Traditionally, compounded pharmaceuticals are quality checked through a “double-check” system where a second pharmacist does a paper check to ensure that compounded pharmaceuticals are prepared accurately. Unfortunately, the literature is replete with reports of compounding errors related to the use of the double-check method of quality control.

With that in mind, a team of researchers from the Texas Tech University Health Sciences Center (TTUHSC) School of Pharmacy, Cook Children’s Health Care System in Fort Worth and Children’s Medical Center in Dallas have been working to improve this practice that is so common to compounding and reduce the number of compounding errors.

The researchers proposed a novel approach to assuring the quality of compounded pharmaceuticals through the use of hand-held Raman spectrometers. The results of their project, titled “Raman Spectroscopy: A Sensitive and Specific Technique for Determining the Accuracy of Compounded Pharmaceutical Formulations,” was recently published in the Journal of Pediatric Pharmacology and Therapeutics (21:413-8, 2016).

Because the study findings drew the attention of the U.S. Food and Drug Administration (FDA), School of Pharmacy researchers Claudia Meek, Ph.D., Trey Putnam, Ph.D., and Richard Leff, Pharm.D., were invited to speak about the study and its findings Dec. 15 at the FDA headquarters in Silver Springs, Maryland. More than 50 FDA officials — including several FDA directors — were invited to attend the presentation, which was part of FDA’s Critical Path Innovation Meetings.

Putnam said these preliminary studies demonstrated that the novel technique provided “robust quantitative information on the identity and the concentration of the formulation’s components.” In conclusion, he added, the investigators found that utilizing hand-held Raman spectrometers as a quality control measure is accurate, quantitative, rapid and cost-effective.

“The dialogue during the meeting was robust,” Putnam said. “FDA is interested in watching the future directions of our research.”

Fourteen TTUHSC School of Pharmacy student members of the American Pharmacists Association-Academy of Pharmacy Students (APhA-ASP) attended the APhA Region VI Midyear Meeting Nov. 4-6 in Little Rock, Arkansas.

Krisgel Padolina, a third-year (P3) pharmacy student on the Dallas/Fort Worth campus and TTUHSC’s student chapter president, said the group was engaged at each session. Some stepped up to the microphone to address the room during an open session to discuss resolutions.

“Alexandria Ybarra (P3-Abilene) serves as an excellent regional delegate” Padolina said. “She exuded poise and confidence as she stood before the student body during the open session. She represented our school well.”

The TTUHSC School of Pharmacy group included five first-year (P1) students. Abilene P1 Ervin Lopez ran for regional delegate, and though he wasn’t selected, Padolina said Lopez described it as a valuable learning experience and he is making plans to run for a Region VI position next year.

“Overall I think attending the meeting was a success,” Padolina said. “The P1s realized just how exciting policy can be.”

Other students who attended included Abilene P1s Kelsie Basso, Justin Langreck, Viktoria Guttenberg and Nicole Asonganyi; Amarillo P1 Mimi Xuan Ngoc; Amarillo P2s Alex Parish, Christian Tulio, Samer Hadrous, Arsany Gadallah and Erica Dominguez; and Abilene P3 Tegan Jacobson.
A project prepared by members of the Texas Tech Student Society of Health-System Pharmacists student organization, also known as TTSSHP or Double T, won the Outstanding Professional Development Project Award Dec. 4 at the American Society of Health-System Pharmacists (ASHP) Midyear Clinical Meeting and Student Society Showcase in Las Vegas.

The award winning project, titled, “The Future Starts with Us: Promoting and Growing Advocacy at a Student Level,” was enacted by the 2015-2016 TTSSHP officer team. The project consisted of two law and advocacy sessions that sought to expose pharmacy students to legislative changes and current events that directly affect pharmacy practice.

The project’s first session was conducted during the fall semester and was presented by former School of Pharmacy faculty member Shane Greene, Pharm.D., who is currently serving as president for the Texas Society of Health-System Pharmacists (TSHA). Greene relayed to students the ways in which they can become actively involved in advocate positions at the local, state and national levels.

The second session was hosted in the spring semester and featured guest speaker Brad Shields, a TSHP lobbyist. Shields’ presentation provided an update to students regarding laws related to health care issues and highlighted new laws that are being considered and how they could impact the future of health care.

“The officer team of TTSSHP is very excited and honored to have received this award,” fourth-year (P4) Dallas/Fort Worth student and TTSSHP President Jennifer Hardcopf said. “We look forward to initiating and refining projects that will continue to benefit students of the TTUHSC School of Pharmacy.”

Members of the TTSSHP officer team who attended the awards ceremony with Hardcopf included P3 Hayley Brazeale, TTSSHP’s president-elect; P3 Lindsey Bartos, TTSSHP Lubbock liaison; and faculty advisors Kalin Clifford, Pharm.D., and Jennifer Grelle, Pharm.D.

Several other School of Pharmacy students also participated in events at the ASHP Midyear meeting, including P4s Brandi Dahl and Christina Tran, who competed in the National Clinical Skills contest. In addition five School of Pharmacy students participated in the ASHP Midyear poster presentations. The group included P3 Peia Lee and P4s Lauren Yancy, Sydney Kutter, Yasameen Nazemi and Darshil Dodhiya.

In November, Amie Blaszczyk, Pharm.D., officially began her two-year term as president of the Texas chapter of the American Society of Consultant Pharmacists (ASCP). During her tenure, she will work to advance the Texas ASCP chapter mission, which is to empower pharmacists to promote healthy aging through the appropriate use of medications. She will also lead the group’s advocacy and education endeavors and help ASCP expand its presence within all pharmacy schools in Texas.

In addition, Whitney Zentgraf, Pharm.D., an alumna of the School of Pharmacy’s PGY2 geriatric pharmacotherapy residency, received a Top 4 Poster award Nov. 4-6 at ASCP’s Annual meeting in Dallas. Zentgraf’s poster was one of 58 posters entered in the poster presentation contest. Her residency research, titled, “Anticholinergic Risk Score and Risk of Antipsychotic Prescribing in the Nursing Home Population,” focused on medication-related causes of antipsychotic prescribing.
AMARILLO HOSPITAL HONORS TTUHSC ALUM

Matt Tate, Pharm.D., a School of Pharmacy graduate from the Amarillo campus, was recently selected as the 2016 Mickey Dan Cornett Pharmacist of the Year by the Department of Pharmacy at Northwest Texas Healthcare System (NWTHS).

According to a story from the NWTHS website, NWTHS annually recognizes one pharmacy technician and one pharmacist with a Mickey Dan Cornett award. Honorees are selected from nominations submitted by their peers. The award was created in memory of Mickey Dan Cornett, a long-term staff pharmacist for NWTHS who is fondly remembered for his contributions to the pharmacy department.

Tate began his career at NWTHS in 2006 as a pharmacy technician. After graduating from the School of Pharmacy in 2013, he has worked as a pharmacist for NWTHS’s Adult Critical Care Services.

CPRIT EXTENDS PEDIATRIC BRAIN TUMOR GRANT AT TTUHSC IN AMARILLO

Each year, about 4,300 children are diagnosed with brain tumors in the United States. In fact, childhood brain tumors rank as number two killer among pediatric cancer patients, second only to leukemia. Trying to improve outcomes for these young patients is what drives researchers like Dr. Kalkunte Srivenugopal and his colleagues to spend long hours in the laboratory looking for answers.

Srivenugopal’s research at the Texas Tech University Health Sciences Center School of Pharmacy in Amarillo received a boost in November when the Cancer Prevention and Research Institute of Texas (CPRIT) named him a recipient of an Individual Investigator Research Award for Cancer in Children and Adolescents (IIRACCA).

The four-year, $1.23 million grant, titled, “BBB-penetrating redox-responsive smart drugs and exploiting the MGMT-driven S-phase checkpoint for chemotherapy of childhood brain cancers,” is a competitive renewal of a CPRIT grant Srivenugopal received in 2012.

“Our proposal received an outstanding rating,” Srivenugopal said. “Only seven applications out of 45 were selected in the IIRACCA category, so we are happy to obtain continued CPRIT funding for our research in these difficult times.”

Over the last twenty years, Srivenugopal said there have been marked improvements in the survival rates of patients with mild medulloblastomas, the most common type of malignant pediatric brain cancer that originates in the rear portion of the brain called the cerebellum. However, he said the outlook for children with other brain cancers in the brainstem and spine, called gliomas, has changed very little.

“Every pediatric brain tumor patient goes through chemotherapy using alkylating agents, which is often preferred to radiation because of the ill-effects of the latter on the developing brain,” Srivenugopal explained. “However, the treatment fails because these tumors have multiple genetic abnormalities, and malignant cells can escape the cytotoxic effects of drugs and develop resistance.”

Because chemo-drugs for brain cancers are scarce and have changed little over the years, Srivenugopal said there is a significant need to find new and more effective drugs.

“Drugs that can hit multiple targets simultaneously will be particularly useful,” he added.

With that goal in mind, Srivenugopal’s research seeks to discover targeted drugs for childhood brain tumors that will exploit the cell biology of a DNA repair protein known as MGMT for chemotherapy using agents specific to the S-phase, which is the DNA synthesis phase of a cell’s cycle. His research will help to initiate clinical trials using new drugs.

In addition, Srivenugopal said the MGMT repair protein has been found to have non-repair functions in DNA replication, which means inhibiting MGMT activity can reduce the scope of DNA synthesis.

“This finding provides us a new strategy: combining the MGMT inhibitors with drugs that curtail DNA synthesis to achieve brain tumor regression,” he added. “We will synthesize novel amino acid-linked and brain penetrating S-phase-specific drugs and test all compounds in cell culture and brain cancer models. Our efforts represent a major step forward in pediatric brain tumor management.”

For more information about the research underway at the TTUHSC School of Pharmacy, visit www.ttuhsc.edu/sop/research/.

PHARMACY TEAM ADVANCES TO NATIONAL COMPETITION

Second-year pharmacy students Edward Bergman, Austin Crissman and Russell Neill teamed up Jan. 18 to win the local round of the American College of Clinical Pharmacy (ACCP) Clinical Research Challenge. The local competition included 11 three-member teams comprised of first- and second-year pharmacy students from the TTUHSC campuses in Amarillo and Abilene.

Their first-place finish means Bergman, Crissman and Neill will advance to ACCP’s Online Journal Club competition Feb. 6 and compete against other pharmacy school teams from across the country. The top 40 teams from the online journal club round advance to the second round of ACCP’s National Clinical Research Challenge. The top 20 teams second round teams will advance to the third and final round, where they will draft full research proposals. The full research proposals will be evaluated from April 17 – June 2 and winners will be announced June 5.
PHARMACY RESEARCH STUDENTS TO BE HONORED AT BALTIMORE MEETING

A group of TTUHSC-Amarillo graduate students working toward their Ph.D. as research assistants for the School of Pharmacy’s Graduate Program in Pharmaceutical Sciences each received a travel support award to attend the Society of Toxicology’s (SOT) 56th Annual Meeting March 12-16 in Baltimore. The group includes Nehal Gupta, Mohammad Abul Kaisar, Hanumantha Rao Madala and Kshitij Verma.

In addition, abstracts submitted by Gupta, Madala and Verma also received high marks from the 2017 Dharm V. Singh Carcinogenesis Awards Fund. The awards are based upon an excellence in understanding carcinogenesis and will be presented March 15 during the Carcinogenesis Specialty Section reception at SOT’s Annual Meeting. Gupta was named the first place graduate student honoree, Madala took home the second place graduate student award and Verma’s submission was named the fourth place graduate student entry.

Gupta was also selected to receive the 2017 Sheldon D. Murphy Mechanisms SS Student Travel Endowment Award. Qualifications for the award are based upon the scientific quality of the applicant’s abstract. The award and a certificate will be presented to Gupta March 14 at the Mechanisms Specialty Section reception during SOT’s Annual Meeting.

Each year, the SOT Awards Program recognizes scientists who are making a positive impact on the field of toxicology. The awards honor individuals from all career levels and generally consist of a stipend or financial support for research.

Gupta is working in the lab of Dr. Sanjay Srivastava, Ph.D.; Madala works in the lab of Kalkunte S. Srivenugopal, Ph.D.; Verma works in the lab of Paul Trippier, Ph.D.; and Kaisar works in the lab of Luca Cuculio, Ph.D.

TEXAS PANHANDLE POISON CENTER ACHIEVES REACCREDITATION

The Texas Panhandle Poison Center (TPPC), hosted by the Texas Tech University Health Sciences Center School of Pharmacy in Amarillo, has achieved re-accreditation through 2023 from the American Association of Poison Control Centers (AAPCC).

TPPC, which also undergoes annual compliance reviews, is required to go through re-accreditation every seven years to ensure it provides quality services and to secure federal funding. To achieve accreditation, TPPC and all other poison centers undertake an extensive peer-review process that includes a review of policies, procedures, call management efforts to educate the public and health care providers, in the context of nationally recognized standards for poison control centers.

“For severe and unusual poisonings, poison centers serve as a free resource to both the public and health care providers,” TPPC Medical Director Thomas Martin, M.D, said. “Also, physicians who are managing poison cases may consult with board-certified medical toxicologists by using poison center services.”

TPPC Managing Director Jeanie Jaramillo-Stametz, Pharm.D, said Texas poison centers save the public, insurers and other payers millions of dollars each year by providing assistance over the phone and preventing unnecessary emergency room visits.

“There are types of poison exposures in which a patient needs to go to the emergency room, but with a majority of poisonings, our trained medical staff can manage patients at home without the expense of going to an emergency room,” Jaramillo-Stametz said.