

# TTUHSC PharmNews

Texas Tech University Health Sciences Center School of Pharmacy  
*THE Prescription for Excellence*

Amarillo • Lubbock • Dallas/Fort Worth • Abilene

## SOP researchers publish discovery of new breast cancer agent

Researchers from the Texas Tech University Health Sciences Center (TTUHSC) School of Pharmacy (SOP) have 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," was published October 1 by *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 SOP'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.

The research team also includes faculty, students and fellows from TTUHSC and their collaborators. The work is supported by grants from the National Cancer Institute at the National Institutes of Health.

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 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 anti-breast cancer

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.

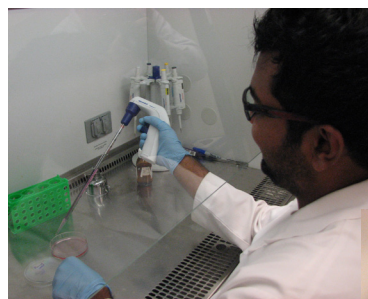
Zhang said the SP-141 agent has also shown promise as a target treatment for some pancreatic cancers.

"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 up to 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.



*Sukesh Voruganti, a research graduate assistant and member of the Zhang research team, works with a Petri dish containing SP-141.*

*Voruganti holds a tube containing SP-141 in its powder form. The agent could prove valuable in the fight against breast cancer*



## SOP's Ballew, Cox recognized by ACCP

Abilene P4 Austin Ballew earned a first runner-up finish in the 2014 Best Student Poster competition at the American College of Clinical Pharmacy (ACCP) Annual Meeting Oct. 12-15 in Austin. His poster was titled, "Evaluating current recommended dose of enoxaparin in renally impaired and morbidly obese patients by monitoring anti-factor Xa levels." Abilene Assistant Professor Young Lee, Pharm.D., was his faculty advisor.

In addition, Craig Cox, Pharm.D., was one of 33 ACCP members to be inducted as ACCP Fellows at the same event. Members who receive ACCP Fellow status can be recognized by the initials FCCP as part of their title. The title is awarded to ACCP members who have demonstrated a sustained level of excellence in clinical pharmacy practice and/or research. Cox is an associate professor for the Dept. of Pharmacy Practice in Lubbock and serves as the SOP's vice chair for experiential programs.



*Abilene P4 Austin Ballew (far right) earned first runner-up at ACCP's Best Student Poster competition for 2014.*

*Craig Cox, Pharm.D., was named an ACCP Fellow at the group's 2014 Annual Meeting.*



## First Alumni Pioneers Scholarship awarded to Abilene student



*Lenamon*

For Abilene P2 Hannah Lenamon, the first recipient of the SOP'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, she was attracted to the health care field. However, the squeamish feeling Lenamon experienced around blood, severely ill people and hospitals counterbalanced that desire.

chemistry, enrolled in the Honors College and joined Gamma Beta Phi. Though she didn't graduate, she did complete her pharmacy pre-requisites and 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 SOP Alumni Pioneers Scholarship 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 honored to be assisted by the alumni who previously walked in her shoes during their time at the school.

"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."

"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, a native Texan, 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

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**SOP Alumni  
Pioneers Scholarship**



## SOP faculty earn TTUHSC President's Awards

At his 2014 State of the University Address, TTUHSC President Tedd L. Mitchell, M.D., recognized 22 faculty members from each TTUHSC school for their exceptional efforts in the clinic and the classroom. The honorees at the November event included six SOP faculty members:

- Vardan Karamyan, Pharm.D., Ph.D. (Dept. of Pharmaceutical Sciences/Amarillo) - Excellence in Teaching Award
- Brian Irons, Pharm.D. (Dept. of Pharmacy Practice/Lubbock) - Outstanding Clinician Award
- Jeanie Jaramillo, Pharm.D. (Dept. of Pharmacy Practice/Amarillo) - Excellence in Community Engagement Award
- Mary Klein, Pharm.D. (Dept. of Pharmacy Practice/Abilene), Kenna Payne, Pharm.D. (Dept. of Pharmacy Practice/Amarillo) and Harold Miller, Ph.D. (Dept. of Pharmaceutical Sciences/Abilene)- President's Award for Excellence in Interprofessional Teamwork.

*Karamyan*



*Miller*



*Irons*



*Jaramillo*



*Payne (far left)*

*Klein (front row, center)*



## Society of Toxicology recognizes SOP grad student



*Ranjan*

Thanks to the Society of Toxicology (SOT), the end of the year was fruitful for Alok Ranjan, a Ph.D. candidate in the Graduate Program in Pharmaceutical Sciences.

Ranjan, a research assistant for Sanjay Srivastava, Ph.D., in the TTUHSC School of Pharmacy's

Department of Biomedical Sciences, received a Graduate Student Travel Support Award in November from the SOT Awards Committee. The award consists of a \$1,000 stipend to assist with his travel expenses to attend the 54th Annual Meeting of the Society of Toxicology March 22-26 in San Diego.

In December, the SOT Awards Committee again contacted Ranjan, this time to inform him of his selection as the 2015 Syngenta Fellowship Award in Human Health Applications of New Technologies. He will receive the award in March while attending at the SOT Annual Meeting in San Diego.

The Syngenta Fellowship provides research funding to a third-year (or later) graduate student or postdoctoral trainee. The award supports mode-

of-action research aimed at characterizing dose-dependent effects of xenobiotics on mammalian systems in such a way that the causal sequence of key events underlying toxicity is made clearer.

As the 2015 Syngenta Fellowship recipient, Ranjan will receive a plaque, \$15,000 in fellowship funds and funds to travel to a Syngenta site to present his research.

The SOT is a professional and scholarly organization of more than 7,700 scientists from academic institutions, government and industry representing the great variety of individuals who practice toxicology in the U.S. and abroad.

Since its founding in 1961, the SOT has been committed to creating a safer and healthier world by advancing the science of toxicology. It promotes the acquisition and utilization of knowledge in toxicology, aids in the protection of public health and has a strong commitment to education in toxicology and to the recruitment of students and new members into the profession. For more information about SOT and toxicology, visit [www.toxicology.org](http://www.toxicology.org).

## TPPC completes 2014 Medication Cleanout collections

The Texas Panhandle Poison Center (TPPC) has completed its Fall 2014 Medication Cleanout cycle.

The collections kicked off with a Sept. 6 collection in Amarillo and continued in Pampa (Sept. 16), Lubbock (Sept. 27) and Abilene (Oct. 4).

Medication Cleanout seeks to prevent poisonings and stop the abuse that may result when old or unused medications are left around the home and improperly stored, prevent the misuse of leftover medications like antibiotics and pain medications and avoid environmental contamination.

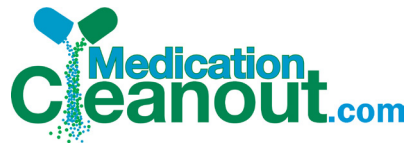
TPPC Managing Director Jeanie Jaramillo, Pharm.D., said Medication Cleanout provides communities a safe option for disposing unused medications and reducing poisoning and abuse risks.

“People are told not to flush these drugs or throw them in the trash because this may result in contamination of the water supply, but they are not really provided with alternatives,” Jaramillo said. “The Medication Cleanout events provide a safe and responsible alternative.”

This Fall, the Amarillo collection was the largest with 519 cars/participants dropping off 1,399 pounds of unused and unwanted medications. The Abilene collection netted 738 pounds (317 cars/participants), Lubbock took in 427 pounds (154 cars/participants) and Pampa collected 30 pounds from 13 cars/participants.

Including this latest round of collections, TPPC had conducted 35 Medication Cleanout events since September 2009. Those collections resulted in 20,229 pounds of unused medications being properly disposed.

“None of this would be possible without the support of the pharmacy school, our students, volunteers, law enforcement agencies and community supporters,” Jaramillo said.



**Fall 2014**

## Journal publishes study by SOP cancer researcher



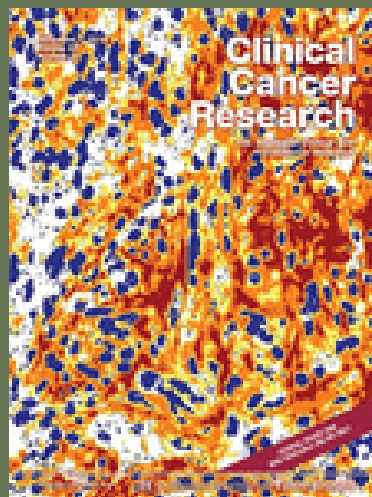
Wang

A manuscript describing research led by Ming Hai-Wang, M.D., Ph.D., was published in the Dec. 1 edition of *Clinical Cancer Research*, a journal published by the American Association for Cancer Research

that focuses on articles related to innovative clinical and translational research that bridge the laboratory and the clinic.

Wang is a professor for the SOP's Department of Biomedical Sciences in Amarillo.

The paper, titled, “Efficacy of Anti-*RON* Antibody Zt/g4-Drug Maytansinoid Conjugation (Anti-*RON* ADC) as a Novel Therapeutics for Targeted Colorectal Cancer Therapy,”



was also e-published Oct. 7 on the Clinical Cancer Research website.

The manuscript describes the first novel biotherapeutics known as antibody-drug conjugates (anti-*RON* ADC) targeting *RON* receptor for potential cancer therapy.

“The preclinical studies demonstrated that anti-*RON* ADC is highly effective in inhibition of tumor growth,” Dr. Wang said. “This lays the foundation for development of humanized anti-*RON* ADC for clinical trials.”

Wang said the work has resulted in a patent through TTUHSC for commercialization with pharmaceutical companies.



## ***IPSF a great way for pharmacy students to help others***

*By Angel Acosta, P4 (Abilene)*

This past summer I was able to attend the International Pharmaceutical Students' Federation (IPSF) 60th World Congress in Porto, Portugal. I was one of 18 U.S. pharmacy students to represent APhA-ASP at this event. I also campaigned for — and was elected — the IPSF chairperson for the Pan American Regional Office (PARO) by the IPSF general assembly.

PARO consists of North, Central and South American countries. The duties of the regional office chairperson are to direct general management of their respective regional office, initiate and develop the activities of the corresponding regional working group and help with the support and implementation of IPSF projects in the region.

The regional chairperson must also establish and maintain relations with student and professional organizations in their corresponding region in accordance with the IPSF Executive Committee and assist the IPSF Reception Committee in organizing corresponding regional symposiums.

The IPSF was founded in 1949 by eight pharmacy student associations in London. The federation now represents approximately 350,000 pharmacy students and recent graduates in 70 countries worldwide. This makes IPSF the leading international advocacy organization for pharmacy students promoting improved public health through the provision of information, education, networking and a range of publications and professional activities.

APhA-ASP is the Full Member Organization representing the United States to the IPSF. If you are a member of APhA-ASP, you are automatically a member of IPSF and no additional paperwork or dues is required.

IPSF holds official relations with the World Health Organization (WHO), operational relations with the United Nations Educational, Scientific, and Cultural Organization (UNESCO) and roster consultative status with the Economic Social Council of the United Nations (UN ECOSOC).

IPSF also collaborates closely with the International Pharmaceutical Federation (FIP). The IPSF Secretariat is supported and hosted by the FIP in The Hague, The Netherlands.

The IPSF World Congress is the biggest and the most important event of the Pharmacy Students agenda. For ten days, hundreds of students and recent graduates from all over the world get together to participate in several different activities, including leaders in training, symposia, workshops, public health campaigns and discussions about the past, present and future of the IPSF.

The IPSF Executive Committee is also elected every year during the IPSF General Assembly at the IPSF World Congress.

I would like to encourage TTUHSC pharmacy students to take advantage of these future IPSF events. Our 9th IPSF Pan American Pharmaceutical Symposium will be held June 16-22 in San Luis, Argentina. This regional event is for pharmacy students from the Americas and is a smaller version of the IPSF World Congress.

The 61st IPSF World Congress is scheduled for July 30- Aug. 9 in Hyderabad, India.

If you are interested in upcoming international student pharmacy events or want to learn about how you can get involved, please contact me by email at [angel.acosta@ttuhsc.edu](mailto:angel.acosta@ttuhsc.edu) or [chairperson@paro.ipsf.org](mailto:chairperson@paro.ipsf.org)

For more information about IPSF, please visit [www.ipsf.org](http://www.ipsf.org)

For more information about the 61st IPSF World Congress, please visit [www.ipsf2015.org](http://www.ipsf2015.org).



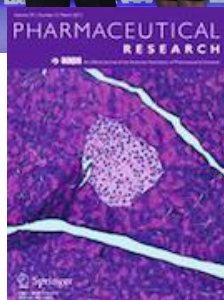
## SOP research team garners AAPS Meritorious Manuscript Award

The American Association of Pharmaceutical Scientists (AAPS) has selected a research team led by SOP Dean Quentin Smith, Ph.D., to receive its Pharmaceutical Research Meritorious Manuscript Award. The team was officially recognized Nov. 2 during the opening session of the AAPS Annual Meeting & Exposition in San Diego.

The award, presented by AAPS President Marilyn E. Morris, Ph.D., recognizes outstanding achievement by the author in the pharmaceutical sciences as demonstrated by the quality and originality of their manuscript published in *Pharmaceutical Research*, the official AAPS journal.



*From left: SOP Dean Quentin Smith, Ph.D., and research team members Ramakrishna Samala, Oh.D., and Joseph W. Polli, Ph.D., accept the Meritorious Manuscript Award from AAPS President Marilyn E. Morris, Ph.D., Nov. 2 in San Diego.*



Smith and his team received the award for their paper, titled, “Lapatinib Distribution in HER2 Overexpressing Experimental Brain Metastases of Breast Cancer.” It was published in the March 2012 edition of *Pharmaceutical Research*.

Smith’s research team includes Stephen Castellino, Ph.D.; Brunilde Gril, Ph.D.; Emily Hua, Ph.D.; Julie Lockman, Ph.D.; Paul R. Lockman, Ph.D.; Rajendar K. Mittapalli, Ph.D.; Diane Palmieri, Ph.D.; Joseph W. Polli, Ph.D.; Stephen D. Rubin, M.D.; Vinay Rudraraju, Ph.D.; Ramakrishna Samala, Ph.D.; Patricia S. Steeg, Ph.D.; Kunal S. Taskar, Ph.D.; and Helen R. Thorsheim, Ph.D.

## Experiential Programs premier second video installment

Associate Professor Craig D. Cox, Pharm.D., and the SOP’s Office of Experiential Programs rolled out the second installment of their 12-episode preceptor training video mini-series during an Oct. 7 premiere at the Alamo Drafthouse in Lubbock.

Cox, who also serves as vice chair for experiential programs, wrote and directed the knowledge-based video series to provide educational pearls to preceptors who train students or residents completing experiential rotations in an Interprofessional setting. The series was produced and edited by Studio 84 Productions.

The series follows three health professional preceptors including a nurse, pharmacist and physician as they precept their students in an ambulatory care setting. Each episode runs 5-8 minutes and builds upon the previous episode.

The latest offering uses a combination of inappropriate and quality interactions to demonstrate the values, ethics, roles and responsibilities necessary to

build competent interprofessional communication and teamwork. At key moments throughout each episode, two preceptor experts share insights about how they would deal with each learning situation that is presented. Each episode concludes with a minimum of two precepting pearls and requires participants to answer three short reflective questions.

All actors are faculty and students from the TTUHSC schools of pharmacy, nursing and medicine who volunteered to be a part of the innovative training series. The latest premiere attracted 115 viewers, including SOP Dean Quentin Smith, Ph.D., and TTUHSC President Tedd L. Mitchell, M.D.

The program can be accessed online at [ttuhsc.learningexpressce.com](http://ttuhsc.learningexpressce.com) and is available for continuing education credit. Registration is free for TTUHSC preceptors.

Cox and his colleagues are working on scripts for the third series — focused on community pharmacy and residency training — which they plan to produce in 2015.



*The crowd settles in for the premiere of the second installment of the Office of Experiential Programs’ second preceptor training mini-series Oct. 7 at the Alamo Drafthouse in Lubbock.*



## In case you missed it...

- SOP graduate student Mohammad Rashedul 'Rashed' Islam received a \$500 travelship award from the Natraceutical and Natural Products Focus Group of the American Association of Pharmaceutical Scientists (AAPS). He used the stipend, which is sponsored by Amway, for travel expenses when he attended the AAPS Annual Meeting and Exposition Nov. 2-6 in San Diego. Islam works in the laboratory of Thomas Abbruscato, Ph.D.

- Pooja Naik, an SOP graduate student, delivered a podium presentation Nov. 13-14 at the Lone Star Regional Chapter of the Society of Toxicology Annual Meeting in Austin. Her presentation was titled, "Tobacco Smoke Induced Inflammatory Response at the Blood Brain Barrier Endothelium: A Comparative Analysis of Full Flavor vs Reduced

Nicotine Products." Naik works in the Luca Cucullo, Ph.D., laboratory.

- Brian Irons, Pharm.D., (Dept. of Pharmacy Practice - Lubbock) was invited by the American College of Clinical Pharmacy to participate in a symposium held in conjunction with the Gulf Cooperation Council Pharmaceutical Congress in Dubai, United Arab Emirates. The symposium, held in September, was titled, "Clinical Pharmacy Services and Their Impact on Patient Outcomes: Focus on Diabetes Mellitus."

- Two faculty members from the SOP's Dept. of Pharmacy Practice in Dallas/Fort Worth (DFW) were recently elected to serve as officers for the Texas chapter of the American Society of Consultant Pharmacists. Amie Blaszczyk, Pharm.D., an associate professor was tabbed to be the

group's president-elect. Nakia Duncan, Pharm.D., an assistant professor, will serve as the chapter's DFW regional director.

- SOP 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, SD. 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.



Islam



Naik



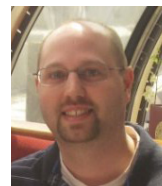
Irons



Blaszczyk



Duncan



Hellwig

## Getting to know...

### Iverlyn Peng

**Unit Coordinator - Residency Programs/Outcomes Assessment  
Dept. of Pharmacy Practice • Dallas (VA)**

Iverlyn Peng was born and raised in Taiwan. She says one of her dreams was to be able to study abroad and explore outside Taiwan, especially in the U.S.

After working for five years in Taiwan, Iverlyn moved to the U.S. and began making her dreams come true. She enrolled at the University of Texas at Arlington and graduated in 2006 with a M.S. in engineering management. Before going to work for TTUHSC and the SOP, she worked for several years in student and business support services.

Iverlyn lives in Arlington with her husband, Brian, and two dogs named Toby and Bebe.

"When I'm home I like to spend as much time as I can with Brian and our lovely dogs," she says.

Iverlyn enjoys traveling, and because her parents still live in Taiwan, she tries to go back as often as possible to visit them and other family members and friends.

She also likes gardening, listening to music and "exploring Texas for the best BBQ."



*When Iverlyn Peng and her husband aren't on the prowl for the perfect barbeque...*

*...they enjoy playing around at home with their canine friends, Toby and Bebe.*





# School of Pharmacy Photo Gallery



Leadership and teamwork were the top subjects when SOP students met at the Lubbock campus in October for the annual Student Leadership Conference.



Amarillo P3 Jacy Hodges helps a patient work through Medicare Part D options as part of Phi Delta Chi's Medicare Consultation Day Oct. 31 at the Amarillo Pharmaceutical Care Center.



Members, family and friends of the Student National Pharmaceutical Association and the Graduate Student Association of Amarillo represented the SOP at the American Heart Association's (AHA) October Heart Walk.



Abilene P4s Kelsey Van Gorkum (left) and Erica Wilson won the Double T Clinical Skills Competition in October. Dallas P4s Olga Shvarts and Jordan Light took second-place and Dallas P4s Sarah Turner and Jamie Morris finished in third place.



Vardan Karamyan, Pharm.D., Ph.D., (left) accepted the Top Fundraising Team award for the SOP at the AHA Heart Walk. P3 Ann Leung and P1 José Hernández also earned awards as the top individual fundraisers.



Jon Weidanz, Ph.D., (left) accepts a check for cancer research from an Edward Jones representative at the 2014 Tour de Ted event in Abilene. Edward Jones selected Abilene to host one of the nine 2014 Texas Tour de Ted events. Abilene selected the SOP's cancer research team, led by Weidanz and the Dept. of Immunotherapeutics and Biotechnology, as its beneficiary.



SOP student members of Kappa Psi and the Texas Pharmacy Association were interviewed by KFDA-TV in Amarillo for their efforts in collecting 724 pounds of canned goods (604 meals) for the High Plains Food Bank.

