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At the Texas Tech University Health Sciences Center (TTUHSC) School of Pharmacy, we take deep pride in the excellence of our Doctor of Pharmacy (Pharm.D.) training program and in its leadership in developing clinical pharmacy practitioners. Though the school is not yet 20 years old, U.S. News and World Report and the American Association of Colleges of Pharmacy already rank us among the top quarter of pharmacy schools nationally. Since opening our doors to the first class in August 1996, we have graduated more than 1,000 pharmacists and roughly 90 percent of these practitioners have remained in Texas. More than 90 percent of our students complete the Pharm.D. program on time and our students have an excellent first-time pass rate—greater than 97 percent annual average—on the North American Pharmacist Licensure Examination.

The TTUHSC School of Pharmacy curriculum is innovative and student-centered. It combines extensive group projects with first-rate facilities and we are fully accredited and in good standing with the Accreditation Council of Pharmaceutical Education and the Southern Association of Colleges and Schools. Our curriculum requires the highest number of clinical training hours of any U.S. pharmacy school and we are the only pharmacy program to require clerkships in pediatrics and geriatrics, demographics that jointly account for more than 80 percent of drug prescriptions in the U.S. today. Our Department of Pharmacy Practice is ranked among the top three such departments in the country and its clinical residency program is ranked as one of the top five such programs. In addition, students interested in pharmacy administration and management can obtain a MBA through our joint Pharm.D./MBA program, which continues to grow each year.

Though we are on the cutting edge in our use of technology, and we remain strongly dedicated to quality, the School of Pharmacy is just as proud of its focus on the student, evidenced by a strong student-to-faculty ratio and multiple student programs to develop professionalism and leadership. Each year, TTUHSC pharmacy students organize or lend their support to more than 600 community events in North Texas and the Texas Panhandle. Outside the classroom, our licensed Department of Pharmacy Practice faculty members provide direct patient care and pharmaceutical support in clinics, pharmacies and hospitals in the communities served by all four School of Pharmacy campuses. In addition, the School of Pharmacy operates pharmacies, helps manage the Texas Panhandle Poison Center and houses the Texas Pharmacy Museum.

School of Pharmacy science faculty also conduct biomedical, pharmaceutical and clinical/translational research with the help of more than $5 million of annual extramural grant funding. Our research focus areas include disease mechanisms, drug formulation and delivery, drug synthesis, drug action and clinical practice. We also have four centers of research excellence that concentrate on clinical pharmacology, cancer, the blood-brain barrier and immunopathic and biotechnology research.

In 2015, the School of Pharmacy celebrated six faculty members who were awarded university distinguished faculty status and seven more who received either a TTUHSC President’s Award or a Texas Tech University System Chancellor’s Award for their excellence in the classroom and in the laboratory. In addition, Sid Phillips, Pharm.D., a proud School of Pharmacy alumnus, was elected president of the Texas Society of Health System Pharmacists.

When students enroll at the TTUHSC School of Pharmacy, they have access to all of these things, which makes ours one of the most cost-effective pharmacy programs in the state based upon tuition and fees. It is also why we are so proud of our role in training pharmacists who will be the profession’s clinical and research leaders of the future.

QUENTIN R. SMITH, PH.D.
DEAN, TTUHSC SCHOOL OF PHARMACY
STUDENT IN VolvEMENT

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SCHOOL OF PHARMACY SIGNS DEAL WITH ABILENE UNIVERSITIES
Dean signs articulation agreements with three Abilene universities for students to transition to the TTUHSC School of Pharmacy.
At the 2015 State of the University Address, TTUHSC President Tedd L. Mitchell, M.D., recognized 39 TTUHSC faculty members for their exceptional efforts in the clinic and in the classroom. The recipients included 12 faculty members from the School of Pharmacy who received 13 awards.

- **President’s Excellence in Teaching Team Award** - Charles Seifert, Pharm.D., FCCP, BCPS (as a member of the Clarion Course Team)
- **President's Excellence in Research Award** - Ruiwen Zhang, M.D., Ph.D.
- **President's Young Investigator Award** - Luca Cucullo, Ph.D.
- **President's Outstanding Clinician Award** - Steven Pass, Pharm.D., BCPS; Sachin Shah, Pharm.D., BCOP, FCCP
- **President’s Excellence in Interprofessional Teamwork Award** - Charles Seifert, Pharm.D., FCCP, BCPS (as a member of the Delivery System Reform Incentive Payment Program)
- **University Distinguished Professor Awards** - Thomas Abbruscato, Ph.D.; Fakhrul Ahsan, Ph.D.; Roland Patry, Dr. PH.; Sanjay Srivastava, Ph.D.; Thomas Thekkumkara, Ph.D. and Jon Weidanz, Ph.D.
COX HONORED BY TTUS

Craig Cox, Pharm.D., an associate professor of pharmacy practice and vice chair of experiential programs for the TTUHSC School of Pharmacy, was among a group of Texas Tech University System (TTUS) faculty members whose outstanding achievements and contributions were recognized in January with a TTUS Chancellor’s Council Distinguished Teaching and Research Award. The awards are presented annually and are the highest honors bestowed upon faculty by TTUS.

Cox has received more than 20 teaching awards in his 15-year career at TTUHSC and is one of the School of Pharmacy’s foremost clinical pharmacy faculty members in student, resident, preceptor and clinical partner surveys. In addition to his teaching duties, Cox provides clinical pharmacy services on the adult medicine ward at University Medical Center where he has provided six-week rotation experiences to more than 250 students and residents.

Through national leadership positions, Cox has helped usher in transformative initiatives in pharmacy experiential education throughout the country. He recently received an honorable mention for a National Innovations in Teaching competition for his novel mini-series movie-teaching concept, which has grown beyond the School of Pharmacy to include all schools at TTUHSC. He is referred to as “Mr. Hollywood” for the ingenuity and vision he brought to the preceptor training videos.

2014-2015 SCHOOL OF PHARMACY PRECEPTORS OF THE YEAR

The School of Pharmacy annually honors one faculty member and one adjunct faculty member from each campus community with a Preceptor of the Year Award. The Office of Experiential Programs reviews preceptor evaluations submitted by students and then determines the top five faculty preceptors and top five adjunct preceptors from each campus. The third- and fourth-year students then vote for one faculty and adjunct faculty finalist from their respective campus.

2014-2015 FACULTY PRECEPTORS OF THE YEAR:

- Chris Tawwater, Pharm.D. (Abilene)
- Sherry Luetke, Pharm.D. (Amarillo)
- Kalin Clifford, Pharm.D. (Dallas/Fort Worth)
- Leslie Monye, Pharm.D. (Lubbock)

2014-2015 ADJUNCT FACULTY PRECEPTORS OF THE YEAR:

- Wesley Hood, Pharm.D. - San Angelo Medical Center (Abilene)
- Julie Edwards, R.Ph. – CVS (Dallas/Fort Worth)
- Patty Luera, Pharm.D. – Texas Specialty Hospital (Lubbock)
Several School of Pharmacy students from Amarillo, Abilene and Dallas/Fort Worth (DFW) received special recognition this fall from a long-time school supporter and TTUHSC.

Jessica McKinney, a second-year (P2) student at the Amarillo campus, received the Dean’s Leadership Scholarship sponsored by Walgreens. Other scholarship recipients named by Walgreens include Abilene P3 Cara Gorton, who received the Walgreens Diversity and Inclusion Scholarship; and Cindy Adibe (P4-DFW), Adriana Campa (P1-Amarillo) and Juana Rivas (P2-Amarillo), who each received a Walgreens Diversity Scholarship.

In addition, three School of Pharmacy students were included in a group of 21 TTUHSC students to be named as President’ Select Ambassadors. The trio includes Adibe and Abilene P3s Sydney Kutter and Addie Young. Students chosen to participate in the President’s Select Ambassador program learn leadership skills and help support the work of TTUHSC.

Thomas J. Abbruscato, Ph.D., professor and chair for the School of Pharmacy’s Department of Pharmaceutical Sciences, has accepted an invitation from the Department of Health and Human Services (DHHS) at the National Institutes of Health (NIH) to serve as chairperson for the Drug Discovery for the Nervous System Study Section, Center for Scientific Review.

Members are selected based upon their competence and achievement in their scientific discipline as demonstrated by the quality of research accomplishments, publications in scientific journals and other significant scientific activities, achievements and honors.

Each year state agencies from the upper 26 counties in the Texas Panhandle are invited to select an employee or team of employees to receive a Texans Caring for Texans award. The award recognizes state employees for the effort they put forth to positively impact their communities.

The 2015 recipients were honored in a ceremony on the West Texas A&M University campus in Canyon. Jeri Brown, executive associate for the School of Pharmacy’s Dean’s Office, was among the recipients from the TTUHSC campus in Amarillo. TTUHSC President Tedd L. Mitchell, M.D., was the keynote speaker for the event. State Reps. John Smithee and Four Price were also present to honor the 2015 recipients.
An important community outreach program received a $10,000 shot in the arm July 10 through a grant awarded by the Xcel Energy Foundation, which awarded $400,000 in grants to 74 nonprofits in the company’s Texas-New Mexico service area. The Texas Panhandle Poison Center (TPPC), managed by the Texas Tech University Health Sciences Center through the School of Pharmacy, was one of 40 Texas Panhandle nonprofits to receive one of the grants.

TPPC Managing Director Jeanie Jaramillo-Stametz, Pharm.D., said TPPC will use the grant to pay for costs associated with its Amarillo Medication Cleanout events, including incineration expenses, supplies, advertising, refreshments for volunteers and server maintenance.

While unused medications in the home create a risk for poisonings, something most people understand, Jaramillo-Stametz said teens and young adults target many of these same medications for experimentation and abuse. “Studies have shown that those who abuse prescription medications for non-medical reasons often move on to abuse illicit drugs in the future. So, they start with prescription medications that they feel are safe and gain confidence with the abuse. Then, they either become addicted or simply desire the high and seek an alternative.” Jaramillo-Stametz said there is also an environmental safety component to Medication Cleanout because consumers are often unsure how to dispose of unused medications or they may not fully understand the consequences of inappropriate disposal. This uncertainty may lead to old and unwanted medications being flushed, washed down a drain or tossed into the trash.

“Most current wastewater treatment technologies do not adequately filter pharmaceuticals, so flushing medications or rinsing them down the drain results in contamination,” Jaramillo-Stametz explained. “Medications that are trashed, in most cases, find their way to the landfill. While landfill liners are required to meet minimum standards, over time, leachate can occur and also contaminate not only underground water supplies, but also soil.”

Jaramillo-Stametz said surveys indicate that approximately 11 percent of participants would have flushed or washed their medications down the drain and 26 percent said they would have thrown their medication into the trash.
WHITE COAT CEREMONY HIGHLIGHTS PHARMACY SCHOOL BOOT CAMP

The 2015-2016 academic year officially opened Aug. 17, but the School of Pharmacy began a bit earlier in the month by welcoming the incoming Amarillo Class of 2019 at the annual White Coat Ceremony Aug. 10 at the Paramount Theatre in Abilene and Aug. 17 at the Amarillo Civic Center. CVS/Caremark helped sponsor the events.

In addition to receiving their white pharmacy coats, the incoming students also signed the Pharmacist Code of Conduct and recited the Oath of a Pharmacist for the first time.

The Pharmacist Code of Conduct defines the roles and responsibilities of pharmacists and forms the basis for student conduct when they interact with patients and colleagues during their years in the TTUHSC pharmacy program and after they graduate and enter the profession.

The event concludes the pharmacy school’s annual orientation period that prepares students for their first year of classes and provides them with an overview of the school’s four-year doctor of pharmacy (Pharm.D.) program.

SCHOOL OF PHARMACY HIGHLIGHTS

Widely recognized for the strength and quality of its clinical Doctor of Pharmacy training program.

- Largest number of clinical clerkship training hours
- Top 3 Department of Pharmacy Practice
- Top 5 Residency Training Program
- Separate geriatrics and pediatrics divisions
- Joint Pharm.D./MBA program
- Four campuses across Texas
- Ranked among the top third overall of pharmacy schools nationally, based upon research grant funding and by a U.S. News and World Report survey

FACULTY RECEIVE PROMOTIONS, TENURE

The Texas Tech University System Board of Regents recently approved promotions for seven School of Pharmacy faculty members.

Department of Pharmaceutical Sciences faculty member Fakhrul Ahsan, Ph.D., from the Amarillo campus and Steven Pass, Pharm.D., from the Department of Pharmacy Practice in Dallas, were promoted from associate professor to professor. Ahsan, who was named a University Distinguished Professor in 2015, also serves as advisor for the Graduate Program in Pharmaceutical Sciences. Pass serves as vice chair for the School of Pharmacy residency programs.

Four Department of Pharmacy Practice faculty members were also promoted from assistant professor to associate professor. The group includes Pamela Ochoa, Pharm.D., and Jose Vega, Pharm.D., from the Abilene campus; Lisa Chastain, Pharm.D., from the Dallas campus; and Janie Robles, Pharm.D., from the Lubbock campus.

In addition, Claudia Meek, Ph.D., from the Department of Pharmacy Practice in Dallas, was promoted from research assistant professor to research associate professor.

“We want to celebrate this achievement with our faculty,” School of Pharmacy Dean Quentin Smith, Ph.D., said. “They went through a very thorough and demanding review process and performed extremely well. They are certainly deserving of our praise for their efforts and achievements.”

trash if they were unable to bring them to Medication Cleanout. The surveys also indicate that 54 percent of participants would have simply kept their medications had Medication Cleanout not been available to them.

“Applying this to our collections, Medication Cleanout has prevented approximately 2,530 pounds of medications from being flushed and directly entering our wastewater system and prevented an additional 5,980 pounds from being deposited in our landfills,” she said.
Jean Stockton was thrilled when she first learned TTUHSC was opening a School of Pharmacy campus in Abilene in 2007. As a Red Raider alumna (Class of ’57) and a lifelong Abilene resident, she knew she wanted to help students achieve their educational goals in her hometown.

“After my husband passed away in 1998, I had funds to invest,” Stockton said. “It’s nice to be appreciated, so I decided to go to Texas Tech. Now I have a whole stack of personal letters from every student. They write really nice letters; their momma’s taught them good.”

Stockton’s husband, Hal, graduated from Texas Tech University (TTU) in 1958 with degrees in electrical engineering and math.

“He had two degrees, but when graduation came around they would only let him get one there because they didn’t want him going clear across the room to the other and holding up the ceremonies,” Stockton said. “So he got the other one in the mail.”

Her son, Bryan, also graduated from TTU. He’s now retired, but worked for the City of Dallas for more than 30 years.

“So we’re kind of Texas Tech fans,” Stockton added with a laugh.

With her family’s hearts belonging to the Red Raiders, it was only natural that she would look to help those working to earn their degrees from within the Texas Tech University System.

Over the years, Stockton’s donations have benefitted students from several TTUHSC schools and programs, including the schools of allied health, medicine and nursing and the Garrison Institute on Aging. Today, her gifts are focused primarily on Abilene pharmacy and nursing students, a process that began when the School of Pharmacy opened its Abilene campus.

“I started with the School of Pharmacy; they’ve been good to me and they were right here in town,” Stockton said. “The stock market has been good to me, so I’ve enjoyed donating and getting to know the kids. Sometimes, if the students are here in Abilene, the schools have receptions or dinners for everyone. I don’t get out very much like I used to, so I don’t really go to those, but it’s been a lot of fun.”

The School of Pharmacy and its students benefit greatly from the generosity of others, and Stockton is one of many supporters that contribute to the success of the school and its students.

“The School of Pharmacy truly appreciates the support we receive from Ms. Stockton,” School of Pharmacy Dean Quentin Smith, Ph.D., said. “Our students face many challenges as they navigate through our program and the support they receive from our friends like Ms. Stockton make it easier for them to focus on their classroom and clinical requirements.”

Stockton said she doesn’t care where the recipients come from or whether they’re male or female as long as they need a helping hand.

“i just want to know that it’s useful to them and that they appreciate it,” Stockton added. “Some of the students may even be going back to a foreign country. Well, maybe they’ll be able to do some good there, too.”

TTUHSC School of Pharmacy offers Ms. Stockton its deepest appreciation for her gracious and giving heart.
Results from a study conducted by Sanjay K. Srivastava, Ph.D., a professor in the School of Pharmacy's Department of Biomedical Sciences, were published in the Feb. 15 issue of Cancer Research, the most frequently cited cancer journal in the world. Alok Ranjan, the study’s lead author, and Parul Gupta are graduate students in the same department and worked with Srivastava on the study.

According to a 2011 report prepared by the Greater Amarillo Affiliate of Susan G. Komen For the Cure, the breast cancer mortality rate for 25 of 26 Texas Panhandle counties exceeds national and state rates. Metastasis of breast cancer, especially to the brain, is the major factor in the mortality rate and Srivastava said triple negative breast cancer (TNBC) is a very aggressive form of the disease. Once the cancer reaches the brain, there are almost no treatment options available. Srivastava said researchers looking for a successful treatment to halt metastasis to the brain have been thwarted by the inability of anticancer agents to cross the blood-brain-barrier (BBB). Because of this, he said metastatic TNBC is very difficult to treat and patient survival rates are poor. To combat this challenge, Srivastava and his research team have been studying ways to bypass the BBB and prevent the metastasis process that is so often fatal.

“We know that anti-psychotic drugs do reach the brain, and so we screened several of these drugs and found penfluridol to be effective in suppressing the growth of various TNBC cells,” Srivastava said. “We demonstrated that oral administration of penfluridol suppresses the growth of breast tumors in the brain in various tumor models, and interestingly, we observed that some of the proteins, which are overexpressed in breast tumors and play a role in metastasis, were also suppressed by penfluridol treatment.”

Srivastava said long-term treatment with penfluridol also did not appear to cause any toxicity or behavioral side effects. “Penfluridol is currently given to patients with schizophrenia, though few studies have suggested that schizophrenic patients have reduced risk of cancer,” he added. “Since penfluridol is already in clinic, positive findings from our study will accelerate its clinical development and be helpful for patients with aggressive and metastatic breast cancer.”

The Abilene Community Health Center (ACHC), a satellite clinic of the Larry Combest Community Health and Wellness Center in Lubbock, officially rolled out its welcome mat Dec. 16 with a ribbon cutting and open house. ACHC, primarily associated with the Texas Tech University Health Sciences Center (TTUHSC) School of Nursing, also provides an interprofessional practice site that includes two clinical pharmacists—School of Pharmacy faculty members Kayley Will, Pharm.D., and Mary Klein, Pharm.D. Will and Klein work with Sharon Cates, F.N.P., and supervising physician Allen Schultz, M.D., to provide therapeutic recommendations, provide patient education for disease states and medications, administer vaccines, conduct point of care tests and evaluate lab results.

Will said pharmacy and nursing students from the TTUHSC campus in Abilene do clinical rotations through the ACHC. “The pharmacy students help with medication reconciliation, answer drug information questions and provide patient education,” Will said. “The clinic provides access to comprehensive health services to those in need. We also try to reduce or eliminate health disparities among high risk populations and integrate student clinical experiences and faculty practice to effectively deliver health care services.”

ACHC is a federally qualified health center with an on-site laboratory that provides a wide-range of services, including annual exams, immunizations, STD testing, contraception, pregnancy testing and minor injury care. Medicare, Medicaid and most private insurance are accepted and there is a sliding-scale fee for the uninsured.

“We are a family practice clinic that provides disease management and primary care services to all patients, from infants to the elderly,” Will added.
In October 2014, TTUHSC School of Pharmacy researchers published an article reporting the discovery of a new anticancer agent that targets MDM2, a known cancer-causing gene.

The article, titled, “The Pyrido indole MDM2 Inhibitor SP-141 Exerts Potent Therapeutic Effects in Breast Cancer Models,” appeared in Nature Communications, a multidisciplinary journal that publishes high quality research from all areas of the natural sciences.

Ruiwen Zhang, M.D., Ph.D., a professor for the School of Pharmacy’s Department of Pharmaceutical Sciences, is primary investigator for the research. Wei Wang, M.D., Ph.D., a research assistant professor for the same department, is the paper’s lead author.

Breast cancer is most frequently diagnosed among women and is the second leading cause of cancer-related death for women in the U.S. Despite early diagnosis and new treatment options, the mortality rate remains high, especially for patients with triple negative breast cancers (TNBC). That rate has helped create a sense of urgency among scientists to develop new therapeutic drugs that offer increased survival rates, fewer side effects and a better quality of life than the therapies currently available to patients with TNBC and metastatic breast cancers.

MDM2 activation is linked to the poor response to treatment and poor prognosis in breast cancer patients, especially those with TNBC. Zhang’s team used a high-throughput screening and computer-aided rational drug design approach and discovered a lead compound, called SP-141, that can directly bind to MDM2, induce its degradation and inhibit its cancer-related activity. SP-141 has strong antibreast cancer-related activity in cultured TNBC cells and in animal models of human TNBC and metastasis with no apparent host toxicity.

While further investigation is needed, the published data indicate that SP-141 is a novel targeted therapeutic agent that may especially benefit patients with advanced breast cancer. Zhang said the SP-141 agent has also shown promise as a target treatment for some pancreatic cancers.

“This gene basically controls the cancer cell growth,” he said. “What we are trying to do is to block the gene and stop cancer growth. If we can block this gene, hopefully patients will live longer.”

Zhang said the next step in his group’s SP-141 research is preparing specific FDA-required studies and generating an investigative new drug application. “If we get approval, we can move on to a clinical trial.”

Although the entire process could take ten years, Zhang said it is a step forward in the fight against cancer. If the newly developed agent is successful, he added, it could also break new ground in preventing cancer.
This fall, the Texas Panhandle Poison Center (TPPC) said goodbye to its first medical director and welcomed his successor.

On Sept. 30, TPPC and TTUHSC hosted a reception to thank Shu Shum, M.D., for his service to both organizations. Shum, a board certified toxicologist, spent 21 years as the medical director for TPPC and 14 years as a professor for the Department of Pediatrics at the TTUHSC School of Medicine. Shum began working to get a poison center located in Amarillo in the mid-1980s. His efforts finally paid off in 1994 when the Amarillo Hospital District sub-contracted with Northwest Texas Hospital to be TPPC's host institution.

Nine years later, on Sept. 1, 2003, TTUHSC began hosting the TPPC through the School of Pharmacy in Amarillo. Shum served as TPPC’s medical director from the day it opened until his retirement in September.

With Shum beginning the next chapter in his life, Thomas Martin, M.D., MPH, has stepped in and will serve as TPPC’s next medical director.

Martin is board certified in emergency medicine, medical toxicology and occupational medicine. Prior to coming to TPPC and TTUHSC, he served as director for the University of Washington’s Medical Toxicology Service and as the associate medical director for the Washington Poison Center. While there, he served on the Washington Overdose Prevention Workgroup, the Opioid Abuse Workgroup, the Opioid Risk Workgroup Steering Committee, the Seattle/King County Heroin Task Force and many others.

Martin has authored more than 30 publications and multiple textbook chapters. His current research initiatives include QT/QTc prolongation, TdP and VTach in antidepressant and neuroleptic exposures and outcomes comparison in salicylate intoxications with or without hemodialysis.

SCHOOL OF PHARMACY ALUMNI BOARD

THANK YOU FOR YOUR SERVICE!

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<td>(2011)</td>
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Belinda Hong, Pharm.D., a PGY2 geriatrics residency program alumna from the Dallas/Fort Worth campus, won the Best Poster Award at the American Society of Consultant Pharmacists’ 2015 Annual Meeting Oct. 30-Nov. 1 in Las Vegas. Hong, who is a clinical geriatrics pharmacist for Evolution Health, L.L.C., presented her residency research project, titled, “The Impact of Cholinesterase Inhibitors with or without Memantine on Antipsychotic Prescribing in Nursing Home Residents with Alzheimer’s type Neurocognitive Disorder,” as a poster at the event. Hong’s collaborators included School of Pharmacy Assistant Professors Monica Mathys, Pharm.D., and Amie Blaszczyk, Pharm.D., from the Dallas campus and Hennie Garza, M.S., R.Ph., director of pharmacy for Senior Care Centers in Dallas.

Harold Miller, Ph.D., an associate professor for the Department of Pharmaceutical Sciences at the Abilene campus, has been named interim chair for the Department of Immunotherapeutics and Biotechnology. Miller, whose appointment began Dec. 5, replaces Jon Weidanz, Ph.D., who accepted a position at the University of Texas at Arlington.
SCHOOL OF PHARMACY HOSTS 2015 JOB FAIR

More than 200 third- and fourth-year students from the TTUHSC School of Pharmacy attended the school’s annual job fair Oct. 8-9 at the Hurst Convention Center in Hurst, Texas.

The students discussed potential job opportunities with representatives from retail and chain pharmacies, drug manufacturers and distributors, hospitals and other health care facilities. Students also attended workshops covering topics like C.V. updating and reviewing, networking, dressing for success and business etiquette, career pathways, interviewing skills, how to manage finances and student loan debt and residency preparation.

Deb Notturno-Strong, Ph.D., assistant dean for professional affairs at the School of Pharmacy, said residency programs were invited to participate free of charge and vendors paid $450 to $1,000 for space. Students who interviewed were charged a $25 reservation fee.

“The venue was perfect – we had the entire convention center,” Notturno-Strong said. “Our fourth-year students interviewed with retail pharmacies on Friday as well as attended workshops. This might be the perfect way to pitch our collaboration with other Texas schools – one big event would be awesome.”

Vendors who attended the 2015 job fair included Albertsons, Randalls, Tom Thumb, United Supermarkets, Baylor Scott & White Health, Brookshire Grocery Company, Cardinal Health, CVS Health, Caremark, HEB Pharmacy, Kmart Pharmacy, Kroger Pharmacy, Mass Mutual Dallas Fort Worth, Medical Center Hospital, Target Pharmacy, Tenet, TTUHSC School of Pharmacy Residency Programs, Texas Health, United States Air Force Health Professions, Walgreens and Walmart.

ALUMNI PROFILE
TADD HELLWIG - SCHOOL OF PHARMACY ALUMN NAMED PHARMACIST OF THE YEAR IN SOUTH DAKOTA

School of Pharmacy alumnus Tadd Hellwig (’06), an associate professor at the South Dakota State University (SDSU) College of Pharmacy, received the 2014 Pharmacist of the Year award from the South Dakota Society of Health-System Pharmacists.

Hellwig provides didactic teaching for second- and third-year SDSU pharmacy students at the SDSU campus and at the University Center in Sioux Falls, South Dakota. He also serves as an internal medicine preceptor to fourth-year SDSU pharmacy students through his rotation site at Sanford Health. Hellwig served the previous two as a South Dakota representative to the American Society of Health-System Pharmacists’ House of Delegates.
In 2011, the School of Pharmacy Alumni Association board created a legacy of support for future pharmacists and launched an effort to endow a scholarship. Their efforts to raise funds were ultimately successful and the School of Pharmacy Alumni Pioneers Scholarship was established. Hannah Lenamon, a P2 in Abilene, was chosen as the first recipient of the Alumni Pioneers Scholarship. We want to thank and recognize the alumni who have given to this endowment:

- Alisia Baker Sutton
- Hong Brod
- Nathan Buerkle
- Carl Carruthers
- Amy Cave
- Shalyn Cox
- Sonya Crouch
- Leslie Cutright
- Kerry Daniel
- Rekha Daniel
- Bonnie Dugle
- Omar Espericueta
- Shawn & Stefani Gautreaux
- Theresa Gerst
- Lee Ann Hampton
- Thaddaus Hellwig
- Jason Neuerman
- Jennifer Hillman
- Alisa Hirschberg
- Melanie Huf
- Boris Loffe
- Mark Land
- Valerie Levi-Derrick
- Gail Lowry
- Melinda Marks
- Traci Metting
- Adriana Montemayor
- Sarah Mureeba
- Jennifer Nelson
- Jessica Njoku
- Sidney Phillips
- Sara Robison
- Josh & Tiffany Rodgers
- Jefferson Sheng
- Wesley & Meghan Skalak
- Shauna Smith
- Brandon Sucher
- Laurie Wheeler
- Amanda Williams
- Tyler Wood

If you would like to help future students such as Hannah through this scholarship, please go to www.give2tech.com and select “School of Pharmacy Alumni Pioneers Scholarship.”
For Abilene P2 Hannah Lenamon, the first recipient of the School of Pharmacy's Alumni Pioneers Scholarship, pharmacy school is a solution to a lifelong conflict. As a self-described math and science nerd who has always enjoyed helping those in need, Lenamon was drawn to the health care field. However, the squeamish feeling she experienced around blood, severely ill people and hospitals counterbalanced that desire.

“I went to church with a community pharmacist, and after discussing aspects of the field with him, I knew that becoming a pharmacist was what I wanted to do,” Lenamon said. “I want to be that friendly face people see when they are ill and become the face they can trust to help them get well.”

Lenamon was born in Waco and raised 20 minutes southwest in McGregor, a small town with roughly 5,000 people. She graduated as the McGregor High School valedictorian in 2011 and attended Texas Tech University (TTU). While in Lubbock she majored in chemistry, enrolled in the Honors College and joined Gamma Beta Phi. Although she didn’t graduate, she did complete her pharmacy pre-requisites and became more comfortable with her roots. By the time she completed her pre-requisites, Lenamon realized she had a plan for her future.

“After attending TTU and becoming a true Red Raider at heart, I knew that TTUHSC was where I wanted to attend pharmacy school, no matter what it took,” she said. “Being a small-town country girl, I knew the Abilene campus would be the perfect fit for me so I could be closer to home and succeed in pharmacy school.”

Receiving the Alumni Pioneers Scholarships meant a great deal to Lenamon as she continued the transition to pharmacy school. She was surprised to learn she met the qualifications for the scholarship and was honored to be considered by the alumni who previously walked in her shoes during their time at the School of Pharmacy. “I believe that this endowment/scholarship is a great way to give back to the school that helped shape the alumni into the pharmacists they are today,” Lenamon said. “And because the alumni have helped me in fulfilling my dreams, and the dreams of many other students, I know that I will be giving back to the endowment to help support future students after I graduate.”

Lenamon came to the School of Pharmacy hoping to some day work in a retail setting as an independent pharmacist. Her experiences thus far in pharmacy school, along with her continued interest in veterinary pharmacy, have further focused her career interests. “I would prefer to work in a retail pharmacy that does compounding, and further into the future, I want to be able to own or be a partner in an independent pharmacy and specialize in veterinary compounding,” Lenamon said. “Now that I have been able to explore these fields of pharmacy, and being from a small farming and ranching community, I feel that I could succeed someday in opening my own independent pharmacy and catering to that type of community by compounding veterinary medications.”

As she gets closer to reaching her goals, Lenamon has become increasingly aware of the important role a scholarship can play in relieving some of the pressure that comes with pharmacy school. “This scholarship has helped me to pay for some of my bills, tuition and groceries throughout the semester,” Lenamon said. “It has also lifted the burden of having to take out more loans off of my shoulders. I believe I can speak for all students going through stresses of pharmacy school when I say it’s a fact that scholarships like the Alumni Pioneers Scholarship help to relieve the added stress and questions of ‘how am I going to pay for school?’ I am beyond grateful to the alumni for making that possible.”
A current School of Pharmacy student and an alumna, both from the Abilene campus, were elected to serve Phi Delta Chi (PDC) at the pharmacy fraternity’s 70th Grand Council meeting in Albuquerque.

Megan Fenney, a P4, was elected by regional delegates to serve as PDC’s South Central Regional Correspondent. During her one-year term, Fenney will be responsible for communication between the national office and the region and for ensuring all 12 region chapters are participating at the highest level possible.

In addition, Tiffany Johnson (Class of ’13) was elected to a PDC national office and will serve a two-year term as the organization’s Grand Vice President for Collegiate Affairs. One of Johnson’s primary tasks will be to work with all PDC collegiate chapters to expand the professional fraternity’s membership. She will also help PDC promote its Collegiate Chapter Standards, organize and coordinate material judging for PDC’s Achievement Award Program and supervise the activities of the group’s regional collegiate affairs directors.

Fenney said PDC felt like home from the moment she joined, but she didn’t realize how much she wanted to be involved until the Albuquerque meeting.

“Attending my first Grand Council was like the spark that ignited a passion to serve beyond my chapter,” Fenney said. “I saw that PDC was much more than a professional pharmacy fraternity, it’s a true brotherhood with Brothers willing to do anything across the nation to help each other out. Seeing that passion around me — and the opportunities available to give back on a bigger scale — led me down the path of running for regional correspondent to serve the South Central region. I volunteered to serve and was awed by the support I received from my fellow PDC Brothers.”

Fenney said she is honored and humbled by her appointment. Her PDC responsibilities will only add to the amount of work she faces as a third-year pharmacy student, but she is eager to begin.

“I look forward to the challenges to come and to the growth that comes each day from learning from new experiences,” she said. “Anytime we are presented with an opportunity to serve those around us, it’s a chance to make a difference in their lives and in our own.”

After pharmacy school, Fenney hopes to complete a two-year residency in either geriatric or psychiatric pharmacy. Whichever direction her career takes, Fenney wants to stay involved with PDC. She credits the organization with her overall development and she wants to share those experiences with future members.

“Over the past four years, Phi Delta Chi has presented me with several opportunities for growth as a future pharmacist and in my networking ability, my leadership skills and my growth as a person,” Fenney said. “Looking back, I don’t think I would be where I am today without the numerous opportunities and lessons I was faced with, so I just want to encourage those around me to find something they are passionate about and get involved because you never know what opportunities may lay ahead of you.”

Johnson, who helped found and charter PDC’s Gamma Nu chapter for the Abilene campus in 2011, received several scholarships to attend the organization’s regional and national conferences during her four years of pharmacy school. She said PDC’s collegiate members thrive on support from alumni, whether it’s networking and advice for the competitive job market or application tips for some of the organization’s scholarships.

In fact, Johnson gives credit to her former residency director, a PDC alumna from the University of Houston College of Pharmacy, for helping her land her current job as a clinical pharmacist for Magellan Health. But that experience is just one reason why Johnson applied to serve PDC on a national level.

“Because of the blessings I have been given from this organization, I feel it is my duty to give back as an alumnus,” Johnson said. “When we are initiated, we pledge to be brothers for life; this experience is not just during our pharmacy school careers but is a lifelong experience. I continue to serve this organization to be an example for current students that I am a Brother for Life and I will support my collegiate Brothers until the end. I truly do it because of what the organization gave me and to help other collegians advance themselves professionally.”
During the 2010-2011 academic year, a group of students from the School of Pharmacy in Amarillo helped found a TTUHSC student chapter for the Foundation for International Medical Relief of Children (FIMRC). The organization’s mission is to provide access to medical care for the millions of underprivileged and medically underserved children around the world. Each year, the national FIMRC office selects a Chapter of the Year from among its more than 60 local chapters spread across the U.S., Canada and Australia for their contributions to the organization’s efforts. In September, FIMRC Operations Specialist Abigail Proctor traveled to Amarillo to recognize the TTUHSC chapter as the 2014-2015 FIMRC Chapter of the Year.

“Years of experience sometimes do not matter, yet the quality of the work you do and the impact you make as an innovative individual can allow others to see your true character, work ethic and dedication,” Johnson stressed. “I have wanted nothing more than to be an example for my collegiate Brothers and to inspire them to ask, ‘Why not, what do we have to lose?’ and just go for it.

“To quote William Shakespeare, ‘we know what we are, but know not what we may be.’ In other words, we only realize our greatness when we put it to the test. Sometimes we surprise ourselves, and that’s when the real experience begins.”

During the 2010-2011 academic year, a group of students from the School of Pharmacy in Amarillo helped found a TTUHSC student chapter for the Foundation for International Medical Relief of Children (FIMRC). The organization’s mission is to provide access to medical care for the millions of underprivileged and medically underserved children around the world. Each year, the national FIMRC office selects a Chapter of the Year from among its more than 60 local chapters spread across the U.S., Canada and Australia for their contributions to the organization’s efforts. In September, FIMRC Operations Specialist Abigail Proctor traveled to Amarillo to recognize the TTUHSC chapter as the 2014-2015 FIMRC Chapter of the Year.

“The TTUHSC School of Pharmacy best exemplified what it means to be a FIMRC chapter through their local volunteering in the Amarillo area, their commitment to fundraising through events such as the volleyball tournament, advocating for health issues and traveling to our project site in the Dominican Republic,” Proctor said. “Student involvement is integral to our mission because our chapters play such an important role in advocating for health issues that affect those in underserved countries. The work that these students do benefits FIMRC by making global health issues visible in their communities, while also strengthening the health of members in their own community.”
By reconfiguring an existing laboratory space, the School of Pharmacy now has a facility on its Abilene campus where first- and second-year students (P1s and P2s) can learn about and practice sterile and drug delivery (non-sterile) compounding.

“The drug delivery compounding lab is where the P1 students learn about preparing different dosage forms like ointments, gels, capsules, solutions, creams, lollipops, suspensions, suppositories—they learn a total of 17 pharmaceutical/compounding preparations during their P1 spring semester,” Assistant Professor Siva Koganti, Ph.D., said. “Each class is two hours long where they compound, dispense their final product, print their prescription label and log the product information with all of the manufacturing details.”

Koganti said compounding is very important in today’s health care because the pharmacist can create a medication form based on what the patient needs rather than what dosage forms are available. Because the drug delivery lab and the sterile compounding lab share adjacent spaces, he said the P1 students have a feel for what sterile compounding lab is about when they begin that course in their P2 year.

José Vega, an assistant professor for the Department of Pharmacy Practice, teaches the P2 sterile compounding class on the Abilene campus. Like Koganti, he believes the new lab space is a benefit to the students.

“What is unique about our new lab space is we maximized the layout of the room by placing all IV laminar airflow workbenches along the walls, which leaves the middle of the room open for better faculty-to-student supervision and demonstration,” Vega explained. “To my knowledge, no other pharmacy school in Texas utilizes true ISO 5 laminar airflow workbenches for all student sterile compounding lab activities.”

Vega said the new sterile lab is also equipped with a high definition 70-inch television that can be used to show demonstration videos.

“Through the use of a high definition camera connected to the television, I am able to demonstrate key aseptic techniques to the class, which increases the efficiency of student learning,” Vega said. “Our lab space is also designed to simulate a sterile compounding clean room environment with an ante room, a buffer room and the laminar airflow workbenches. By demonstrating sterile compounding techniques in a simulated clean room environment, our students will be better prepared for clerkships and employment when they graduate.”

Koganti also likes the unique open-concept lab because he can interact more closely with the students about their compounding procedure, and should a student encounter a problem, he is better able to immediately advise them or help them overcome the problem. He said the four high-definition screens, which he compares to a miniature Cowboys Stadium, is a unique characteristic that adds to the active learning process and appeals to the school’s existing students and visiting admissions candidates.

“I also offer an advanced compounding elective to P4 students for six weeks in the summer where they have unique opportunity to learn advanced formulation and compounding skills that will help them in their career,” Koganti added. “A good pharmacist is very useful in compounding unique medications to meet the needs of geriatric patients, pediatric patients and veterinary animals, to name a few.”
There are many reasons why scientists are drawn to particular fields of research. For some, it may start with a child's curiosity to learn more about the world in which they live. Others may be influenced by a family member or close friend whose individual circumstance lights a motivational fuse. For Luca Cucullo, Ph.D., who was born and raised in the southern Italy city of Chieti about 120 miles outside of Rome, it was a series of seeing-is-believing moments that sparked his passion for investigating brain-centered pharmacology/pathophysiology research. Cucullo's journey began as he was preparing his doctoral thesis at the University of Pisa School of Pharmacy. That's when he was selected from among the school's best performing graduate students to complete his project at the prestigious Cleveland Clinic.

"Probably the strongest input and motivation to pursue my research endeavors as a career path came from my working experience at the Cleveland Clinic's Department of Neurosurgery," Cucullo recalls. "While there I was directly exposed to the cumbersome challenges patients and care physicians have to deal with." As he spent more time at the clinic, Cucullo became acutely aware of the paucity of treatment options available for patients—including children—afflicted with various neurological disorders like drug refractory epilepsy, multiple sclerosis, vascular dementia, stroke and many others. That awareness also increased his desire to investigate and alleviate those health burdens to the best of his ability.

"It is one thing to read from a pathophysiology book about the toll these brain disorders take upon a patient and it is another to see it happening with your own eyes and realize how bad they can impact someone's life," he added.

Cucullo was recruited back to the Cleveland Clinic to work as a post-doctoral research fellow at the hospital's Cerebrovascular Research Center. That's when he began specializing in neuropharmacology and brain vascular modeling. In 2007, Cucullo accepted a non-tenure track position at Case Western Reserve University and the Cleveland Clinic Lerner College of Medicine. He moved to Amarillo in 2011 to begin his current position at the TTUHSC School of Pharmacy as an assistant professor for the Department of Pharmaceutical Sciences.

"In recent years, I have started investigating an underestimated and often overlooked area relevant to public health: the effect of tobacco smoke exposure on the cerebrovascular system," Cucullo says. "I am focusing primarily on the neurovascular toxicity of various tobacco products and their effects as prodromal agents (early symptoms) to the pathogenesis and progression of major neurological disorders such as stroke, vascular dementia, Alzheimer's disease and—more recently—Type 2 diabetes." Cucullo's position at TTUHSC allows him to work in the classroom with doctor of pharmacy students and in the laboratory with graduate students from the School of Pharmacy's Graduate Program in Pharmaceutical Sciences (GPPS). He is a recent recipient of a TTUHSC President's Young Investigator Award and a member of the School of Pharmacy's physiology-based Pharmacology Team that was voted the 2014-2015 Teaching Team of the Year by GPPS students.

"The inner motivation to discover new information is a personal trait that has undeniably been an asset in my professional career," Cucullo says. "Fostering this same trait in my students and observing the end results in their growth and career path choices is definitely refreshing and motivates me to keep improving my teaching skills."
“It was the biggest health fair they had ever done,” James recalled. “There were a lot of teachers who volunteered and a lot of staff involved, and we provided a meal at the end. We had tons of faculty helping and there were educational booths and community vendors.”

TTUHSC pharmacy, medical and health professions students helped screen patients and other local health care professionals pitched in to provide dental, plastic surgery, pediatrics and internal medicine screenings. James said the team noticed the average body mass index of children screened during the health fair exceeded 30, a result they attributed to the children having limited or no access to fresh food. She said many children in the impoverished areas around the school also missed the first month of classes because they lacked the necessary immunizations. The team also learned that families in the area primarily used urgent care clinics and local hospital emergency rooms to address their medical needs, but they were not able to fill prescriptions written by those providers.

“We could see there was a real need in this community,” James said. “When they were asked what the San Jacinto community needed most, their answer was a free clinic.”

In September 2014, Keister, who was quite experienced in undertaking medical missions abroad and had become known for the small screenings and health fairs at Amarillo schools, opened the Heal the City clinic in the foyer of Generation Next Church and in an adjacent house on Tennessee Street.

“We did vitals in the church and used it as the waiting area,” James explained. “We did more of the services in the house, but it quickly grew too crowded, so we expanded use of the church. Generation Next Church also gives goods and clothing in the area, so it has always been like a safe place.”

The Heal the City project, which is nearing the end of its second year, operates with volunteers and funding from the Amarillo community. Physicians assess patients at the clinic on Monday nights and write prescriptions for acute and chronic illnesses. The prescriptions are filled with the help of the Amarillo Pharmaceutical Care Center located on TTUHSC’s Amarillo campus. James said Rachel Basinger, Pharm.D., a fellow assistant professor for TTUHSC’s Department of Pharmacy Practice, and Senior Pharmacy Technician Rebecca Young work with School of Pharmacy students to fill prescriptions that cannot be filled by the small Heal the City pharmacy. The students also deliver the medications to Heal the City where they can be picked up by the patients.

“The patients wouldn’t be able to get the medications if not for the pharmacy team effort,” James said. “We usually have 8-10 people assisting just with the pharmacy services, and if it weren’t for Rachel and Rebecca volunteering almost every Monday night, we wouldn’t be able to do this.”

James said there are some nights when Heal the City fills more than 200 prescriptions. The project works with coupons and discounts to pay for all of the medications, though there is a limitation to what they can provide.

After being diagnosed at Heal the City, patients with severe conditions are asked to schedule follow-up appointments at the volunteer physicians’ private office. Patients may also be sent to Northwest Texas Healthcare Systems (NWTHS) for lab work and imaging. James said providing these services helps NWTHS meet its indigent treatment mission and also reduces its emergency room traffic. On Tuesdays, patients who have chronic or less acute illnesses can return to Heal the City to pick up their prescriptions and to receive counseling about other Potter County outreach programs that may be available to them.

Meeting the medical needs of about 40 families each Monday also means Heal the City provides immunizations to all who need them, an effort that has significantly decreased the number of children missing classes at the beginning of the school year. It also allows School of Pharmacy students to hone their patient counseling skills by educating patients about the medications they receive during the free clinic.

By August, Heal the City expects to relocate one street east to the former YMCA building on Carolina Street. James anticipates the move will allow the clinic to double the number of patients it sees each Monday night from 40 to 80. She said Heal the City has greater aspirations for the future, including expansion into other areas of the city.

“We’re not trying to re-invent the wheel here,” James said. “We want to use a lot of what’s already in the community to help the community.”
The TTUHSC’s School of Pharmacy’s presence has a multi-million dollar impact upon the West Texas area. The school admitted its first Pharm.D. class in the Fall of 1996 and the founding class graduated in May 2000. The school’s current class size is 155 students. Over the course of its history, the school has conferred 1,499 Pharm.D. degrees. In addition, 274 residents have completed the Pharmacy Residency program, 72 students have been awarded a Ph.D. in pharmaceutical sciences and 20 have graduated with a joint Pharm.D./MBA.

The School of Pharmacy receives significant external research grant and contract funding annually. Extramural grant funding for fiscal year 2015 exceeded $6.3 million and included grants from the National Institutes of Health, the Department of Defense and the Cancer Prevention and Research Institute of Texas. Overall research expenditures by the School of Pharmacy exceeded $10 million during the same period from all sources.

**2015 GRANT FUNDING**

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<tr>
<th>Source</th>
<th>Amount</th>
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<td><strong>Total</strong></td>
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**PROVIDER PLAN INCOME**

- 2012: $3.5 million
- 2013: $3.3 million
- 2014: $4.5 million
- 2015: $4.4 million

**STUDENTS WHO PASS NATIONAL LICENSING EXAM ON THE FIRST ATTEMPT**

- 2012: 100%
- 2013: 95.70%
- 2014: 97.70%
- 2015: 95.07%
EFFECT OF TTUHSC SCHOOL OF PHARMACY

From 2005 to 2015, the School of Pharmacy has grown from 349 total students to 616 total students. The Abilene campus opened in 2007 and the first class of Abilene pharmacy graduates received their degrees in May 2011.

Today, approximately 160 future pharmacists are enrolled across each of the program’s four years. The School of Pharmacy at Abilene is a state-of-the-art facility with multimedia classrooms, a drug information center, a pharmacy practice laboratory, patient counseling and physical assessment training rooms and modern research labs. With the addition of the Abilene campus, the School of Pharmacy now has four-year programs in Amarillo and Abilene and campuses in Dallas/Fort Worth and Lubbock that educate and train third- and fourth-year students.

The school is an active partner with several health care systems. Through its patient care contracts with partners such as the Texas Department of Criminal Justice, North Texas Veterans Affairs Health System, Hendrick Medical Center, Abilene Regional Medical Center, Jan Werner Adult Day Care, and others, pharmacy practice faculty help to deliver cutting-edge clinical pharmacy services. The school is noted for providing comprehensive medication management in both the acute-care and ambulatory care settings. The school also owns and operates two community pharmacies that serve as “living laboratories,” including one that specializes in sterile compounding.

<table>
<thead>
<tr>
<th>Campus</th>
<th>Budget in Millions of Dollars</th>
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<tbody>
<tr>
<td>Amarillo</td>
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<tr>
<td>Abilene</td>
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<tr>
<td>Dallas</td>
<td>$3,395,824</td>
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<td>Lubbock</td>
<td>$761,092</td>
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<tr>
<td>Total</td>
<td>$28,928,416</td>
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<table>
<thead>
<tr>
<th>Program</th>
<th>Number of Alumni</th>
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<td>Geriatrics</td>
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<tr>
<td>Hematology/Oncology</td>
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<td>Pharmacy Practice</td>
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<tr>
<td>Pharmacotherapy</td>
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<tr>
<td>Total</td>
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2015 Residency Distribution

- Geriatrics: 1
- Hematology/Oncology: 1
- Pharmacy Practice: 3
- Pharmacotherapy: 15

Total Alumni: 1,499

Budget by Campus

- Amarillo: $20,291,582
- Abilene: $4,479,918
- Dallas: $3,395,824
- Lubbock: $761,092
- Total: $28,928,416