all three of his children have been very active in the Live Beyond ministry.

"It's just lots of fun having them here. They basically would claim Haiti as home probably," he said laughing.

Still, Vanderpool hopes more volunteers will join the Live Beyond cause, because there are still plenty of needs to be filled in areas of health care, agriculture, construction, business and education.



David Vanderpool, MD, (SOM '87) treats a patient in Haiti.

Seeing those re-occurring needs during his years of medical missionary service has opened Vanderpool's eyes to how privileged Americans are. He left his practice in the states, because he felt a desire to live beyond that comfort. Now, he said, he hopes he can bring a better quality of life to those in poverty.

"It's just amazing to me that an hour and a half off our border, we have people that are living in absolute squalor," he said. "So for me, it was a real spiritual awakening. It's really invigorating to have given everything away and to be living among the poor trying to help them in any way we can."

For more information about the Live Beyond ministry, please visit www.livebeyond.org.

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

Luedtke Named Recipient of Helms Award

The Pediatric Pharmacy Advocacy Group (PPAG) named Sherry Luedtke, PharmD, a founding faculty member of the School of Pharmacy, the ninth recipient of the Richard A. Helms Award of Excellence in Pediatric Pharmacy Practice.

The Helms Award recognizes sustained and meritorious contributions to PPAG and to pediatric pharmacy practice and contributions of importance to education, new knowledge and outreach.

To be eligible for the award, nominees should have made a lasting contribution to pediatric pharmacy practice, must be in pediatric pharmacy practice for a minimum of 15 years and must be an active member of PPAG for a minimum of five continuous years.

Luedtke, who served as PPAG president from 2002 to 2004, is the youngest recipient of the award.

“It is a great honor to receive the Richard Helms Award of Excellence and to be considered a member of a truly elite group of leaders within pediatric pharmacy,” Luedtke said. “I greatly respect each of the past award winners and feel very humbled to be a recipient.”



Regents Honor Paul L. Foster School of Medicine Faculty Member with Emeritus Appointment

The TTU System Board of Regents recently conferred David Steele, PhD, TTUHSC at El Paso senior associate dean for Medical Education and Office of Curriculum, Evaluation and Accreditation, with the honorary title of professor emeritus for his distinguished service to the Paul L. Foster School of Medicine at the time of his retirement on Aug. 31.

The legacy of customizing the innovative and effective Paul L. Foster School of Medicine curriculum and steering the only medical school on the U.S./Mexico border through the massive task of successfully attaining preliminary, provisional and final full Liaison Committee on Medical Education (LCME) status in February 2013 belongs to Steele, said TTUHSC at El Paso Founding President and Dean of the Paul L. Foster School of Medicine Richard Lange, MD, MBA.

“His interaction with the accrediting body is the reason that the secretariat of LCME holds TTUHSC at El Paso as the model for curricular innovation in designing new medical schools,” he said. “We are deeply indebted to Dr. Steele for his devotion and leadership in meeting our educational mission.”

Appointment as professor emeritus honors Steele’s exemplary years of service and longstanding contributions and will enable the Paul L. Foster School of Medicine to retain his services as a valued advisor to students, residents, faculty and administrators.



Rotwein Joins TTUHSC at El Paso

Peter Rotwein, MD, joined TTUHSC at El Paso in September as the assistant vice president of research, associate dean of research, chair of the Department of Biomedical Sciences and regional dean of the Graduate School of Biomedical Sciences.

Upon accepting the job, Rotwein said, “I look forward to working with President Lange and with the faculty of Texas Tech University Health Sciences Center El Paso to help enhance the excellent research programs already in place. I am honored and humbled to be recommended by the search committee and to be selected by President Lange for this position and am excited to get started at an institution with a great future in an outstanding city.”

Rotwein obtained his undergraduate degree from Yale University and his medical degree from Albert Einstein College of Medicine, where he also completed his internal medicine residency training. He was an NIH postdoctoral fellow in endocrinology at Albert Einstein College of Medicine and in metabolism at Washington University School of Medicine.

Rotwein’s research efforts have focused on insulin-like growth factor signaling pathways and have won him election to several prestigious organizations, including the American Federation of Clinical Research, the American Society for Clinical Investigation and the Association of American Physicians.

VARMA APPOINTED TO TEXAS MEDICAL BOARD

Former Gov. Rick Perry appointed Surendra Varma, MD, Distinguished Service Professor and vice chair of pediatrics in the School of Medicine, to the Texas Medical Board. The board protects and enhances the public’s health, safety and welfare by establishing and maintaining standards of excellence used in regulating the practice of medicine and ensuring quality health care for Texans.

“As a leader in health care education, as well as the field of pediatrics, Dr. Varma’s appointment to the Texas Medical Board is well-deserved,” said Steven L. Berk, MD, TTUHSC executive vice president and provost and dean of the School of Medicine. “His commitment to those afflicted with endocrine metabolic diseases has changed the lives of countless people across our state. We are proud that our School of Medicine is represented in leadership roles across the state.”

Varma’s Texas Medical Board term will expire April 13, 2019.

Investigators Receive NIH Grants

The National Institutes of Health have awarded grants totaling almost \$3 million to four investigators in the Center of Excellence in Infectious Diseases at Paul L. Foster School of Medicine.

Huanyu Dou, MD, an assistant professor in the Department of Biomedical Sciences, was awarded a four-year Ro1 grant totaling \$964,000 from the NIH National Institute of Medical Sciences titled, *Injury Mechanisms and Systemic Immune Responses after Cerebral Global Ischemia*. The central hypothesis of this grant proposal is that most of the disseminated neuronal loss in the later phase of reperfusion after resuscitation can be prevented and reversed by tailoring the immune system to turn off pro-inflammatory responses and turn on protective immune activation. It is anticipated that the studies will pave the way for development of a systemic strategy to treat neuronal damage.

Premlata Shankar, MD, principal investigator, and Manjunath Swamy, MD, co-investigator, professors in the Department of Biomedical Sciences were awarded a \$1.5 million grant from the NIH National Heart Lung and Blood Institute titled, *Role of PD-1H induced monocyte activation in HIV pathogenesis*. The four-year Ro1 grant will investigate the role of a novel co-stimulatory molecule called Programmed Death-1 Homologue (PD-1H) in regulating monocyte activation/function in normal and HIV infected individuals. It is anticipated that the studies will shed light on the underlying mechanism of chronic immune activation associated with HIV infection and help identify novel targets for therapeutic intervention.

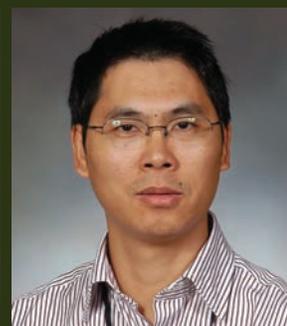
Haoquan Wu, PhD, assistant professor in the Department of Biomedical Sciences, was recently awarded two grants from the NIH National Institute of Allergy and Infectious Disease. Wu received \$377,500 for his research titled, *Identifying Host Factors Involved in HIV-Induced Cell Death with CRISPR-Mediated*, and \$151,000 for his research titled, *Suppressing HIV Infection by Disrupting CCR5 with Double Nicking CRISPR-Cas9 Syst*. The study evaluates the anti-HIV efficacy and off-target effects of the double-nicking CRISPR-Cas9 system in the Hu-PBL mouse model. The long-term goal of this project is to develop an alternative HIV therapy to ZFN that might offer a functional cure with excellent safety profile for HIV patients.



Huanyu Dou, MD



Premlata Shankar, MD, and Manjunath Swamy, MD



Haoquan Wu, PhD

SCHOOL OF NURSING NAMED AS A CENTER OF EXCELLENCE

The School of Nursing is one of six nursing schools to be recognized as a Center of Excellence by the National League of Nursing (NLN) Board of Governors for the years 2014 to 2018.

The NLN began inviting schools to apply in 2004. The School of Nursing was recognized at the NLN's Annual Education Summit in September.

"We are extremely honored to be recognized as an NLN Center of Excellence," said School of Nursing Dean Michael L. Evans, PhD, RN, FAAN. "We join some of the nation's top nursing programs in this group of the select few Center of Excellence schools."

When selecting schools for the award, the NLN looks at sustained faculty development, nursing education, research and a proven commitment to continuous quality improvement. The School of Nursing was selected for creating an environment that enhances student learning and professional development, according to the NLN.

Only 31 colleges and schools of nursing along with four health care organizations have been selected to date for the commendation out of more than 700.



MacLaughlin Named Department Chair of Pharmacy Practice

Eric MacLaughlin, PharmD, was named chair of the Department of Pharmacy Practice for the School of Pharmacy at Amarillo.

MacLaughlin's specialty is family medicine. Along with his new appointment, he also has a joint appointment in the School of Medicine Department of Family Medicine and Internal Medicine at Amarillo.

"My clinical duties involve chronic disease state management in the Center for Family Medicine,

and I am also a member of the Geriatric Education Center," he said. "My research interests include the management of cardiovascular diseases and providing education to health care professionals."

School of Pharmacy Dean Quentin Smith, PhD, said he looks forward to working with MacLaughlin in improving upon an already excellent School of Pharmacy.

JUST The facts



#1
The Mommy Meds app reached #1 in the iTunes store when first launched November 2014.



\$9.6 million
amount awarded in grants and scholarships in 2014 by TTUHSC.



20,000
physicians, nurses, pharmacists, educators, researchers and allied health sciences professionals produced by TTUHSC to date — many of whom stay and practice in West Texas and eastern New Mexico.



#24
TTUHSC distance education programs ranked 24th on Edudemic's list of the Top 25 Online Colleges in Texas — the only academic health center named.



11
of the 23 students enrolled in the public health program are MD/MPH dual-degree students.

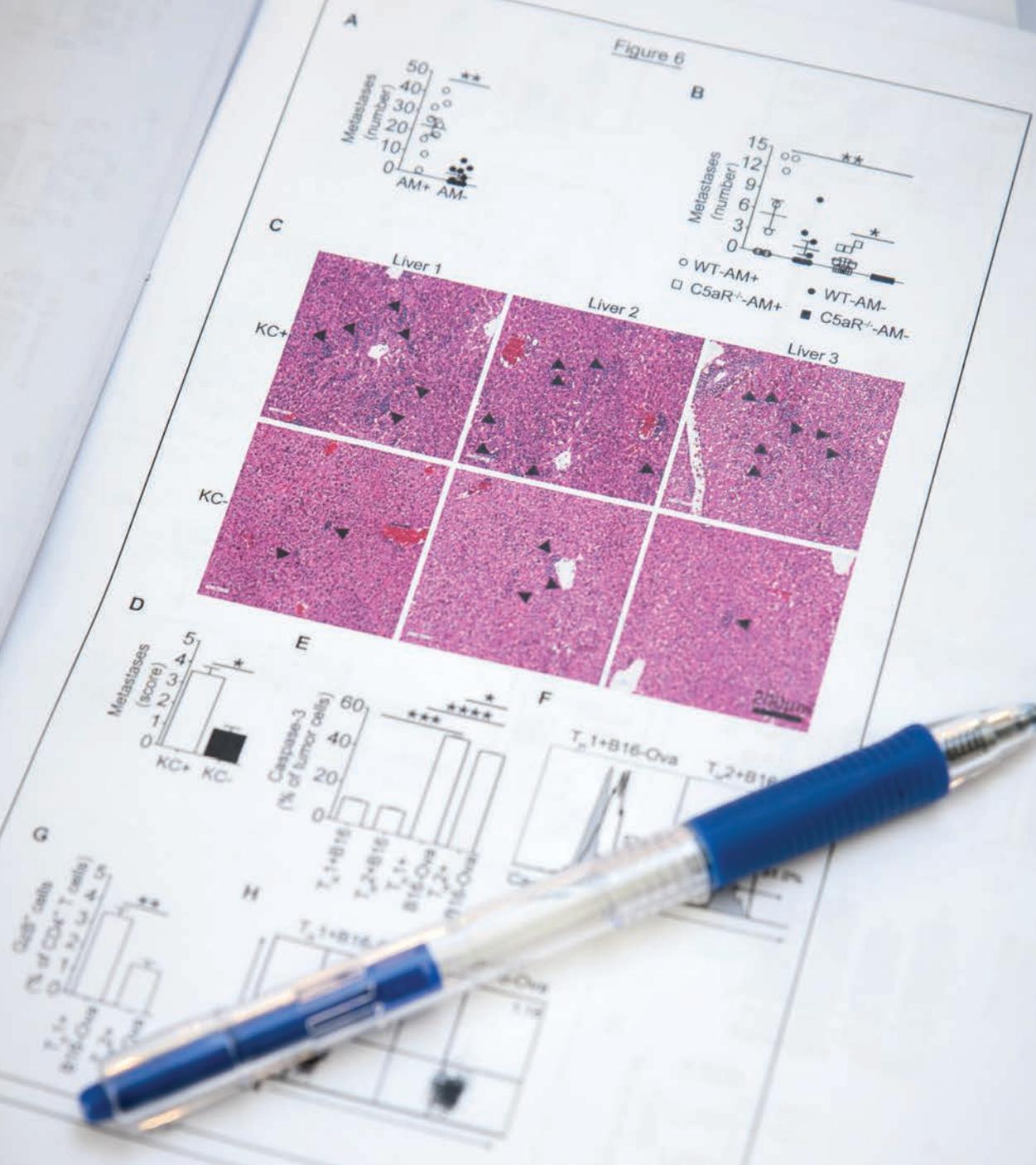


Figure 7



Cure For Cancer?

TTUHSC Researcher Paves the Way with Significant Discovery



Maciej M. Markiewski, MD, PhD, (middle) works with colleagues to prepare research publication.

By Amanda McDaniel (GSBS '01) | Photos by Mark Umstot

More than 1.6 million Americans were diagnosed with cancer in 2014. It is a diagnosis that strikes terror in the hearts of patients and their families.

Learning that the cancer has metastasized causes even greater fear. For each additional organ system involved beyond the original tumor site the survival rate decreases dramatically.

Maciej M. Markiewski, MD, PhD, and members of his lab in the School of Pharmacy at Abilene, are currently studying a means of preventing the spread of cancer beyond the primary tumor location. Markiewski began his career as a clinical pathologist at Pomeranian Medical University in Szczecin, Poland. During this time, he became interested in tumor pathology and obtained a PhD in the subject from the same institution. Markiewski then collaborated with the Max Planck Institute in Germany on several studies related to breast cancer. His interest in research

piqued, Markiewski left his clinical pathology practice in Poland to complete a postdoctoral fellowship in the laboratory of John Lambris, PhD, at the University of Pennsylvania.

“I decided to go to America to do research, as at a certain point of my medical career I felt that I could do more than perform routine work in health care. However, it was not my initial intention to stay in the USA for longer than two to three years. I thought that I would do profound research in a short period of time, and then I would go back to my home country. However, great research usually takes longer; therefore, I quit my job in Poland and stayed in the USA. I quickly realized that this work gives me more satisfaction and joy than my previous work in the hospital.”

While working in Lambris’ lab, Markiewski focused on the role of the complement system in physiological processes and various diseases. The complement system is composed of proteins that float in the blood and body fluids and act as a part of the innate immune system to help remove pathogens from the body. In 2007, Markiewski read an article in the *Journal of Clinical Investigation* that described the role of myeloid-derived suppressor cells (MDSCs) in tumor growth. This article described a drastic increase in MDSCs in tumors and how these MDSCs protected the tumors from attack by the patient’s immune system. Markiewski wondered if MDSCs had a receptor for C5a, the complement he was working with at the time. A series of experiments showed that not only do MDSCs have a receptor for C5a, but also that C5a is important for MDSC migration to primary tumors and amplifies MDSC immune system suppression. When he blocked the C5a receptor on MDSCs, tumor growth was significantly slowed.

Markiewski joined the School of Pharmacy as an associate professor in September 2010. He and the members of his lab continue to study the role of C5a in cancer. They have expanded their studies to include the role of C5a in cancer metastasis. In order for cancer to spread, a place must be made ready for it at the new site. This is called the pre-metastatic niche. Recently, MDSCs have been identified as part of the niches, which may explain why the migrating tumor cells are not attacked by the immune system.

Markiewski’s lab is currently studying the effect of the C5a receptor 1 (C5aR) on metastasis in a mouse model of breast cancer. They found that by blocking C5aR, metastases in the lungs and liver

were significantly reduced. This may be due to the fact that C5a blocks CD4+ and CD8+ T cells, which are thought to be involved in the removal of “seeding” tumor cells in the lungs and/or tumor cells floating in the blood.

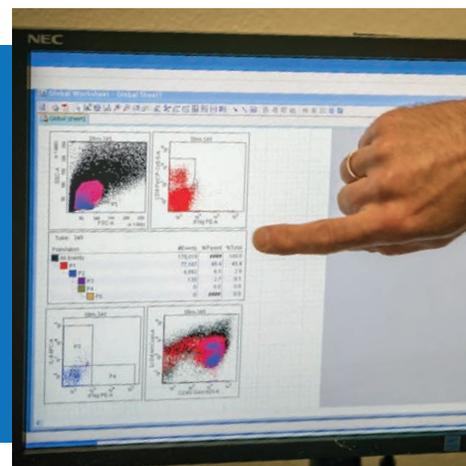
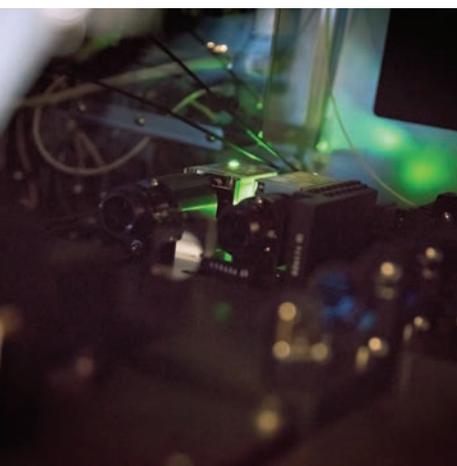
Their study also revealed that CD5a affects multiple steps in the development of pre-metastatic niches. First, without CD5a/CD5aR to act as an attractant to MDSCs, the MDSCs did not accumulate in the lungs. Secondly, the number of anti-tumor CD4+ T cells increased when C5aR was blocked. Third, inhibition of CD5a decreased the amount of IL10 and TGF, cytokines that are involved in immunosuppression. Lastly, inflammation similar to that seen in pneumonia is found in lungs prior to seeding of tumor cells. Mice without the CD5aR had greatly diminished cancer-induced inflammation in the lungs, followed by decreased seeding of tumor cells.

The most important finding of all, though, is that 75 percent of the mice with breast cancer who received the C5aR antagonist did not develop any metastases.

“The ultimate goal of my research is to understand mechanisms of disease in order to find targets for new therapies that will improve and prolong patients’ lives.”

“I think that the complement system ... might have a significant and still underappreciated role in shaping anti-tumor immunity and impacting cancer progression and metastasis. I hope to see complement inhibitors in the clinical trials for cancer patients. The ultimate goal of my research is to understand mechanisms of disease in order to find targets for new therapies that will improve and prolong patients’ lives. It is also important to make sure that these new therapies are safe and affordable for people. It is sad that in the richest country of the world (USA) people need to go into bankruptcy to save their lives or their family’s lives.”

Markiewski plans to continue his research of the role of the complement system in cancer in collaboration with Surya Kumari Vadrevu, MS, Navin Chintala, MS, and Sharad Sharma, PhD, as well as Magdalena Karbowniczek, MD, PhD, associate professor in the School of Pharmacy Department of Immunotherapeutics. 

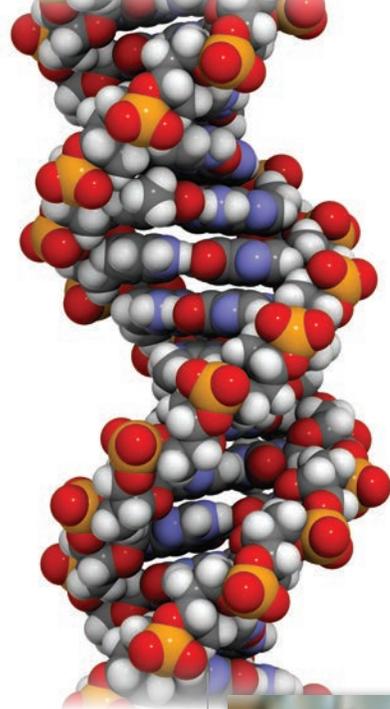


DNA RESEARCH MAY LEAD TO MALE INFERTILITY TREATMENT

Infertility is a heartbreaking reality for many couples. The lab of Clinton MacDonald, PhD, is examining one of the causes of male infertility.

The process of messenger RNA (mRNA) formation is identical in every cell type of every multicellular organism — except mammalian male germ cells. Polyadenylation, or the formation of the 3' end of mRNA, is where this difference occurs. It has been shown that within male germ cells, there is an increase in alternative polyadenylation, reduced dependence on downstream sequence elements, and decreased use of the AAUAAA polyadenylation signal.

While researching this unique form of polyadenylation, MacDonald discovered CstF-64, a protein that controls polyadenylation and is only expressed during male meiosis. His lab created mice with a targeted deletion of Cstf2t, the gene that codes for CstF-64. Studies of these mice showed that CstF-64 is required for spermatogenesis. While the infertility caused by the mutation is due to low sperm count, MacDonald also showed that multiple genes involved in sperm development require CstF-64 for normal expression. These discoveries may lead to a targeted gene therapy treatment for some types of male infertility.



Clinton MacDonald, PhD, is a professor in the Graduate School of Biomedical Sciences Department of Cell Biology and Biochemistry.



UNIQUE TREATMENT DISCOVERED FOR TINNITUS PATIENTS

Most people experience an annoying ringing in their ears from time to time. For some, though, that ringing becomes tinnitus and is loud, constant and can affect their quality of life. Current treatments for tinnitus range from white noise machines to treatment of underlying conditions.

Yang-soo Yoon, PhD, became interested in tinnitus when he was approached by a colleague from South Baylo University, the largest oriental medicine university in the U.S. This colleague said more than 50 percent of his patients reported that their tinnitus was reduced or cured after two weeks of acupuncture treatment. This level of response is far above that normally seen with Western therapies; however, the results were only anecdotal.

Yoon and his lab are now designing a study to quantify tinnitus before, during and after two weeks of twice-weekly acupuncture treatments. They plan to perform six different assessments of tinnitus severity: otoacoustic emissions, which quantify the function of outer hair cells, the amplifiers in the ears; pitch-matching, in which the patient indicates the pitch played over headphones that most closely matches the pitch of their tinnitus (lower pitch frequency matches after treatment indicate improvement); loudness matching, in which the patient indicates the loudness presented that perceived the most closely matched with the level of their tinnitus (lowered level is expected after the treatment); and temporal processing, one of the most important auditory abilities for sound perception, in which the patient attempts to identify which of a set of sounds has a time-gap in a continuous sound (dooo vs doo doo, improved ability to detect a time-gap is expected after the treatment).

They also will test spectral ability, the most important auditory ability to discriminate small difference in frequency, ie, between a 1 kHz and a 1.1 kHz sound; and the Tinnitus Handicap Inventory, the most popular and widely accepted self-report questionnaire measure to quantify the impact of tinnitus on daily living such as functional, emotional and catastrophic subscales.

Such quantification is often lacking in reports of the effectiveness of alternative medicine and will be an important step in validating acupuncture as an effective treatment for tinnitus.

Yang-soo Yoon, PhD, is an assistant professor in the School of Allied Health Sciences Department of Speech, Language and Hearing Sciences.

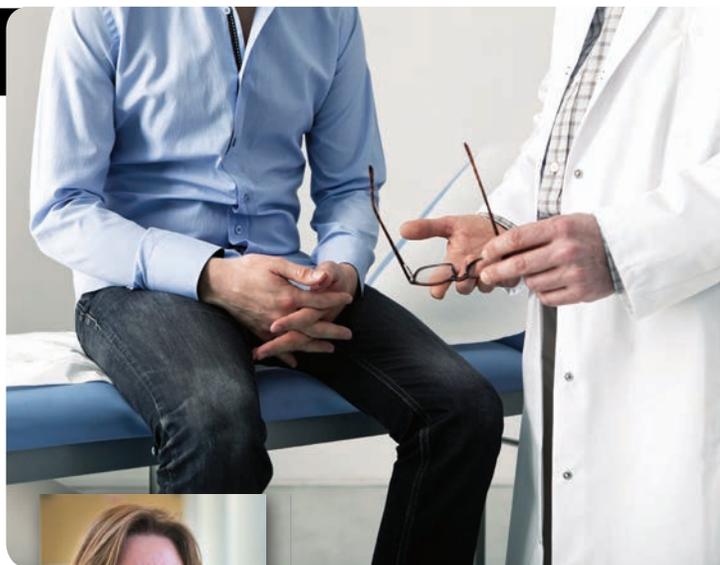


PROTEIN DISCOVERY LEADS TO PROSTATE CANCER TREATMENT

Metastasis to the bone is the main cause of death for patients with advanced prostate cancer. Pigment Epithelium-Derived Factor (PEDF), a natural protein necessary for a healthy prostate, is lost in prostate cancer. During her post-doctorate at Northwestern University, Stéphanie Filleur, PhD, made the original discovery that engineering prostate cancer cells to re-express PEDF blocks tumor growth in vivo. Since her arrival at TTUHSC, Filleur and her team are studying the molecular and cellular mechanisms of PEDF to develop new therapeutic strategies for advanced prostate cancer. They have found that PEDF affects tumor growth, bone metastases formation and survival of tumor-bearing mice in at least three ways: it causes the tumor cells to become less malignant (re-differentiation); it blocks blood vessel growth within the tumor, thus, “starving” the tumor of nutrients; and it modulates inflammation by targeting a specific kind of inflammatory cells (macrophages).

In a recent study in mice-bearing prostate tumors, Filleur’s lab found that PEDF combined with low-dose chemotherapy drugs, was more effective than chemotherapy alone. In fact, the mice who received the PEDF/chemotherapy treatment showed a drastic increase in survival rate — more than 35 days beyond those who were treated with chemotherapy alone. Additionally, there was a significant decrease in metastases and, most importantly, more than 50 percent of mice had complete regression of their tumors.

As a next step, Filleur’s group is developing a system to deliver PEDF directly to tumors. This study could lead to development of improved therapeutic approaches for patients with metastatic prostate cancer.



Stéphanie Filleur, PhD, is an associate professor in the School of Medicine Department of Urology.

STUDIES MAY LEAD TO SAFER, MORE EFFECTIVE DRUGS

In humans, membrane proteins account for 20 percent of all the genes contained in our genome. They are found embedded within the cell membrane and are key players in a wide variety of biological functions that include solute transport across the cell membrane, cellular communication and energy production. Given the wide spectrum of cellular function mediated by membrane proteins, it is not a surprise that their malfunctioning is often responsible for the onset of many diseases, including cancer, cardiac arrhythmias and Alzheimer’s disease. For these reasons, membrane proteins have become the principal target of the pharmaceutical industry in its attempt to develop newer and safer therapeutic drugs.

Luis G. Cuello, PhD, is researching the structure and dynamics of membrane proteins in order to understand how these molecules work at the atomic level to later develop drugs that are safer and more effective. The first step in the process is to develop a very high-resolution structure of a membrane protein, followed by continuous wave electron paramagnetic resonance spectroscopy (CW-EPR spectroscopy) and fluorescence spectroscopy in tandem to define the structural changes that these proteins undergo when working in a living cell. Such exhaustive analysis of the structure and function of these molecules, down to the atomic level, will allow researchers to design safer therapeutic drugs that will specifically target and correct the “malfunctioning” of a specific membrane protein. This methodological strategy will allow scientists to synthesize safer and more specific therapeutic drugs, which consequently will minimize the undesired and typical side effects produced by current drug therapies.

Luis G. Cuello, PhD, is an assistant professor in the Graduate School of Biomedical Sciences Department of Cell Physiology and Molecular Biophysics.



SEX

Traditional interactions between health professionals and patients may soon be changing thanks to a groundbreaking curriculum initiative developed at TTUHSC. The Sex- and Gender-based Medicine (SGBM) Curriculum Project is poised to change how physicians, nurses and other health professionals view diagnostic and treatment differences between men and women.

A project of the Laura W. Bush Institute for Women's Health (LWBIWH), an institute under the TTUHSC umbrella, the curriculum works to strengthen and infuse TTUHSC's existing curriculum with additional sex- and gender-based concepts, facts and data from evidenced-based resources. The project began three years ago and includes the schools of Medicine, Nursing, Pharmacy and Allied Health Sciences with more than 150 faculty members and students involved.

"We refer to this curriculum as a game changer," said Marjorie Jenkins, MD, associate professor in the Department of Internal Medicine and Department of Obstetrics and Gynecology, chief science officer for the LWBIWH and project lead faculty. "We realize that if our faculty and students aren't trained in how sex and gender differences can affect diagnosis and treatment. Research tells us these differences exist and, more importantly, tells us that addressing these differences can help us provide the best possible care for men and women."

The Curriculum

The SGBM curriculum features a series of patient-case learning modules and lecture material designed to encourage learners and increase their awareness of the roles sex and gender play in medicine. The cases are organized into a series of web-based interprofessional medical education programs including students and faculty from each participating school. Five cases in which gender differences are significant comprise the launch of the curriculum. Each case mimics the types of interactions students will have with others in their professional careers, Jenkins said.

"We know osteoporosis, diabetes, heart disease, addiction to alcohol and urinary incontinence show marked differences between the genders," she said. "This is where we chose to begin. These cases are designed with today's learner in mind, featuring video clips, animated patient/caregiver interviews and simulations of disease processes. Each module has assessment questions to evaluate student comprehension and knowledge."

Imagine that every medication women take was **only studied** in males. Does it make a difference?

Research shows that if men and women drink the same amount of alcohol over a long period of time women will have **more organ damage** to their brain, bones, nerves and heart.

Matters

by Jo Grant

Laura W. Bush Institute for Women's Health Hopes to Raise the Bar on Sex- and Gender-Based Medicine Education

The Need

Sex refers to the biological basis of being male or female while gender refers to the different social, cultural and economic attributes of being male or female. Sex and gender differences go beyond noting the physical and emotional differences between the sexes, said Steven L. Berk, MD, TTUHSC executive vice president and provost and dean of the School of Medicine.

"We want to create a curriculum that teaches health professionals the optimal way to care for males and females. It means asking the questions of how medications and treatment modalities react in each gender. We know there are differences. We need to apply these relevant differences when taking care of our patients."

A prime example of these differences is the recent move by the Food and Drug Administration to recommend doses for women be halved, from 10 milligrams to 5 milligrams, for immediate-release products (Ambien, Edluar and Zolpimist) and from 12.5 mg to 6.25 mg for extended-release products (Ambien CR).

In explaining these recommendations, Ellis Unger, MD, director of the Office of Drug Evaluation I at the FDA's Center for Drug Evaluation and Research, said at the time "women appear to be more susceptible to risk for next-morning impairment because they eliminate zolpidem from their bodies more slowly."

"The FDA realized the metabolic difference these drugs had in each gender," Jenkins said. "Up to 40 percent of package inserts included in medication packaging report some type of metabolism difference between men and women yet different dosing instructions are lacking. This is why we have to ask the sex- and gender-difference questions."

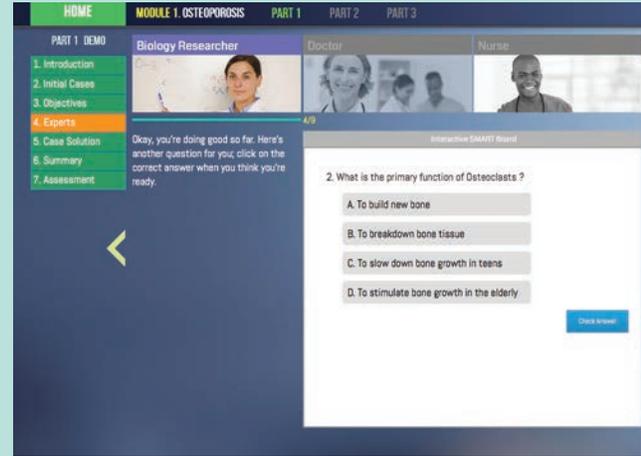
How men and women exhibit cardiovascular disease is another example.

"We know that women experience cardiac disease differently than men," Berk said. "Their symptoms are different. They react to treatment differently. They manage their illness differently. That is why women's cardiac centers have been created. If these differences exist in cardiac health, we feel they exist in other areas."

Jenkins says this curriculum is designed to look at the disease process not only of women but also of men. "We know men are more likely to experience sudden death from cardiovascular disease, and suicide and osteoporosis is frequently misdiagnosed in men. Urinary incontinence is the No. 2 reason why men are in nursing homes, yet it is considered a disease of women. These differences matter."

Of the **45 million people** who experience chronic headaches, the vast majority are women between the ages of 20 and 45 years old, often juggling a young family, job and other commitments.

Women are **less likely** to be transported to a Level 1 Trauma Center for cardiac-type injuries.



A CHAT WITH THE CHAIR

A telephone call from President George W. Bush and his wife, Laura, on Christmas Eve 2013 was the icing on the holiday cake for Lee Ann White, chair of the Laura W. Bush Institute for Women's Health (LWBIWH) National Advisory Board and senior vice president and director of public relations for PlainsCapital Corporation. The call was to confirm a pledge — allowing White to reach and exceed a fundraising goal for the institute.

White was spearheading a matching fund initiative set in motion by Lea Wright of Amarillo. This particular fundraising initiative provided start-up funds for the Sex- and Gender-based Medicine Curriculum developed by faculty and students of TTUHSC, the only such curriculum in the United States.

Calling herself an adopted Red Raider through marriage to Alan B. White, chairman and CEO of PlainsCapital Corporation and vice chairman of Hilltop Holdings, White is a staunch supporter of the LWBIWH and the work accomplished for women in West Texas. She feels strongly that TTUHSC should receive well-deserved attention for developing a curriculum focusing on the differences in sex- and gender-based medicine.

"We are leading the work in sex- and gender-based medicine," White said. "We are on the forefront of this education, and we should be known as the leader in this effort. We have brilliant physicians and teachers creating a new way to teach.

"Our donors are excited about the institute. They understand the importance of providing health care for the women of West Texas and support for the curriculum mushroomed as people began to understand its importance. Sex- and gender-based medicine makes a difference in how we teach our health professionals and in how they take care of patients."



75 percent of people living with autoimmune disorders like lupus and rheumatoid arthritis are women.

Men are less likely to undergo treatment for urinary incontinence (**No. 2 reason** for nursing home placement).

There are 2.4 million bone fractures in the U.S. each year due to osteoporosis. Of these, **80%** are women and **20%** are men. Yet men are more likely to die after a hip fracture and are less likely to be screened and treated for osteoporosis.





Screen shots of the education curriculum modules.

It Takes a Village

Earmarks of the curriculum project are its interprofessional and interdisciplinary natures. The project incorporates students and faculty from four TTUHSC schools, meshing their expertise and academic innovation to develop this curriculum.

Faculty and students work together creating the modules, said Robert Casanova, MD, associate professor in the School of Medicine Department of Obstetrics and Gynecology. “We have created triads that include faculty members from the basic sciences, clinical science and a medical school student. This way we can determine whether the module has integrated appropriate science and treatment and whether the content is consistent with what our students need.”

Throughout the development, the content is steered toward finding the sex and gender differences. In the first year of the curriculum’s development, students worked through the curriculum and mapped out ‘gaps’ where those differences should be incorporated. In the second year, the team began looking at cases, again looking for gaps where the issues of sex and gender should be added, Casanova said.

“The first module was the hardest to complete,” he said. “We brainstormed, worked the triad process and now we have a beautiful module that brings together science and clinical knowledge and is representative of how our students learn today. We were able to cross professional lines and develop this project that will change the way health professionals are taught.”

For Yondell Masten, PhD, School of Nursing professor and associate dean, the interprofessional work fits perfectly into how she wants to teach her students.

“As faculty, we struggle with how to help our students get the best education they can,” she said. “Additionally, we feel our graduates must know how to work with other disciplines to care for our patients. Developing this curriculum has given students and faculty opportunities to cross lines and work as a team.”

As the modules develop, Masten said, the teams look across traditional department lines and intentionally look for areas where sex and gender differences should be included. She sees the teams finding ways to incorporate SGBM in ‘purposeful practice’ for patients.

“Our teams are looking at what is considered normal for a patient, then what causes a change and finally how can we intervene and prevent a disease or injury,” she said. “Our students see the process and how that process is handled outside of nursing. Now that we are actively looking for ways to incorporate sex- and gender-based medicine into patient assessment and treatment, we realize how prevalent it is. It’s as if our blinders have been removed.”

It’s More Than Pink or Blue on the Chart

Until the early 1990s, premenopausal women were prohibited from participating in clinical drug research. As a result, 90 percent of national medical recommendations were, and still are, based on research performed in groups of mostly males. The results were then ‘applied’ to women. A growing body of evidence now shows clear anatomical, hormonal and physiological differences in how illnesses present in men and women and how these diseases are diagnosed and treated, Jenkins said.

Berk sees the curriculum as a commitment to innovation. “Our School of Medicine has assembled a large body of knowledge related to geriatric care and I feel this will be the case with sex- and gender-based medicine,” he said. “We are developing a body of knowledge that is new, and we are then showing our students how to use the information in a clinically relevant way. We have a long way to go nationally in creating this body of work, but our schools have started the process. We are continuing to educate learners.”

Jenkins sees the curriculum as a way for learners to use a different lens to view medicine. “We are taking excellent care of our patients,” she said, “but we can do even better. Sex and gender differences are creating new knowledge and more research and that is good for everyone. We are embarking on a visionary journey to change the way we assess health.” 



1ST ROW: BELEN RAMIREZ, TTUHSC STAFF; CORINTHIANN HAWES, MPH STUDENT; SCOTT BERGFELD, MD, PHYSICIAN, JOHN MONTFORD UNIT

2ND ROW: TAYLOR LENZMEIER, MPH/MBA STUDENT; JORDANA FARUQUI, MD/MPH STUDENT; BARBARA BALLEW, TTUHSC STAFF

3RD ROW: CHRISTIE HUST, MS, RDN, CDE, LD, TTUHSC STAFF; AMANDA CUTTS, MPH STUDENT; MEGAN HOWARD, MD/MPH STUDENT

population

By Danette Baker | Photos by Neal Hinkle

Impact of new public health focus will be seen in education, research, patient care

Carlos Martinez doesn't know yet exactly what medical specialty he plans to pursue, but he has already decided that public health will be an integral part of it.

One of the trends ushered in with the Affordable Care Act is a move toward population-based medicine, said Martinez, a first-year medical student. "Having (public health) training will be invaluable regardless of where my practice takes me."

This fall, Martinez and 22 classmates comprised the inaugural class of the Master of Public Health program in the Graduate School of Biomedical Sciences. He, along with 11 others in the class, is pursuing a MD/MPH dual degree; there are also recent undergraduates, established physicians, health care providers from other disciplines and professionals in various other fields. [Read their bios in PULSE online www.ttuhs.edu/communications/pulse].

Martinez had admission offers to several Texas medical schools and strongly considered accepting an invitation from one that already offered a dual MD/MPH degree.

"My No. 1 priority was to get my medical degree, and I really wanted to come to (TTUHSC)," Martinez said. "But I also felt very strongly about combining the public health aspect with my degree.

"Health care is not just about one disease in one patient at one given time. It's about the hows and whys and commonalities that exist among them related to a given diagnosis."

Upon learning that TTUHSC's Master of Public Health program would launch simultaneously with his first year of medical school, Martinez committed to TTUHSC.

Adding public health to the academic curriculum has been discussed since the early '70s, said Rial Rolfe, PhD, MBA, executive vice president for Academic Affairs. When TTUHSC President Tedd L. Mitchell, MD, joined the university in 2010, he made it a priority.

Mitchell came from The Cooper Institute, which has a research repository of more than 120,000 pieces of data on health and fitness. Epidemiologists, biostatisticians and others in research can access the database and pull an almost infinite amount of data from it.

"If you look at rural America in general, and rural West Texas specifically, there is not really much data that is being systematically pulled for health care specific to these populations," Mitchell said. "By combining the power we have throughout TTUHSC, we can build a database for studying rural populations regarding health, illness and disease that could become a very powerful tool in health care."

The master's program is the first step the university has taken to develop a full-fledged school of public health. TTUHSC administration announced this summer the second-largest gift ever to the university to establish its sixth school, the School of Public Health [see accompanying story "Progress on Pine Street"]. The Dodge Jones and the Dian Graves foundations in Abilene provided the lead gift for infrastructure, start-up funds and an endowment for the school's long-term sustainability.

“...we can provide professionals for a workforce that is not only declining in number, but also one that is significantly undertrained.”

The foundations' gift set the stage for TTUHSC to make a significant impact in public health, Mitchell said.

“What a school of public health does academically is help provide the data infrastructure that future generations of health care researchers can access.

“It gives you academic expertise in areas that individual counties couldn't afford to have by supporting efforts of the public health professionals in the field,” he said. “And finally, we can provide professionals for a workforce that is not only declining in number, but also one that is significantly undertrained.”

The initial master's curriculum will offer two concentration areas of public health: social and behavioral science and epidemiology, said Theresa Byrd, DrPh, MPH, RN, chair and associate dean for the Department of Public Health in the Graduate School of Biomedical Sciences.

The first cohort will go through the program in synchronized fashion, where all students take the same classes and focus on one of the core areas in their elective courses. Faculty and administrators from TTUHSC and TTU, as well as one from Angelo State University, who have public health backgrounds are teaching classes, she said. Byrd served on the faculty at the University of Texas School of Public Health for 20 years and was also curriculum coordinator.

In the coming year, additional faculty will be added to the department so that students in future classes will go through the program in an asynchronous manner. There also will be faculty hires to support doctoral level programs and within five years be situated to establish a School of Public Health to be accredited by the Council on Education for Public Health, said Rolfe.

“One of the most exciting opportunities that a public health program offers is for teaching about the approaches and methods of population health that health care providers will need to know because they underlie payment reform due to the Affordable Care Act,” said Billy U. Philips, Jr., PhD, MPH, executive vice president for rural and community health. Philips served as founding director of the public health program at the University of Texas Medical Branch, being the only program in the nation to

combine all three specializations of aerospace medicine, occupational medicine and general preventive medicine.

Conversely, TTUHSC is the only publicly funded health sciences center that does not have a School of Public Health. The ones that do – University of Texas at Houston, Texas A&M University and the University of North Texas – are all in urban-centric locations east of I-35.

“More than likely, the graduates from these programs are not going to come all the way out to West Texas to work,” Mitchell said. “We are going to have to grow our own to meet the projected shortages in the workforce.”

According to the Association of Schools of Public Health, an additional 250,000 public health workers will be needed by 2020 to meet the impending shortage. One reason is the 110,000 workers, or 23 percent, who were eligible to retire in 2012.

In the 108 West Texas counties that TTUHSC services, there are 14 local public health agencies within four Texas Department of Health Services regions that serve about 11 percent of the total population, but account for 26.3 percent of the additional workforce needs, according to a study by department.

Subsequently, 87 percent of employees in these agencies, or about 1,300 workers, do not have entry-level certificate training for their jobs.

The Center for Studying Health System Change points to four factors influencing the shortage: inadequate funding, uncompetitive salaries and benefits, an exodus of retiring workers, insufficient supply of trained workers and a lack of enthusiasm for public health as a career.

“Without additional support to address workforce issues, including the recruitment of the next generation of public health leaders, it is unlikely that local public health agencies will succeed in meeting the growing community need, a situation potentially imperiling the public's health,” write Debra A. Draper, Robert E. Hurley and Johanna R. Lauer, authors of “Public Health Workforce Shortages Imperil Nation's Health,” published by the Center for Studying Health System Change.

“The very charter of (TTUHSC), was to meet a shortage in health care, and we have made great headway to meet



Donor support brings much-awaited School of Public Health closer to reality

A generous gift in July from the Dodge Jones Foundation and the Dian Graves Owen Foundation has provided TTUHSC with the funding to begin its much-awaited School of Public Health.

The foundations' lead gift, the second largest gift ever given to TTUHSC, will support construction of a third building on the Abilene campus to house the future School of Public Health, as well as provide start-up funds and establish an endowment for the school's long-term sustainability. Groundbreaking for the new school building is scheduled for late spring.

"Having a School of Public Health provides the infrastructure in research data that you need for future generations of health care," said TTUHSC President Tedd L. Mitchell, MD. "Additionally, from an academic standpoint, it provides a different way of thinking about illness and disease based on populations instead of individuals and there is also a huge service aspect."

Dodge Jones Foundation Executive Director Joseph E. Canon said the foundation was looking to support a project that would have a significant, lasting impact on Abilene.

"When Dr. Mitchell and his team came up to see if we could latch on to this project as one in the spirit of large, meaningful projects that would have a lasting impact, we were convinced this was the way to go," Canon said. "We still feel that way, in fact we are more convicted than ever."

The foundations and the Development Corporation of Abilene along with the Abilene community have also provided bridge funding for the schools of Pharmacy and Nursing on the Abilene campus.

"When we started these discussions in 2005, the first goal was about a pharmacy school; then we started discussing a nursing school and now this newest one, public health," said Tim Lancaster, CEO

of Hendrick Health System and a member of the TTU System Board of Regents.

"The pharmacy school has done an outstanding job in how they have expanded to include biomedical sciences, and we appreciate all the leadership there. The School of Nursing has worked impressively with the community and also with Hardin Simmons, McMurry University and Abilene Christian University," he said. "There are lots of heroes here and lots of people who have worked to make this project happen."

Adding a focus on public health has been a top priority since Mitchell joined TTUHSC in 2010.

"A School of Public Health will provide opportunities to study populations making sure that food supplies are what they need to be, water supplies are what they need to be, and that people are doing the screenings and getting the vaccinations they need to have," Mitchell said. "All this falls into the realm of public health."

TTUHSC is the only publicly supported health sciences center in Texas that does not have a School of Public Health. There are schools at the University of Texas at Houston, Texas A&M University and the University of North Texas; however, the majority of their graduates are not moving north and west, he added.

"Adding a public health school to our university provides an opportunity to 'grow our own' workforce in public health much like we've done in medicine, nursing, allied health and pharmacy," Mitchell said. "There are only a handful of people in public health offices and positions in the counties we serve who are trained in public health and most of those are nearing retirement age.

"There is a huge need in the state and in West Texas in particular for these health care professionals, and we want to help meet that need."

Photo above, L to R: Jane Beard, Dian Graves Owen Foundation; Larry Gill, Dodge Jones Foundation; TTUHSC President Tedd L. Mitchell, MD; TTU System Chancellor Robert L. Duncan; State Sen. Troy Fraser; Tucker Bridwell, Dian Graves Owen Foundation; Kade Matthews, Dodge Jones Foundation; Hendrick Health System President and CEO and TTU System Board Member Tim Lancaster; and Joseph E. Canon with the Dodge Jones Foundation.

CATHERINE HUDSON, CCRC, TTUHSC STAFF
CARLOS MARTINEZ, MD/MPH STUDENT



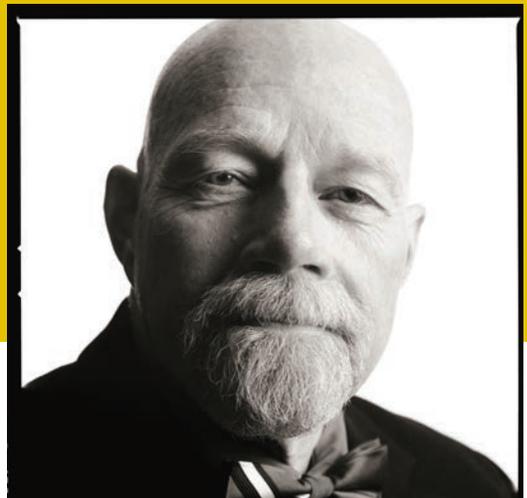
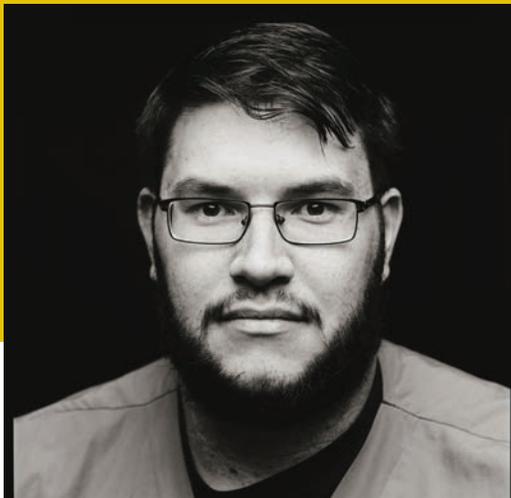
JULIA VOELKL, MD/MPH STUDENT
CAROLYN HUANG, MD/MPH STUDENT



HOLLY MULINDER, MD/MPH STUDENT
ZIA SIDDIQUI, MD/MPH STUDENT



NICHOLAS TALLMAN,
ENDOSCOPY TECHNICIAN AT UMC
MIKE MCMURRY, DNP, RN, ANCP-BC,
TTUHSC FACULTY



workforce needs in the areas of medicine, nursing, pharmacy and allied health sciences,” Philips said. “We can do the same for public health.”

Long-term goals, Mitchell said, include making public health dual degrees available for more students including clinicians such as nurse practitioners and physician assistants as well as those pursuing advanced degrees in all disciplines. There is also opportunity to collaborate with other schools within the TTU System such as the law school at Texas Tech.

Debra Flores’ initial goal was to be a public-health-trained nurse, but until now, she would have had to leave her full-time job and her Lubbock community.

“When I learned about the master’s program, I debated about enrolling but was convinced with my nursing background, a master’s in project management and a doctorate in education, plus community health experience, this was something beneficial,” Flores said.

For almost a year, Flores has worked for UMC Health System as a project manager for the hospital’s Regional Healthcare Partnership. Her responsibilities include providing one-on-one support to providers in the region towards achievement of their project’s milestones and metrics through the Delivery System Reform Incentives Payment program.

Flores has served eight years as a certified community health worker instructor in the TTUHSC School of Nursing and has more than 15 years experience in community health. She has been a co-author on published research studies focused on behavior change among people with chronic diseases and prevention of childhood obesity. Her PhD dissertation investigated how understanding social behavior patterns, specific to health literacy, can help Hispanic populations adhere to prescription treatments.

“I have always had a passion to reach out and help others,” she said. “In particular, I believe I can help the Hispanic population.”

Growing up in a migrant family, Flores understands the challenges of accessing health care, particularly in West Texas. Her grandmother, and guardian, was the curandera, or healer, in Hale Center, Texas, where Flores grew up. Home remedies were the staple of their health care, partly because of cultural traditions but also because many couldn’t afford a doctor visit or prescriptions, she said.

When Flores became a mother and then grandmother, she adopted a hybrid approach to health care that married traditional Hispanic medicine with what she learned in nursing school.

“I love to teach and empower others in their own learning. Adding my MPH, I’m looking to broaden my opportunities in that area and offer it back to the community,” she said.

“Public health goes beyond individual health behaviors to what is important for a community, a region, a state or beyond,” said Byrd. “Most people don’t think about public health until something happens that might affect them.”

“Health care is not just about one disease in one patient at one given time. It’s about the hows and whys and commonalities that exist among them related to a given diagnosis.”

The Ebola virus and, more recently, the measles outbreak, are prime examples, she said. “Health care has a much broader reach than just treating the symptoms a patient presents with in the clinic. It involves environments at home and at work. It involves relationships. If the health care workforce is not trained to understand health care in a broader context, then we won’t be able to track illnesses and diseases, and we will end up with widespread epidemics that will be out of control.”

The new School of Public Health will be built in Abilene, but will become an integral part of the communities served by the TTU System, Mitchell said. In each of the communities – Amarillo, Abilene, Dallas, El Paso, Lubbock, Permian Basin and San Angelo, there are colleges and universities from which to draw students. At Abilene, there will be more than 15 faculty members hired and approximately 200 students added to the enrollment on that campus, as well as the ancillary support staff for both, Rolfe said. Julie St. John, DrPh, MPH, began in September as an assistant professor in the Department of Public Health in Abilene.

Additionally, the plan is to implement online courses, as well, utilizing not only the critical mass of public health trained faculty and administrators on all TTUHSC campuses but also those at other universities within the system, Rolfe said.

The new emphasis on public health provides yet another opportunity for TTUHSC to positively impact the health of those in rural areas. About five years ago, for example, students and faculty in the University of Texas Brownsville Regional Campus conducted a community-based health assessment and from their work the community implemented a local farmer’s market as a source for fresh, healthy foods, Byrd said. “Our students will also engage in practica in the community as well as service learning activities that will positively impact the health of our communities.

“The whole idea is to get the students outside the walls of the academic community and engage in the greater community to see how they can make a difference.” 

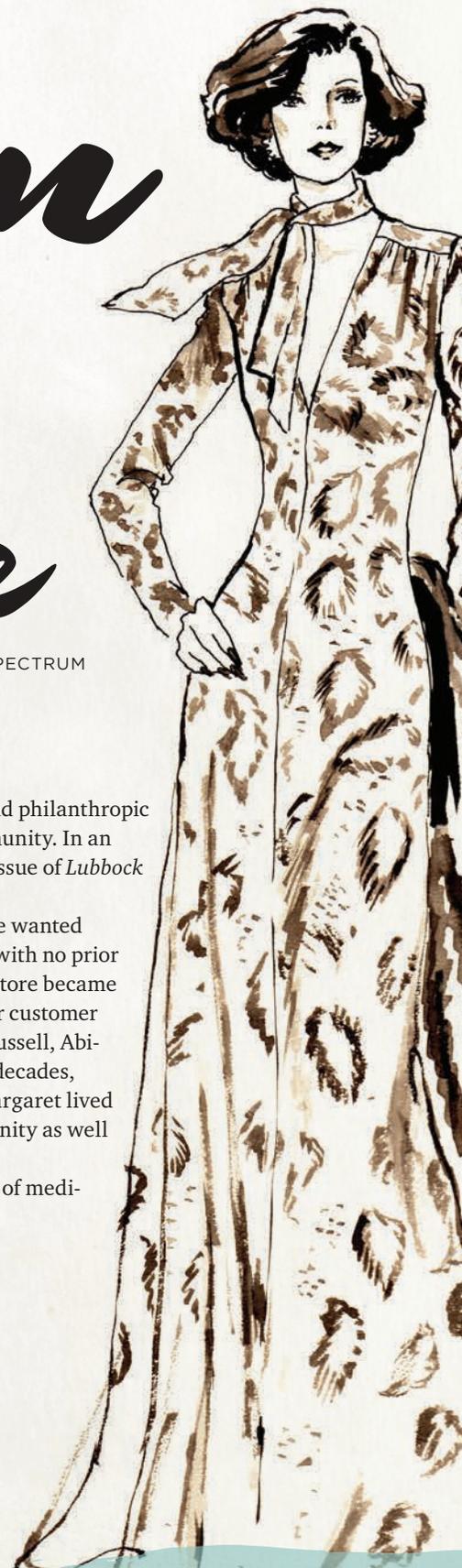
Fashion meets Medicine

BY KARA BISHOP | ILLUSTRATIONS PROVIDED BY THE SCIENCE SPECTRUM

Margaret Talkington had no idea that her retail clothing store and philanthropic vision would become such an important part of the Lubbock community. In an interview with Doug Hensley, published in the March/April 2010 issue of *Lubbock Magazine*, Margaret said, “It just started — and that was it.”

Never one to showcase her own success, Margaret knew what she wanted and went after it, establishing a ladies specialty store, *Margaret’s*, with no prior business experience. She must have figured something out as her store became infamous throughout West Texas, New Mexico and Oklahoma. Her customer portfolio was impressive as well, including Reba McEntire, Jane Russell, Abigail Van Buren and Lily Pons. *Margaret’s* was open for almost five decades, operating on the motto “service and help.” This motto was how Margaret lived her life, too, and this attitude graciously touched an entire community as well as future generations of citizens.

This is the story of how Margaret Talkington changed the future of medicine in Lubbock, Texas.





Fashion Sense

When J.T. and Margaret Talkington moved to Lubbock from Fort Worth in 1946, J.T. settled in as an accountant, while Margaret jetted off to New York to learn about the fashion business. As a green but determined businesswoman in the making, she soon charmed those she came in contact with and traveled back to Lubbock with her newfound knowledge.

When you talk to community members today, they reminisce about *Margaret's* with a reverent awe. Becoming a "Margaret's Woman" was an honor and a privilege.

"Very few people got rid of their *Margaret's* clothing," said Charlotte Park, longtime friend and employee of *Margaret's* and secretary/treasurer of the J.T. and Margaret Talkington Charitable Foundation Inc. "In fact they sometimes do events to honor Margaret and her store where women bring their *Margaret's* clothing to exhibit."

Margaret definitely had a particular style. From the hand-drawn advertisements in the *Lubbock Avalanche-Journal*, to the exquisite chandeliers hanging in her store, to the famous European designers that she knew on a first-name basis, you knew there was something special going on at *Margaret's*.

"One thing was certain when you shopped at *Margaret's*, customer service was a top priority," Park said. "Margaret saw to it that all of her customers were treated to a special shopping experience."

The service was definitely special. From the coffee served with a special *Margaret's* napkin, to the special hanger for your purchase, to the 10,000 special shoes to choose from, you were going to walk away with an excellent, special experience under your belt.



Margaret's unchallenged in its retail store 'niche'

By RAY WESTBROOK
A Business Editor

Margaret's, a women's apparel store which directs its marketing approach toward clientele who prize quality and personal attention over price, operates almost unchallenged in its own particular retail niche.

The present store was carved out of a house purchased in 1954 by J. T. Margaret Talkington, owners of Margaret's. At its downtown location, the business has expanded through the years by adding onto the existing structure, utilizing square footage on a story for storage. It currently totals 16,500 square feet of

ret parking has been prodigant property owned by

other stores moved to Lubbock or met their demands of decreased downtown. Margaret's tenacious original building and profit apparent adverse ef-

ers driving to Lubbock for the purpose of visiting downtown location is an obstacle, ac-

store's patrons come primarily from the West Texas/Eastern New Mexico region, but a scattering of shoppers are from geographical locations outside this portion of the country. Margaret's "famous" customers include Reba McEntire, Lily



Store owners

A.J. Photo / Jim Watkins

J. T. and Margaret Talkington stand beside displays in their store at 2002 Broadway. The specialty business, which markets fashion apparel, is one of the largest of its type in United States. Its original building, was at 26th Street and Boston.

because of re- always rather than of a particular tive." d there are a in this area ily merchan- el to Dallas, to purchase ore, and at- fashion de- worked out

Their ownership of the building enables them to avoid a high-rent situation.

They said retailing has changed dramatically over the years since their start in 1946, and they are unsure if they would begin again in today's market. "It's so difficult to start into business today. You really have to have a lot of courage. I'm not sure we would start today. It's a different world from what it was."

Talkington said, "We started right after the war (World War II), and people were hungry for merchandise." The business

Margaret's Opens New Women's Specialty Store In New Location, 2002 Broadway New Colorfully-Decorated Store Housed In Ultra-Modern Building

Section V
LUBBOCK AVALANCHE-JOURNAL
Lubbock, Texas, Sunday, August 6, 1984

IMPORTED FROM FRANCE, ITALY New Margaret's Shop Veritable Storehouse Of Antique Pieces

When the door opened and the first rays of sunlight streamed in, the new Margaret's store at 2002 Broadway was a veritable storehouse of antique pieces. The building, a masterpiece of modern architecture, was filled with a collection of antique furniture, including a large wooden dining table, a chandelier, and a clock. The store's interior was a blend of old and new, with the antique pieces providing a sense of history and character. Margaret's owners, J. T. and Margaret Talkington, had spent months searching for the perfect pieces to complement the new store's design. The collection included a variety of styles, from classic French to contemporary Italian. The store's opening was a grand affair, with a large crowd of shoppers and a festive atmosphere. The new location was a significant expansion for Margaret's, which has long been a leading women's specialty store in Lubbock. The store's success is a testament to the owners' commitment to quality and customer service.



MARGARET'S NEW STORE—Present store is an excellent site of the new store. The building is a masterpiece of modern architecture. The store's interior was a blend of old and new, with the antique pieces providing a sense of history and character.



NEW STORE—Present store is an excellent site of the new store. The building is a masterpiece of modern architecture. The store's interior was a blend of old and new, with the antique pieces providing a sense of history and character.



Adelle Simpson
A legend in her own time—creator of beautiful clothes for beautiful people. Her particular approach to the timeless quality of Simpson clothes—they are truly investments in beauty. Our new collection is light and bright.

BUSINESS

LUBBOCK AVALANCHE-JOURNAL
Sunday, January 2, 1984
Section E

Business legend to hang 'closed' sign Margaret's ends 48-year service

By CHRIS VAN WAGENEN
A Business Editor

A longtime association with Lubbock is coming to an end later this month when Margaret's specialty store closes the doors on a business that has served four generations of shoppers. The familiar Broadway at Avenue T location, where mothers took their daughters and daughters grew up waiting for the day they could shop there, concludes what grew into a 48-year relationship. As a testament to its longevity, the exclusive specialty store for women has received a steady string of letters and phone calls from a loyal core of customers throughout West Texas. "We have a very long following of people whose emphasis has always been more on quality than quantity, but lifestyles are changing. There isn't the same kind of loyalty that there once was. The whole mood of retail has changed," said Margaret Talkington, the person behind the name. Founded shortly after World War II by Mrs. Talkington and her husband, J. T., the specialty store joined the downtown ranks in 1954, when the downtown decided to build a 16,500-square-foot retail site.



J.T. and Margaret Talkington look over a scrapbook of customers' friendships and shopping memories. The store's success is a testament to the owners' commitment to quality and customer service.

You are invited to a Special Showing of A and O Couture Monday and Tuesday February 17th and 18th. Mr. Rod Owen will be our guest and will be happy to consult with you. The collection of clothes is priced from 100.00 to 250.00 with a fine appreciation of cottons.

Margaret's

Business Sense

However, Margaret wasn't satisfied with solely operating a successful store; she also wanted to use her assets to help others, holding fashion shows for charity and being willing to listen to anyone who needed assistance.

"Before moving to Lubbock, Margaret was a middle school teacher, Park said. "She was very passionate about education. She was generous across the board to Lubbock but loved helping advance educational opportunities for individuals, which was evident by the role she played in the establishment of the Talkington School for Young Women Leaders here in Lubbock or through her involvement with the Early Learning Centers. She also held many fashion shows to raise money for scholarships."

J.T. and Margaret loved to give. You can see their influence just about everywhere you look in Lubbock. In their philanthropic, yet often anonymous, generosity, which no one can put an actual value to, the Talkingtons believed in supporting their fellow citizens. In the *Lubbock Magazine* article, Margaret made the following statement: "If God has given to me, then I should give it back, and he was so good to us ... If you want to give back, it's not for you. It should be for the community. It's not for your own edification."

The Talkingtons established the J.T. and Margaret Talkington Charitable Foundation Inc. in 1997 with the intention of dispersing their means throughout the community. They entrusted several key individuals and cherished friends to manage it in their stead and contribute the way they would have.

"We always look at grant applications the way Margaret would like us to," said Norton Baker, partner for Baker Brown & Thompson law firm and president and CEO of the Talkington Foundation. "The first test is whether Margaret would fund a particular grant."

The Talkington Foundation has funded two grants for the TTUHSC School of Medicine Department of Internal Medicine to establish a total of six endowed chairs in different medicine specialties: two in gastroenterology, two in rheumatology and one each in endocrinology and infectious disease. Tinsay Woreta, MD, MPH, assistant professor in the Department of Internal Medicine, was selected in November for the chair in gastroenterology

"We want to make sure that we have the best faculty in these areas to provide West Texas with more of these specialty health providers," said Cynthia Jumper, MD, MPH, (Resident '91; SOM '88) professor and chair of the Department of Internal Medicine

and Margaret's personal physician toward the end of her life. "For example, there are only a handful of rheumatologists in Lubbock and, because the demand is so high, there are hospital patients and many patients elsewhere that are not being attended to because the need is so great but the provision is so short."

In recognition of these outstanding grants, TTUHSC chose to name the Department of Internal Medicine after J.T. and Margaret, making it the first TTUHSC department to be named.

When Margaret opened her fashion boutique, she wasn't trying to make a name for herself, she was simply providing a need she felt was lacking in the Lubbock area—a commonality she shared with Jumper who grew up in Lubbock, Texas, and knew of the Talkingtons most of her life..

"I specialized in pulmonary critical care and my work with hospice meant that I had made house visits in the past, so when a friend asked if I would visit Margaret Talkington, (as her primary care physician) I didn't even hesitate," she said. "Margaret's stories were fascinating and it never felt like work to care for her. We had many things in common, among them being a love for Lubbock."

Jumper's goal is to help put a face to medicine locally the way Margaret would have wanted her to.

"She (Margaret) loved to have me visit," Jumper said. "There would be some times I would come as requested, and she would tell me she didn't need her vitals checked she just wanted to talk. So we did because she wasn't just a patient, she was a person. I want to be able to provide all Lubbock patients with this concept. Where they don't feel like just a number with a specific illness. They feel like a person treated by a physician who cares. When the demand is great and the supply is low, we can't achieve this goal to the utmost of our wishes. Now, can every physician make house visits? No, but we can make sure that all of our Lubbock citizens have access to the care they need in an efficient and affordable manner. And thanks to the Talkington Foundation, this will be more possible to achieve.

"I don't want citizens of the Lubbock community to have to travel to other places for specialty health care. And I don't want our students to have to move for their specialty training either. I had to leave Lubbock to receive training in pulmonary critical care because it wasn't available in West Texas at the time. It is now. I want our students to stay here so they can treat our patients who need access to these specialties in medicine."

Community Sense



ARTIE LIMMER

Cynthia Jumper, MD, MPH (Resident '91; SOM '88)

“Whoever brought Margaret to the dance is who she danced with,” Jumper said. “She felt that the Lubbock community had done a lot for her and wanted to pay it back. The fact that she was able to develop lifelong, completely devoted friendships with people made her incredibly special. I’ve never known another person as devoted to friends and the Lubbock community like Margaret Talkington.”

A tribute held in Margaret’s honor in 2007 affirms this fact. The publication compiled for the event, “*Margaret’s ... The Art of Fashion*,” is full of people sharing stories of how Margaret touched their lives.

However, in her final years, something special grew between her and her physician that was truly beyond the bedside.

“I’ll never forget the way she made me feel,” Jumper said. “She made me feel like I contributed and was important. She had an impeccable style and grace that would have made any other person feel inferior, but she didn’t act that way. In fact, when you walked into their home, you weren’t aware of their wealth. They just didn’t flaunt what they had. I would sometimes be worried about what I was wearing and hoping she approved. Fashion was still a critical part of her last years, and we would joke about whether my clothes were right, but I never felt inferior to her because she made sure I didn’t.”

Her sense of loyalty to the community was inspiring, Jumper said, and humbling at the same time.

The Talkington’s influence in medicine will live on for years because of their generosity to the Department of Internal Medicine. They’ve ensured the advancement of health care for West Texas citizens, and no one will ever know just how many lives they have and will have changed due to their support.

“I grew up in Lubbock and have always had a great sense of loyalty to this community, which was only multiplied through my friendship with Margaret,” Jumper said. “Therefore, I want to put a face to patient care in this community. The money from the Talkington Foundation provides the Department of Internal Medicine with a way to accomplish this goal. We want all of our citizens to be able to access the care they need right here in their city, and I believe that’s what Margaret would have wanted as well.” 

MARK UMSTOT

CHANGING THE =RULES=

Nursing Alumna Creates Conceptual
Training Module for Workplace Violence

By Holly Leger

Chief Nursing Officer Sally Gillam, DNP, MAHS, RN, (SON '14) was expecting another routine day of work in the Emergency Department when she arrived at St. David's South Austin Medical Center at 8 a.m. in 2006. However, it was far from ordinary.

"I didn't realize how that one bad day was going to impact my life for years to come," Gillam said.

Upon entering the hospital that morning, Gillam said fire alarms were ringing and water was dripping from the ceiling in one of the operating rooms on the first floor. After discovering the elevator was not working, Gillam took the stairs to the second floor to see what was wrong.

"I opened the door, and there was this huge vast array of smoke," Gillam said. "It was everywhere. It was like a war zone."

With the sprinkler systems running overhead, Gillam began questioning others as to the source of the problem. She learned a violent male patient had set fire to his bedsheets using two cigarette lighters in an attempt to kill himself and the people around him.

Luckily, the staff at St. David's, along with responding firefighters, evacuated everyone from the five-alarm fire. The violent patient was the only fatality from the event.

Gillam said several nurses decided to quit their job after that day, not just with St. David's, but with the nursing profession altogether. Gillam remained on staff but her views of the office changed.

"I had heard all about workplace violence and all the different attributes that go with it," Gillam said, "but workplace violence that day became more than just a buzz topic for me."

continued on page 32...

...continued from page 31

THE STUDY

Six years later, Gillam was enrolled in the School of Nursing's doctoral nursing program and selecting a dissertation topic. Thinking of that tragic day in 2006, she decided to research workplace violence in health care.

Gillam created the first ever conceptual framework built to study workplace violence from a quality improvement standpoint. The model includes four major components: manifestation, actors, influences and magnitude. She named it the "MAIM" Conceptual Framework.

Based on her new model, Gillam focused her research on whether or not training for health care professionals at St. David's could reduce Code Purple, a term the hospital uses for someone who is having a catastrophic event of violence.

The St. David's staff is required to have a two-year certification called Nonviolent Crisis Intervention, which teaches health care workers how to verbally and/or physically de-escalate violent situations.

"My thought was the more people who are educated in this Nonviolence Crisis Intervention Training," Gillam said, "the less Code Purple will be called."

So, Gillam had the Emergency Department staff trained in Nonviolent Crisis Intervention from 2012 to 2013 and kept track of the number of Code Purples throughout the year. But she struggled to find a positive correlation between the two.

Instead, she found it in the frequency of training.

Gillam said people who were trained in the first 30 to 60 days had no correlation of reducing Code Purple. But at the 90- to 150-day mark, training actually made a difference. Therefore, further education was needed at a six month interval, rather than two years, as the certification suggests.

"So that's a big deal," Gillam said. "There's a whole year, almost a year and a half, where we believe that the training is effective, and it's not."



CHANGING THE HOUSE RULES

Gillam's study gained a lot of attention, even from state legislators.

Texas Rep. Donna Howard asked Gillam to testify in April 2013 at the Criminal Jurist Prudence Committee for Health in regards to HR 705. If passed, the measure would enhance protections for nurses in the emergency room — protections that other public servants already had, like having a felony assault charge automatically pending against a perpetrator in a violent situation.

Gillam said she felt nervous to testify, worried she wasn't the "expert" they had in mind. But, with advice from her professors at TTUHSC, she walked into the Capitol prepared with a brief speech and prepared responses.

The House passed the bill and a few weeks later Gillam testified before the Senate. Howard said she was pleased with the way Gillam handled the political pressure.

"Dr. Sally Gillam is a leader in her field, plain and simple," Howard said. "Her comments gave critical insight into both the workplace danger faced by nurses on a regular basis and the difference in protections offered to nurses versus other public servants and emergency responders."

The Senate also passed the bill, and Gov. Perry signed it as part of the 83rd Legislative Session.

To read the full version of this article, visit: www.ttuhsu.edu/communications/pulse 

friends we'll miss

Harry A. Garbar died July 20, 2014. He was a member of the Texas Tech Foundation and an El Paso businessman.

Kerri Neel (SON '04) died Nov. 6, 2014.

Kenneth Michael Rice, MD, PhD, (Resident '97; SOM '94; GSBS '93) died Feb. 4, 2015.

Stephen Winters, a student in the School of Allied Health Sciences Doctor of Science in Physical Therapy program, died Aug. 28, 2014.

Jeffrey Young, MD, (SOM '87) died Nov. 30, 2014.

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.



Seger Receives Bariatrician of the Year Award

Jennifer Seger, MD, (Resident '02) family medicine physician who specializes in the treatment of obesity and obesity-driven diseases and director of the Medical Weight Loss Program at the Bariatric Medical Institute of Texas in San Antonio, received the Bariatrician of the Year award from the American Society of Bariatric Physicians (ASBP) at its annual awards luncheon in September. The Bariatrician of the Year award recognizes a physician who has done the most to advance the field of bariatric medicine and the society.

Seger has been a member of ASBP for four years and received the award for her tireless efforts working on the Obesity Algorithm Charts, presented by ASBP and several other initiatives on behalf of the society.

“Being Recognized by ASBP is a huge honor because I believe so strongly in the organization’s mission,” Seger said. “I’m inspired daily by the healthier lives my patients are living, and I look forward to the opportunity to further educate people in San Antonio and South Texas about medical obesity treatment.”

Beall Wins 2014 TPA’s “Excellence in Patient Outcomes” Award

Michelle Beall, PharmD, (SOP '05) pharmacy manager for Super One Pharmacy No. 631 in Marshall, Texas, received the 2014 Texas Pharmacy Association’s “Excellence in Patient Outcomes” Award. This award recognizes an individual, organization or company judged to have made outstanding contributions to advancing pharmacists’ ability to improve patient outcomes. The honor recognizes exceptional achievement in public awareness, counseling and pharmacy services aimed at empowering patients to improve their health.

Beall credits her success in patient outcomes in part to good listening skills.

“Part of it is just taking the time to talk to the patient, using open-ended questions, and filling in any knowledge gaps,” said Beall. “I try to listen to patients and get their feedback. I may even quiz them when I’m done. It helps me understand if they need any further clarification. It’s also good to let them know that you are available, and that they can call you if they need to.”



Nursing Alumna Releases New Book

Jeanette Vaughan, MSN, (SON '92) a 2001 School of Nursing Distinguished Alumni and award-winning author, released her third novel through AgeView Press July 2014 titled, “Waiting in the Wings.”

Vaughan has been published in numerous health care journals. Her screenplay, which also served as her graduate thesis, “Angel of Mercy,” won the outstanding research award given by the School of Nursing.

“My thesis was very unusual,” Vaughan said. “Not many students write screenplays about men going in to nursing and it was evaluated for its content research using a panel of content experts and the Likert scale questionnaire. It told the story of a black male nurse I knew from the 1970s who had been a hot oil truck driver prior to going to nursing school. I was fascinated by that and knew it was a story that had to be told.”

Vaughan began her writing career as a young nurse, coincidentally her nursing career alone spans more than 29 years in the areas of critical care, trauma, geriatrics and nursing education. Her first piece, at age 21, was an article on dying with dignity for the *Lubbock Avalanche-Journal* that garnered critical acclaim. She followed this work with several more articles for nursing journals and periodicals, most notably publishing in the *Journal of Nursing Education* with the article, “Is There Really Racism in Nursing?”

“Waiting in the Wings” is the finale to Vaughan’s compelling baby boomer historical trilogy. It can be purchased online through AgeView Press or Amazon.

Alumna Honored by American Association of Nurse Practitioners

Tracey Page, DNP, FNP, BSN, (SON '14, '07, '04) has been selected by the American Association of Nurse Practitioners to participate in a 12-month program designed to develop the next generation of nurse practitioner leaders through a variety of initiatives.

Page was one of 18 nurse practitioners selected for the program from a nationwide pool of 70 candidates.

These individuals will help to provide a broad vision of the nurse practitioner role in the current and future health care environment. Those selected for the program are relatively new to their nurse practitioner careers, serving in clinical, administrative and educational roles. Page has a pediatrics practice, Frontera Pediatrics, in Del Rio, Texas.





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1 TTUHSC alumni and friends enjoying the Halloween party hosted by President Tedd L. Mitchell, MD, and Janet Tornelli-Mitchell, MD, as part of the Your Life, Our Purpose awareness initiative. 2 The Lubbock community was invited to campus in September for La Dolce Vita for the introduction of the Your Life, Our Purpose initiative. 3 Medical students model their new scrubs, compliments of the Office of Alumni Relations, at the annual Scrub Party. The event is sponsored by the alumni office and the School of Medicine. 4 Alumni and future alumni enjoy the traditional homecoming tailgate. 5 Students attend Welcome Back Events at each TTUHSC campus. Pictured: students signing up for drawings and playing games at the Alumni Relations booth to help them learn more about the TTUHSC Office of Alumni Relations.



5





WAKE FOREST BAPTIST MEDICAL CENTER

GOING THE DISTANCE: A passion for research and development has taken Poonam Sonawane across the world to reach her career goals. After graduating with a bachelor's degree in pharmacy from Pune University in her hometown of Pune, India, Sonawane said she wanted to use her knowledge to study more in the field of cancer.

So in 2008, she left India and enrolled at TTUHSC to further her education in pharmacology and neuroscience.

While studying at TTUHSC, Sonawane had the opportunity to work as a research assistant in a clinical cancer research laboratory. She said the experience fueled her passion for cancer research even further, and after graduating with her doctorate, she traveled once again, this time to North Carolina.

PUTTING IT INTO PRACTICE: At Wake Forest, Sonawane is working on a project to develop antibody drug conjugates, which is a targeted cancer therapy for the glioblastoma brain tumor.

According to the National Brain Tumor Society, glioblastoma is one of the most common and deadliest of malignant primary brain tumors in adults. The median survival rate is about 15 months.

"The translational research we perform has potential to improve current therapeutic options for cancers," Sonawane said.

Sonawane hopes to further her understanding of brain tumor research during her fellowship, so she can design new antibody drug conjugate compounds in the future.

ACHIEVING HER DREAM: Although her studies have taken Sonawane away from her home country, she still manages to see her friends and family in India once every two years. She said she might move back someday, but for now she has personal career goals she would like to reach first.

"I want to develop myself as an independent researcher," Sonawane said. "I do enjoy working here and would like to gain some more work experience."

BY HOLLY LEGER

POONAM SONAWANE, PHD

Postdoctoral Research Fellow

Brain Tumor Center of Wake Forest School of Medicine, Winston-Salem, N.C.

Graduate: 2013, Pharmacology and Neuroscience



CAROLYN CRUZ

CHOOSING NURSING: “I came from a background of service,” James Dickens said. “My grandfather was a minister, and I grew up very involved in the church. I was also one of my mother’s caretakers when she was diagnosed with breast cancer at a very young age. I’ve always known I wanted to serve people in some professional capacity.”

CHOOSING THE U.S. PUBLIC HEALTH SERVICE: Dickens was in the Air Force Reserve in Virginia Beach, Va., when he and his family decided to move to North Texas.

“The U.S. Public Health Service is one of the seven uniform services recognized by Congress, so I became a Commissioned Corps Officer, and my current position requires me to provide programmatic guidance regarding health disparities affecting racial and ethnic minorities and underserved populations for New Mexico, Oklahoma, Arkansas, Louisiana, and Texas (HHS Region VI) on health issues.”

CHOOSING TTUHSC: “I applied to two programs, TTUHSC School of Nursing being one of them, when I was deployed to Afghanistan to help support a mission,” he said. “I called both universities and TTUHSC SON shocked me when they indicated they would defer me until I could return and start the program. No other program afforded me that opportunity.

“Once I returned home, I was deployed to Afghanistan a second time and TTUHSC SON deferred me again. I knew I had to go to school in Lubbock because the faculty and staff did not penalize me for my service to our country; to the contrary, they stayed committed to me. Because of TTUHSC School of Nursing I have been afforded some great opportunities that wouldn’t have happened had I gone somewhere else. I received a world-class education from world-class instructors.”

BY KARA BISHOP

Capt. James L. Dickens, DNP, RN, FNP-BC

U.S. Public Health Services Officer, Senior Public Health Advisor

Office of Minority Health, Denton, Texas

Graduate: 2012, Executive Leadership



MARK UMSTOT

JENNIFER RIVERA, MS

Chemistry Supervisor

Covenant Medical Center, Lubbock, Texas

Graduate: 2006, MS in Molecular Pathology

2005, BS in Clinical and Laboratory Science

STARTING YOUNG: Jennifer Rivera's mom was a lab assistant at the Covenant Hospital in Plainview and introduced her to the medical field. "I was the little girl that would be in the lab with her during the summer, and the lab techs would sit me in their lap and show me a slide of blood and I thought it was cool."

FOR THE LOVE OF THE JOB: "I always wanted to be a doctor, but for whatever reason I never went to medical school. I feel like I went into the next best position suited for me to still help patients. Everything that we do, it's about quality work and making sure we're putting out our best work to help physicians treat patients."

COMING HOME: After living in the Austin area for eight years, Rivera decided it was time to come home. She started her position at Covenant in March 2014, which is where she did her rotation as an undergraduate and then worked as a medical technician while earning her master's degree.

PASSING IT ALONG: While at her previous job in Austin, Rivera was awarded "Best Preceptor" by students doing a rotation in molecular testing. While this award honored her, she credits her mentor Nanette Ongluico-Allas, medical technologist in chemistry at Covenant Health System, who helped her as a student. Rivera was able to take what she was taught throughout the years and pass it along.

A BRIGHT FUTURE: Earning her PhD is still on the table, but until then Rivera wants to continue advancing in her career. "I can see the opportunity I have here, and I have some really great mentors that are in manager and director positions that inspire me to work my way up to becoming a lab director and beyond. The sky's the limit!"

BY LAURA RAY



MARK UMSTOT

MARK RAMOS, PHARMD

Pharmacy Manager

H.E.B., Corpus Christi, Texas

Graduate: 2011

WHEN OPPORTUNITY KNOCKS: As he prepared for his final semester of pharmacy school, Mark Ramos began to seriously consider his career options. He had spoken casually with Larry Pittman, RPh, the owner of Barnes & Williams Drug Center in Abilene, about the possibilities of forming a junior partnership. During his four years as a pharmacy student, Ramos considered Pittman to be a mentor, but the talk of a partnership had yet to develop beyond the casual discussion stage.

"I was fortunate to get offered positions with Walgreens in Uvalde and H.E.B. in Corpus Christi," Ramos recalled. "The offer letters pulled a huge weight off my shoulders, and I was in the process of signing with H.E.B. when Mr. Pittman called me and offered what I really wanted — a position with his pharmacy. We began working together to acquire and open a second location in Abilene, which I managed."

SETTING UP SHOP: Ramos quickly established his practice and began serving as a preceptor for pharmacy students from the Abilene campus. He began a medication therapy management program (MTM) to further develop the students' clinical expertise and ability to interact with patients, caregivers and other health care professionals regarding complicated medication regimens and various other medication-related issues.

FAMILY FIRST: His thriving practice in Abilene helped Ramos get past the longing he had to return to Corpus Christi, his hometown. His father, who had suffered from polio as a child, was still living there, and Ramos had more family along the Texas Gulf Coast. When he learned that his father's mobility was deteriorating, Ramos had a decision to make: leave his dream of pharmacy ownership behind or remain in Abilene and leave his father's care to others.

"I chose to leave Abilene for my father and family," Ramos said. "The leave was heartfelt and Larry is a great friend who understood why I needed to go."

In May, he joined the H.E.B. team in Corpus Christi as a pharmacy manager where he helps to maintain the pharmacy's compliance with state and federal policies and guidelines. Ramos also oversees the store's MTM and immunization services.

SUPPORT MAKES A DIFFERENCE: Ramos said making it to graduation was the hardest thing he's ever done. Although he did well in clinical rotations, lecture classes always seemed to hinder his overall performance. Recalling the difficulty of being a father, husband and student, Ramos said he came close to failing out on more than one occasion.

"I can honestly say that if it wasn't for my faith in God and prayer and my belief in Jesus Christ as the voice of truth, I would never have made it out. And if it wasn't for Sarah (his wife) encouraging me to go back to school and pursue something that I thought was impossible, I would still be just another high school drop out."

Ramos also credited his professors who helped him push through the tough times.

"I will never forget what Dr. (James) Stoll (PhD, associate dean) wrote on my organic chemistry final, which I still have: 'Never surrender!' I passed that class with a 70," he said.

BY MARK HENDRICKS



CAROLYN CRUZ

ALL IN A DAY'S WORK: Richard Johnston's days are filled with executive responsibilities. He not only attends corporate meetings for USMD Holdings, a publically held, physician-led health system, but also serves on numerous boards for the company, oversees the hospital's physicians and deals with the operational side of the company.

And, he still practices medicine two half-days a week.

"I did not completely give up internal medicine. It's the only truly sane time of my day when I'm seeing patients," Johnston said with a chuckle.

FOLLOWING THE LEADER: The myriad responsibilities can make Johnston's job a challenge, but he said that's what he enjoys most about it. He is excited to be part of building a physician-led health system, because he believes it's time for physicians to take some control in hospital costs and outcomes.

Having a background in medicine has personally helped him in his own leadership roles, because he said he can better relate with his fellow doctors.

"I think it gives you credibility," Johnston said, "because you're experiencing the same day-to-day problems in the office that they are."

MOVING FORWARD: While his years as a physician have brought him great experiences, including traveling to South America for mission trips, and setting up clinics at oil company sites worldwide, Johnston said now he hopes to use his medical knowledge to help grow USMD's full risk business by expanding its primary care base.

As part of that goal, Johnston said USMD entered a full risk Medicare Advantage Plan with United Healthcare in 2013 and has already seen benefits from it in Dallas-Fort Worth. USMD currently serves the metropolitan area with more than 250 physicians and associate practitioners, and provides services to patients in just under 20 different specialties.

IN HIS WILDEST DREAMS: Johnston said working in these leadership roles are careers he never considered in his early years as a physician, but now he doesn't see himself leaving.

"I never thought I would have been in this particular position, because I never thought about running a public company," Johnston said. "I don't plan on quitting. I'll keep doing what I'm doing."

BY HOLLY LEGER

RICHARD JOHNSTON, MD

Chief Physician Officer and Executive Vice President

USMD Holdings Inc., Irving, Texas

Graduate: 1975

It Doesn't Get Better Than This — Let's Tell People About It

BY MICHAEL F. OWEN, MD (RESIDENT '81; SOM '77)

I was the first of my family to go to college. My dad had to curtail his education after graduation from high school due to the Great Depression. I say that to indicate the value I place on my education. I considered myself blessed to have furthered my studies and to have done so in Lubbock, Texas, — and I still do.

Our students at TTUHSC have unique educational experiences. There's no challenging hierarchy or pecking order to go through for learning. I remember as a medical student having the opportunity to "get my hands dirty" the first day of classes. The hands-on approach to learning that TTUHSC provides is second to none. It still amazes me just how many physicians we have in Lubbock and the surrounding areas that are TTUHSC graduates. And I'm not just talking about physicians. I couldn't even begin to count the number of nurses, speech-language pathologists, physician assistants, physical therapists and countless others who are TTUHSC graduates. They came here to receive high-quality training, and they stayed here to provide health care services for the community.

And TTUHSC itself is definitely unique. I still remember the camaraderie and personable atmosphere when I was a student, which continued after I graduated. I still have colleagues from my school days who are physicians in the area, and I graduated in 1977. I refer patients to them and I delivered all of their babies!

One has only to look at the scores our students get on entrance exams and the residencies and internships they are able to obtain to know that the training here is above par. I was the second class in the medical school when it first started and was still able to get into one of the top residencies in the nation at Louisiana State University. I wouldn't have two daughters and a son-in-law and a son and daughter-in-law with degrees and residencies from TTUHSC if I didn't believe in the training.

And no one benefits more from having TTUHSC here than the Lubbock community. TTUHSC is providing excellent health care opportunities to patients here. There is very little care that you cannot receive in Lubbock, Texas, and chances are high that you will be receiving that care from a TTUHSC graduate. Which is why I'm proud to be serving on the Your Life Our Purpose committee.

Your Life Our Purpose is a new initiative TTUHSC has launched to help increase awareness of who we are and what we do for our patients, community, state, nation and the world. Most of our TTUHSC faculty members practice in their fields. Texas Tech Physicians of Lubbock is the largest medical practice in West Texas, providing the South Plains and Eastern New Mexico with access to high quality, advanced health care. It's home to more than 200 world-class researchers, scientists and educators — who happen to practice medicine as well.

TTUHSC has produced more than 20,000 physicians, nurses, pharmacists, educators, researchers and allied health sciences professionals to date, many of whom stay here. I've heard some say that Lubbock, Texas, and TTUHSC are well-kept secrets, which is why the Your Life Our Purpose initiative is so important. Something that impacts the very world we live in should not be kept from our communities. We know what we do and the importance it has in our Lubbock area and elsewhere, but not everyone does. It's time to spread the word.

I know that TTUHSC has given me some opportunities I wouldn't have had otherwise. Which is why I champion this initiative and its purpose. I get to practice medicine with my daughter every day; there's nothing better than that. 



Michael F. Owen, MD, graduated from the School of Medicine in 1977, completed his residency with TTUHSC in 1981 and has been an obstetrician and gynecologist in Lubbock since then. He now works with Covenant Medical Group. To learn more about the Your Life Our Purpose initiative, please visit: www.yourlifeourpurpose.com

Alan McCarty, M.D., (SOM '00) believes in giving credit where credit is due. And because the School of Medicine took a chance on him in 1996, McCarty in turn has made a lifetime pledge to help further its mission.

READ HIS STORY

[and learn how your gift can impact TTUHSC]

<http://giving.ttuhscc.edu>



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During her junior year in nursing school, Karentia Nelson's (SON '14) spring break fishing trip ended in a crash course in triage nursing.

To read her story, visit: www.yourlifeourpurpose.com

YOUR LIFE
— *our purpose* —