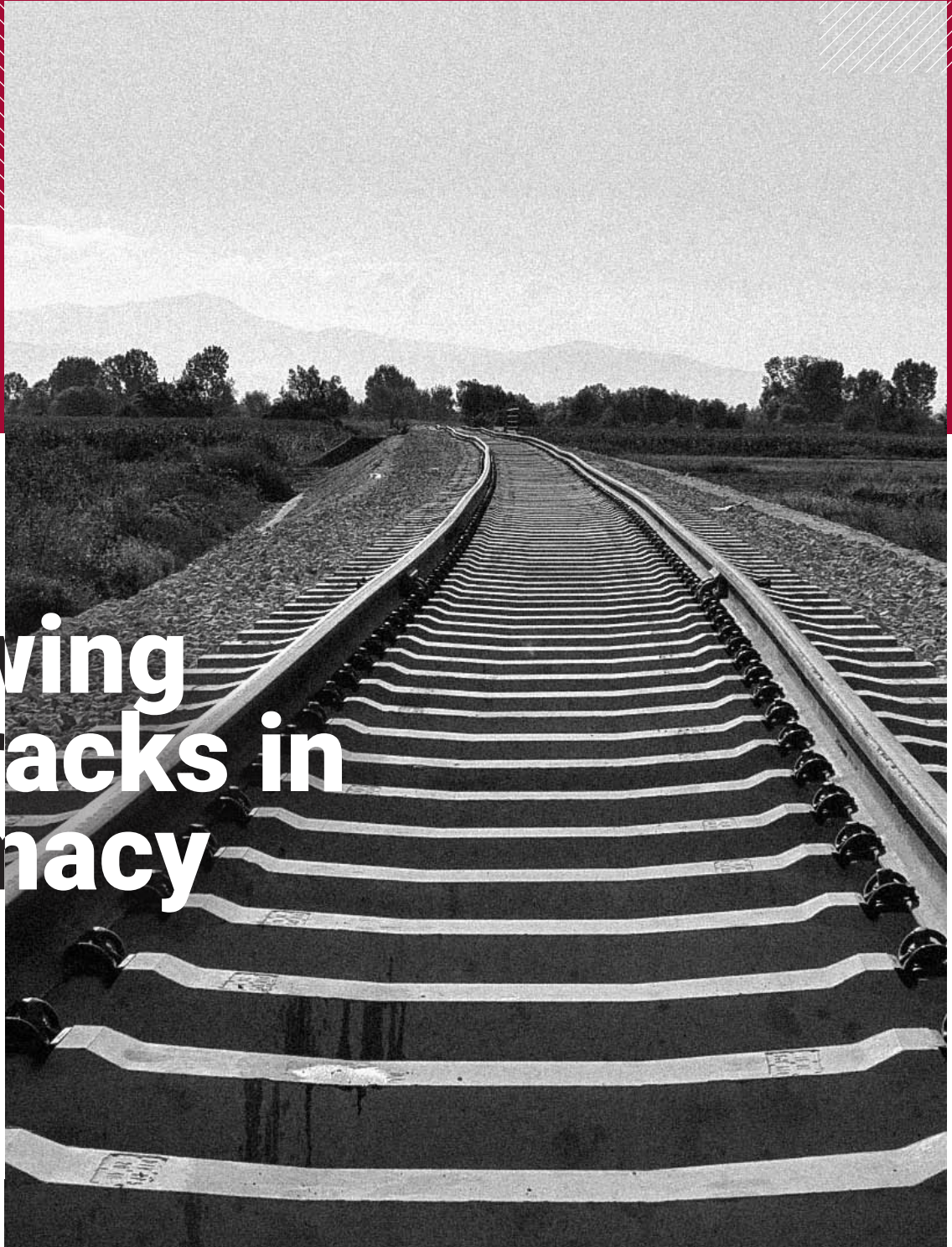


WINTER 2022-2023

OU Pharmacy



•

Following the Tracks in Pharmacy

Page 5



COLLEGE OF PHARMACY
The UNIVERSITY of OKLAHOMA HEALTH SCIENCES CENTER



Content

Winter 2022-2023

23

Welcome
Class of
2026



P/05 Following the Tracks in Pharmacy

P/14 Exceeding Industry Standards for Nuclear Pharmacy

P/17 A Prescription 4 Wellbeing Program

P/19 LEAD ON: The University of Oklahoma's Campaign for the Future

P/21 Creating and Recreating Connections for Future Pharmacists

P/25 Clinical Pharmacy Challenge at Global Conference

P/26 College Highlights

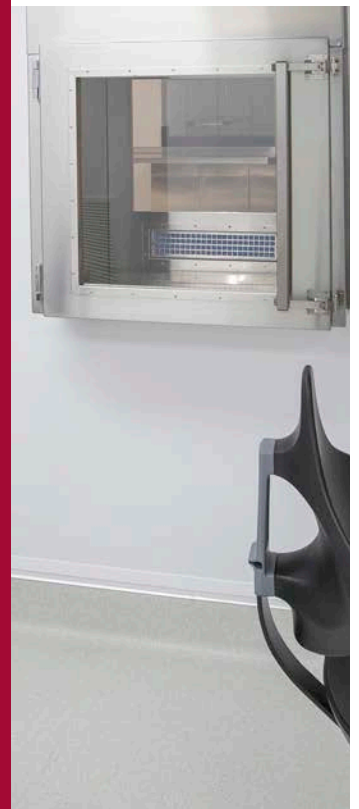
P/28 Advancing Research Related to Liver and Metabolic Diseases

P/30 Current Grants List

P/32 The Definition of Patient Care Is Constantly Changing

P/34 2022 Alumni Award Recipients

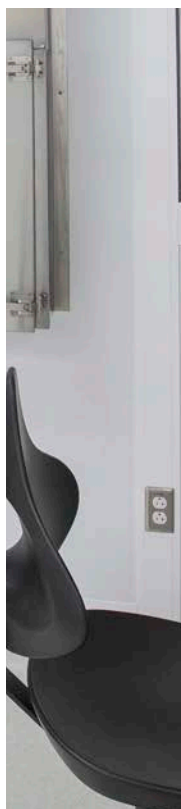
Back Cover Adrenaline Run 2023



14

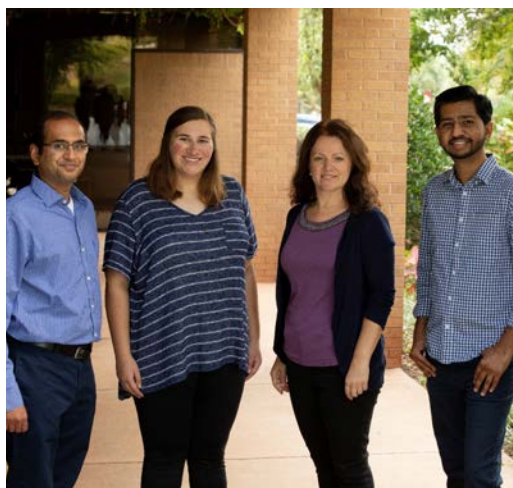
Exceeding
Industry
Standards
for Nuclear
Pharmacy





28

Advancing Research Related to Liver and Metabolic Diseases



COLLEGE OF PHARMACY
The UNIVERSITY of OKLAHOMA HEALTH SCIENCES CENTER

PHARMACY MAGAZINE
A publication of OU College of Pharmacy
Winter 2022-2023

President, University of Oklahoma
Joseph Harroz, Jr.

Senior Vice President and Provost
OU Health Sciences Center
Gary E. Raskob, Ph.D.

Dean, OU College of Pharmacy
JoLaine R. Draugalis, R.Ph., Ph.D.

Contributing Editor
Paula Meder

Photographer
Simon Hurst Photography

Art Direction and Design
Austin Childers, Oklahoma City

PHONE NUMBERS;
DEAN'S OFFICE: (405) 271-6484
OFFICE OF STUDENT AFFAIRS:
(405) 271-6598

WEBSITE: pharmacy.ouhsc.edu

TO UPDATE YOUR ADDRESS:
Please go to
pharmacy.ouhsc.edu/alumni/update-your-info
Or call (405) 271-6484

POSTMASTER
Send address changes to:
Office of the Dean
OU College of Pharmacy
1110 N. Stonewall Ave.
Oklahoma City, OK 73117

OU College of Pharmacy is published annually by the University of Oklahoma College of Pharmacy. Copies have been prepared and distributed at no cost to the taxpayers of the state of Oklahoma.

The University of Oklahoma in compliance with all applicable federal and state laws and regulations does not discriminate on the basis of race, color, national origin, sexual orientation, genetic information, sex, age, religion, disability, political beliefs, or status as a veteran in any of its policies, practices or procedures. This includes but is not limited to admissions, employment, financial aid and educational services. For questions regarding discrimination, sexual assault, sexual misconduct, or sexual harassment, please contact the Office(s) of Institutional Equity— University of Oklahoma, Norman campus at (405) 325-3546/3549, University of Oklahoma Health Sciences Center at (405) 271-2110 or the OU-Tulsa IX Office at (818) 660-3107. Please see www.ou.edu/eoo.

For accommodations or more information, please contact Rita Pierce, assistant to the dean, at (405) 271-6485.



Executive team at OU College of Pharmacy include (first row: Eric J. Johnson, Melissa Medina, JoLaine Draugalis, Kelly Standifer; second row: R. Chris Rathbun, Vincent Dennis, Nathan Shankar, Jamie Miller, Michael J. Smith. Not pictured: Vibhu Awasthi).

Learn From Yesterday; Never Stop Questioning

In many ways, this past year seemed long. We started looking at the possibility of what it would be like not to wear masks at the college at the beginning of the year. Many of us took advantage of booster shots to hedge our protection against COVID. We were somewhat despondent as the news channels informed us of new variants.

But in the midst of such uncertainty, we also looked at each other and questioned how we can inspire each other and aspire to grow. We lived into our tagline, "A prescription for inspiration."

Our nuclear pharmacy was in critical need of updating in order to operate within current guidelines and standards. We boldly looked at an empty building on campus and started remodeling. This updated facility meets industry standards and allows us to provide much needed services for Oklahoma hospitals and medical facilities

The college offers several specialty tracks for our students. In the past 10 years, 312 students were enrolled in one of six different tracks and these graduates entered the workplace armed with valuable skills that impact their sphere of influence. There is definitely hope for tomorrow.

Our faculty question how they can hone their teaching skills and techniques and increase research productivity. They have been recognized by their peers, both locally and nationally. I am proud of their tenacity and applaud every effort. We have, as a college, reviewed our strategic plan with a look toward the next five years.

Albert Einstein said, "Learn from yesterday, live for today, hope for tomorrow. The important thing is not to stop questioning." At your OU College of Pharmacy, we are actively involved in this quest.

Sincerely,

JoLaine R. Draugalis

JoLaine R. Draugalis, R.Ph., Ph.D., F.A.Ph.A., F.A.S.H.P.
Edith Kinney Gaylord Presidential Professor
Dean and David Ross Boyd Professor
Regents'© Professor
Phil C. and Fern Ashby Endowed Dean's Chair

Following the Tracks in Pharmacy

Featuring Nuclear, Research, Pediatric, Leadership, and Ambulatory Care Degree Track Options.

Through degree options and specialty tracks, the University of Oklahoma College of Pharmacy provides a unique opportunity for students to develop pharmacy practice skills within special patient populations, develop general leadership skills or research skills supporting college efforts to stimulate interest in continued education, discovery and professional development after graduation.



Each option or track consists of at least 16 hours composed of a minimum of eight hours of focused, advanced professional pharmacy experiences (rotations) and eight hours of elective didactic coursework approved for the specific track. Specific requirements may vary by option or track. For example, the ambulatory care track can be either 7 hours didactic with 3 rotations, or 9 hours didactic with rotations. For these options, one of the rotations must be research.

At OU College of Pharmacy, there are five active specialty tracks available to interested students. These tracks or degree options have been formed over the past 10 years with 313 students participating. From 2012-2018, there were 10 graduates of the psychiatric pharmacy track, directed by Dr. Nancy C. Brahm. We're pleased to provide an update on each of the active tracks.

Nuclear Track Option

The inaugural nuclear track option started in 2011 and Dr. Wendy Galbraith was installed as its director. Since then, 44 students have completed the track and Dr. Galbraith has remained as director. This track has seen 17 students choose nuclear pharmacy as their career, while three students chose residencies, two obtained fellowships, one student advanced to a Ph.D. program, and one student currently works for the National Cancer Institute. The number of total board-certified nuclear pharmacists that are OU grads is approximately 6%.

Currently, six P4s within the track option will graduate in May 2023, and seven P3s are starting the didactic portion of the track.

The nuclear track option at OU provides an excellent introduction to incoming students. Because of this option, there has been expanded development within the OU Health Sciences Center nuclear pharmacy operations with student-led patient case discussions. In addition, in this track option, students assist with quality systems evaluations within the OU Health nuclear medicine departments. The one-month, nuclear medicine, patient-centered clinical environment experience is the only such experience in the U.S. from a college of pharmacy program. We know that this

interaction increases collaborations between departments and that these interactions have been pivotal for clinical trials. OU Health nuclear medicine departments have had five clinical trials since sponsorship and credentialing of a nuclear pharmacist within the nuclear medicine department began in 2011.

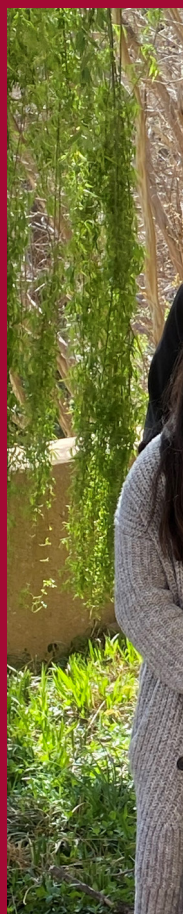
To date, the nuclear track option has produced 24 research-contributed poster or oral presentations with three peer-reviewed publications. Because of outstanding work from the college's experiential office, many P4s were competitive enough to engage in their advanced pharmacy practice experience in places other than the OU Health Sciences Center nuclear pharmacy (these sites include London, Tulsa, Dallas, Los Angeles, Denver, University of Washington-St. Louis and Swansea in Wales).

Ten students have earned a national Cardinal Health summer internship, eight students received a national GE Health summer internship (now Radio Life Sciences - RLS), and one student received a summer internship with Nutech, located in Texas. The National Association of Nuclear Pharmacies has awarded \$1,000 each to six students for outstanding national student performance.

The first Student Society of Nuclear Pharmacists organization, a university-recognized group, started in 2021 with leadership from the upcoming graduating class of 2023.

The Student Society of Nuclear Pharmacists on the OUHSC campus plans to collaborate with five other university nuclear student organizations (University of Arkansas for the Medical Sciences, University of New Mexico, University of Tennessee, University of North Carolina, and Purdue University). With increased development of the SSNP organization at the college, it is anticipated that there will be an increase in student leadership within the American Pharmacists Association-Academy of Pharmacy Practice and Management Nuclear Special Interest Group as students and as alumni.

Dr. Wendy Galbraith, nuclear track director (left back row), with three NANP2022 scholarship awardees: Elizabeth Rayes '23, Jenny Cosby '22 and Adam Lin '23.



Research Degree Option

The research degree option was approved by the OU Board of Regents in 2017 and the first cohort of four students was admitted in 2018. Dr. Nathan Shankar has been the director since its planning and inception.

This degree option provides interested professional students an opportunity to engage in research with a faculty mentor in an area of their choosing. This program is among only a few across the country and thereby puts the college on a competitive level in this area. Students with prior research experience or even those without any experience can learn fundamental elements of being productive as a



Clark Moehlenbrock
Pharm.D.

researcher. Their involvement could earn them a presentation at a meeting or conference or have their name listed as a co-author on a manuscript. These experiences can be added to their resume and thereby make them more competitive for residencies and fellowships.

For college faculty, this degree option provides a unique opportunity to mentor a professional student in research methodology. Likewise, the program

allows an avenue for new faculty, who may not have established research programs but have small project ideas, an opportunity to explore these ideas with student engagement.

"We hope to attract more students and faculty mentors to the advantages of involvement with this track each year," Dr. Shankar said.

Clark Moehlenbrock, Pharm.D., (Class of 2021) PGY2 Oncology, Norton Cancer Institute, reflects on his involvement with the research degree option at OU.

"This fall, I started my PGY2 in Oncology at Norton Cancer Institute in Louisville, Kentucky, after completing my PGY1 within the same health care system. During my time in the research track at OU, I met one of my favorite lifelong mentors, Dr. Hibah Awwad. She encouraged me to achieve my goals, especially my goal to teach pharmacy. In my second year of pharmacy school, I became a Walmart Scholar (2019), thanks in a large part to my mentor. Beyond meeting her, the research track led to a better foundational knowledge of pharmacy literature and research, which has been helpful during my residency experiences. My future goals include becoming a board-certified oncology pharmacist, establishing my practice as an ambulatory oncology pharmacist and teaching oncology at a college of pharmacy."



Pediatric Degree Option

Dr. Peter Johnson has been in a leadership position with the pediatric degree option program since 2010; from 2010-2016 he served as the co-director and then accepted the role as director in 2016. To date, there have been 52 graduates. There are currently three P4s and three P3s enrolled in the program.

As part of the current track requirements, students are required to complete three advanced pharmacy practice experiences. Two APPEs are rotations in which the students provide direct patient care under the supervision of faculty or adjunct preceptors. This care involves numerous pediatric patients either in the inpatient or outpatient setting. In either setting, our students have been involved with patient counseling, pharmacokinetic and parental nutrition consultations, and provided numerous recommendations for optimization of drug therapy in pediatric patients in both Tulsa and Oklahoma City.

Students in the pediatric track have also been involved in quality improvement and research activities devoted to help improve the efficacy and safety of medications in pediatric patients. Given the ethical considerations of research in pediatric patients, there remains a lack of rigorous studies evaluating medication

therapy in children. It is estimated that at least 36% of medications do not have a Food and Drug Administration-approved indication in children. As a result, there is a need for ongoing studies to provide data on efficacy and safety of medications in pediatric patients. One of the aspects the faculty and adjunct preceptors involved within the PDOP program are most proud of is their involvement in non-patient care activities focused on quality improvement and research of medication therapy. Since 2010, students have been involved in 13 quality improvement projects and 52 institutional review board studies. These projects have resulted in 29 peer-reviewed manuscripts, 61 poster presentation/published abstracts and three platform presentations. In addition to this, five students have received either local or national awards as a result of their research project.

This track has been instrumental in providing students with opportunities for furthering their career. Though not a requirement of the program, several students have gone on to pursue post-graduate training. To date, 23 of the 52 graduates have completed a post-graduate year one residency, with the majority completing this residency in a children's hospital or a health system that cares for pediatric patients. Eleven of these 23

(47.8%) graduates have also completed a post-graduate year two residency in pediatrics or completion of another specialty. The remaining graduates have chosen careers in the community setting (n=17; 32.6%), health system setting (n=8; 34.7%), and other (n=7.7%).



Sin Yin Lim, Pharm.D., M.S., assistant professor, Department of Pharmacy Practice and Translational Research Division at the University of Wisconsin-Madison School of Pharmacy, commented about his experience with the pediatric track.

"One of the highlights of my postgraduate experiences is the opportunity to work with Drs. Pete Johnson and Jamie Miller. They are recognized leaders in the field of pediatric pharmacy who constantly try to identify ways to improve the status quo through research. Their dedication to the field has inspired me deeply.

During my postgraduate training, we completed several research studies, which were later published in medical/pharmacy journals. The positive impact our research studies had on treating pediatric patients have motivated me to choose my current position. In 2020, I started my position as an assistant professor at the University of Wisconsin-Madison School of Pharmacy. I continue to focus my research efforts on

improving pediatric drug therapy,” Dr. Lim said.

The PDOP also serves as a template for faculty at other colleges of pharmacy. Pediatric faculty have presented four poster presentations and published abstracts at national meetings and published a description of our program and a survey of PDOP graduates.¹ There has also been the

opportunity to share our experiences with faculty at the American Association of the Colleges of Pharmacy at programming for the annual meetings and webinars devoted to curricular tracks. Many pediatric faculty members across the country have utilized the information from our experiences to help develop a program of specialization of their own.

¹(Johnson PN, et al. *Curr Pharm Teach Learn.* 2019; 11:1296-1302 and Johnson PN, et al. *Curr Pharm Teach Learn.* 2018;10:627-36).

Leadership Degree Option

What started as an idea from the College of Pharmacy National Advisory Board for the College to offer an elective course in leadership began the creation of a premier leadership education and development program for pharmacy students. The Leadership Degree Option, affectionately known as the LDO, was the first elective track in the college to receive designation as a degree option program by the OU Board of Regents. The objective of the LDO is to provide leadership development for future health care professionals in order to equip them with the knowledge, skills and attitudes necessary to assume the roles of leaders, change agents and advocates in an ever-changing health care environment. The overarching goal of the LDO is to increase one's capacity to build relationships.

The LDO is a three-year program consisting of nine hours of classroom didactic coursework and two-month-long advanced practice experience rotations in leadership. During the P2 and P3 years, students in the LDO complete a series of courses designed to increase one's leadership capacity and includes content on self-awareness and individual development planning, team dynamics and dysfunctions of a team, behavior change and the neuroscience of behavior change, and leading change in organizations. A distinguishing feature of the LDO is coaching that is integrated within the program in which faculty who are certified health, wellness and leadership coaches provide one-on-one coaching to every student in the LDO. In the P4 year, students in the LDO complete a leadership APPE rotation in

September in which the cohort completes numerous activities together that require application and practice of the leadership topics covered in the didactic courses. In addition to the September cohort leadership APPE, each student in the LDO completes an individual leadership APPE of his/her choosing. Various individual leadership APPE options stem from numerous partnerships established between the college and external partners over the years, and include rotations in: corporate or local retail chain pharmacy leadership; independent pharmacy ownership, leadership and management; hospital pharmacy leadership and management; federal government health care leadership (including military, VA, CDC and FDA); professional pharmacy organization leadership;

pharmaceutical industry leadership; non-profit organization leadership training; contract research organization leadership; and prescription drug wholesaler and distributor leadership.

The inaugural LDO cohort included seven students and was the first cohort to graduate from the LDO program in 2013. Over the years, the LDO has grown in popularity and numbers of graduates. With the cohort class of 2022, the College of Pharmacy achieved a significant milestone in celebrating its 10th cohort to graduate from the LDO Program that included 29 students, which accounted for over 50% of the Pharmacy Class of 2022. A component of the LDO Program is each cohort chooses a cohort name and creates a cohort covenant that reflects the uniqueness and identity of its members. The history of cohorts that graduated from the LDO Program include:

Magnificent 7 – Class of 2013
Legends – Class of 2014
Nexus – Class of 2015
Legacy – Class of 2016
The Odyssey – Class of 2017
Atlas – Class of 2018
Pillars – Class of 2019
Phamily – Class of 2020
Stormbreakers – Class of 2021
COHORT-19 – Class of 2022

To date, a total of 173 pharmacy students have graduated from the LDO. Several graduates have gained leadership opportunities in their places of employment, pur-

sued Ph.D. degrees, and completed post-graduate residencies and fellowships.

The LDO has been a source of scholarship related to pharmacy leadership education, producing five published manuscripts and four abstracts. The LDO received national attention when the College received the CVS-Health Caremark Corporate Giving Program award to create a Pharmacy Leadership Institute and expand the leadership offerings of the college.

Michael J. Smith, Ph.D., R.Ph., NBC-HWC, FAPhA, associate dean, OU College of Pharmacy, serves as director of the track option, and works with other faculty members in continuously evolving and delivering the LDO.

A recent graduate of the LDO commented, "I joined the leadership track because, to be an effective pharmacist I felt being an effective leader was critical. The track has helped me form better relationships, both personal and professional. I would tell anyone looking at the leadership track to be prepared to work hard and to learn a great deal about yourself. The most beneficial thing about the leadership track for me was learning to set goals properly and work with a team to get those goals accomplished. We all know that working on a team can present tremendous challenges, but the skills I've acquired through the leadership track were

instrumental in all of the team activities."

Another commented, "The leadership track has helped me communicate more effectively with professionals by giving me opportunities to meet with influential leaders in the industry and pushing me to join events or organizations I am passionate about. It has also pushed me outside my comfort zone by helping me discover the ways I am able to influence, despite being an introvert. I know how to better manage conflict in team settings and how to build strong teams, which I know I will use daily in my professional life."

COHORT-19, the 2022 senior leadership degree class



Ambulatory Care Degree Track Option

Dr. Katherine O'Neal has been in a leadership position with the ambulatory care degree option program since 2014; from 2014-2021 she served as the co-director and then took the role as director in 2021. To date, there have been 29 graduates. There are currently two P4s and two P3s enrolled in the program.

As part of the current track requirements, students may elect two different track paths. The first path includes completion of three advanced pharmacy practice experiences. Two APPEs are rotations in which the students are in direct patient care settings within an ambulatory care practice setting. These ambulatory care rotations are above the standard requirements for fourth-year students. The students may be involved with chronic care management either through direct or indirect patient interactions, patient

disease state education, or providing consultative services to physicians in a primary care setting. This path also requires completion of 7 didactic hours of coursework with courses related to ambulatory care. The students have several courses to choose from, of which, two electives are required. The required electives

are Ambulatory Care and Advanced Diabetes. This course provides a foundational understanding of what ambulatory care is and the role of a pharmacist in ambulatory care setting. The second path option requires the completion of two APPEs along with 9 didactic hours of course work. One of the two APPEs is within ambulatory care settings.

Students in the ambulatory care track also participate in research. This research experience can begin as early as their admission into the track, or it can wait until their fourth year. Each student has to have one APPE rotation dedicated to research. Those projects that begin earlier than the fourth-year rotations tend to be larger projects allowing the students to be involved with quality improvement or prospective qualitative or quantitative projects. This experience gives students the opportunity to receive IRB training and, depending on the scope of the project they work on, experience with research documents such as developing an IRB protocol, consent forms, data collection forms and surveys. Students then have the opportunity to present a poster presentation at a local, state or national conference and complete a manuscript for publication.

This track has provided students with experiences that have helped them obtain post-graduate training opportunities or careers within ambulatory care.



Post-graduate training is not required of the program, but to date, 16 of the 29 graduates have completed a post-graduate year one residency. One student went on to pursue his Ph.D. training specializing in pharmacy administration. Seven of these 16 (44%) graduates have also completed a post-graduate year two residency.



Gold Xiong, population health pharmacist at Saint Francis Hospital in Tulsa, Oklahoma, commented about her experience with the ambulatory care track.

“The ambulatory care track carved the way for my career path. It allowed me to obtain a residency at my No. 1 choice, which had strong ambulatory care focus. This further allowed me to obtain a job as the first pharmacist in the population health department at my facility. We are quickly expanding this role, and I believe this would not have been possible without this track.”



Another college graduate, Hunter Stout, PGY1 pharmacy practice resident at the University Medical Center of El Paso in El Paso, Texas, commented, “The ambulatory degree track was extremely beneficial to my growth and development in ambulatory care pharmacy. Through this track, I learned key skills relating to ambulatory care, such as how to set up a collaborative practice agreement, challenges facing patients in outpatient care, and how to stay up to date on current literature and guidelines. This track allowed me to have additional APPE rotations in ambulatory care and gain a wide variety of experiences that I have used in my current pharmacy career as a PGY1 resident at the University Medical Center of El Paso. I would highly recommend this track to anyone with a desire to pursue a career in ambulatory care as it will train and provide you with many unique experiences that you can use in residency and your future practice.”

Combining Pediatrics With Toxicology: The Best of Both Worlds

When I entered the University of Oklahoma College of Pharmacy, I only knew about retail pharmacy, so of course I aspired to be a retail pharmacist in an independent pharmacy after graduation. This all changed during my second semester of my first year of pharmacy school when I enrolled in the Drug Information Systems course.

The course coordinator at the time was Dr. Tracy Hagemann. She was a pediatric pharmacist, and she specialized in pediatric oncology. She made her job sound so exciting and rewarding. She opened my eyes to the world of clinical pharmacy and specifically pediatric clinical pharmacy. I knew at that time, that I wanted to be like her. Midway through the semester, I decided to send her an email and ask if I could possibly shadow or help her with research. She immediately took me under her wing and showed me the ropes of clinical pediatric pharmacy, and I was able to assist her with many pediatric research projects along the way. She created pediatric research electives for me, so that I could work on my research projects with her and obtain elective credit. I also took two semesters of the pediatric



Kristie Edelen, Pharm.D.

elective that was offered at that time. When it came time for me to graduate, she noticed that all my elective credit hours were pediatric-related, and she submitted paperwork that would allow me to graduate with a pediatric track.

Subsequently, during that first year of pharmacy school, I started working at the Oklahoma Center for Poison & Drug Information, known at that time as the Oklahoma Poison Control Center. I worked at the poison center for three years while I pursued my doctor of pharmacy degree. Upon graduation, I knew that I had two passions within the world of pharmacy: pediatrics and toxicology. I chose to complete post-graduate residency training

at The Children's Hospital at Saint Francis in Tulsa. The fundamentals that I learned from the pediatric track were paramount in helping me to be a successful resident at the hospital.

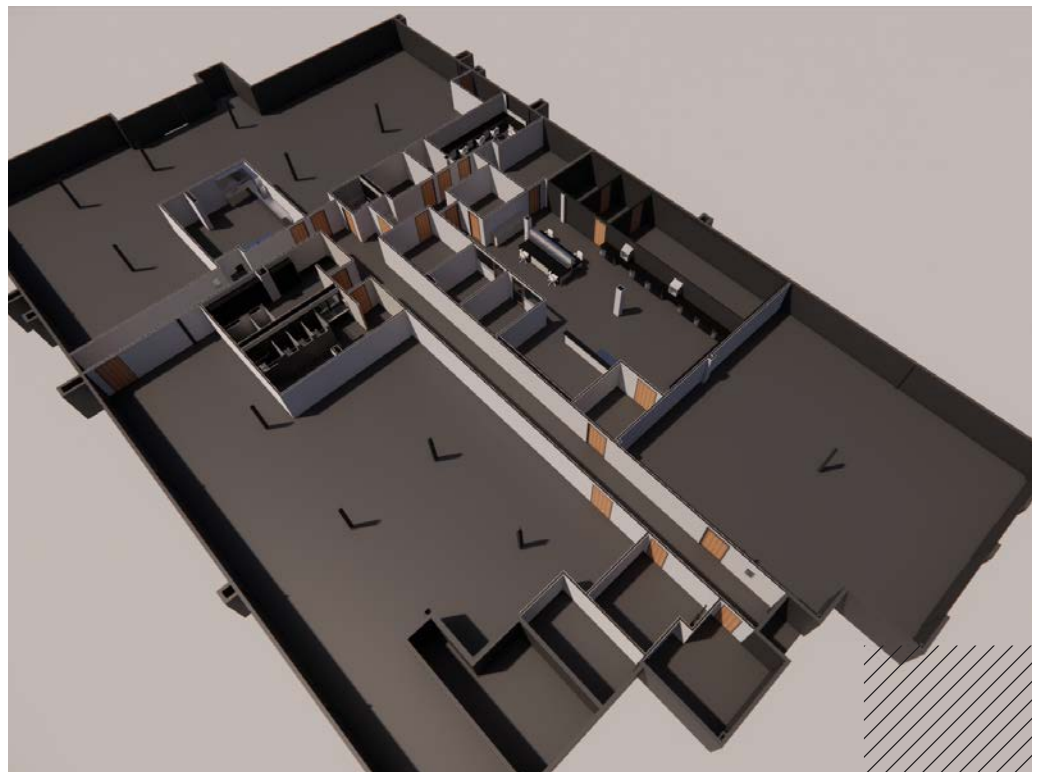
Upon completion of my PGY-1 residency, I had several career opportunities available to me, but I knew that I really wanted to go back to the poison center and use my training in pediatric pharmacy and apply it to the world of toxicology. I now have been back at the poison center for 10 years. I get to wake up every morning and come to a job that I love. In my job as the assistant managing director of the poison center, I get to use my skills and training in both pediatrics and toxicology every day. We train healthcare

professionals in toxicology by providing a clinical toxicology rotation to pharmacy students, nursing students, paramedic/ EMT students, medical residents, pediatric emergency medicine fellows and emergency medicine residents. I love getting to teach students and residents what I have learned through the years in pediatrics and clinical toxicology. It is a very rewarding feeling when a student or resident who has had a rotation at the poison center reaches out to let me know that they saved someone's life because of the clinical toxicology skills they learned during their clinical toxicology rotation.

I know from my own personal experience that the pediatric track can aid pharmacy students in their pediatric professional career and assist students in strengthening their pediatric knowledge. I commend the pediatric faculty or "Peds Posse" for all they do for the students at the OU College of Pharmacy, and I personally thank everyone for all they did for me as a student. I would encourage any pharmacy student interested in pediatrics to consider the pediatric track option. They will benefit from the pediatric faculty's extensive expertise on pediatric-related topics, but also gain advice on how to navigate future pharmacy endeavors.

- Kristie Edelen, Pharm.D., DABAT, assistant managing director, Oklahoma Center for Poison & Drug Information. Edelen graduated from OU College of Pharmacy in 2011.

*Editor's note: Tracy Hagemann, Pharm.D., currently serves as associate dean, University of Tennessee College of Pharmacy-Nashville.



Three-D
photo
of new
nuclear
pharmacy
site

Exceeding Industry Standards for Nuclear Pharmacy

Health care professionals involved in the use of radiopharmaceuticals must conform with a myriad of regulations, guidelines and standards in a variety of practice settings to help ensure patient safety and protect the general population and the environment.

This year, OU Nuclear Pharmacy will move into a larger facility, specifically remodeled to accommodate new required standards. The old nuclear pharmacy space, at 2,168 square feet, included most areas on the north side of the first-floor hallway. The new space is 5,757 square feet. The OU Nuclear Pharmacy will share the building with 1893 Pharmacy, the new closed-door pharmacy, which together occupy over 10,000 square feet.

How did OU Nuclear Pharmacy start?

In 1977, OU College of Pharmacy started its centralized nuclear pharmacy service unit in the basement of the Biomedical Sciences Building on the OUHSC campus. At that time, Dean Rodney Ice and Dr. Garo P. Basmadjian were responsible for the operation. It was staffed by nuclear pharmacists, radiopharmaceutical chemists and graduate students. This operation was modeled after the nuclear

pharmacy at the University of Michigan Hospital.

The OU Nuclear Pharmacy evolved into a self-supporting service unit with the mission of serving the nuclear medicine departments in hospitals and clinics within the Oklahoma City area as well as educating nuclear pharmacists and radiopharmaceutical scientists at the college. In addition, research in the area of nuclear pharmacy and radiopharmaceutical chemistry was supported by revenues generated by the service unit.

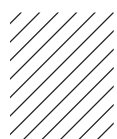
Since 1979, when the first M.S. degree in nuclear pharmacy was awarded, 13 M.S. degrees and 11 Ph.D. degrees in Nuclear Pharmacy and Radiopharmaceutical Sciences have been awarded from the College of Pharmacy. From 1980 to 2000 the college provided portions of nuclear pharmacy didactic training to approximately 30 pharmacy students with about half pursuing the added qualifications of authorized nuclear pharmacist at OU and elsewhere. The College of Pharmacy's training was formulated to meet the ANP requirements for all U.S. states. From 2007 to present, 40 students have completed ANP credentialing concurrently with their Doctor of Pharmacy program. Today, current

programs offered by the college are: Nuclear Pharmacy Electives, Doctor of Pharmacy Nuclear Pharmacy Track Leading to ANP Status, Nuclear Pharmacy option in PharmD/MS, Nuclear Pharmacy graduate MS and PhD programs.

In 2006, David and Sandra Gilliland established the college's first endowed chair in nuclear pharmacy on the OU Health Sciences Center campus to support and revive graduate work in diagnostic and therapeutic pharmaceuticals. Since this time, the college has made significant commitments to nuclear medicine research through faculty grants and the service-unit with acquisition of a state-of-the-art triple imaging camera for small animals (combined single photon emission, computed tomography, and a positron emission tomography). In addition, the college purchased a mini-cyclotron for research and clinical investigational purposes.

Current

Today, the nuclear pharmacy is a service unit operated by OU College of Pharmacy on campus. This operation is available 24 hours a day, 7 days a week. The nuclear pharmacy services over 200 patients a day with sterile radiopharmaceuticals. The large patient base comes from



serving OU Medical Center, Veterans Administration Hospital and approximately 55 departments off campus within a 100-mile radius of Oklahoma City. The nuclear pharmacy has held an Oklahoma Pharmacy license since 1983 and a radioactive material license for manufacturing and distributing since 1980. The nuclear pharmacy is staffed with four board-certified nuclear pharmacists and two additional authorized nuclear pharmacists

who are working toward board certification. The pharmacy is proficient in procuring, compounding, preparing, dispensing, storing, performing quality analysis, and delivery of FDA-approved drugs and clinical investigational agents. The pharmacy has been active in pre-clinical and clinical human trials for over 20 years and adheres to United States Pharmacopeia standards and state regulations. The pharmacy

is inspected regularly by the Oklahoma Board of Pharmacy and the Department of Environmental Quality and is in good standing.

In addition, OU College of Pharmacy expects to have a collaboration with a cyclotron manufacturer in Oklahoma City that will enable OU students to have invaluable PET manufacturing experience.

Faculty Member Earns 2022 Briner Award From National Association



Wendy Galbraith, Pharm.D., FAPhA, BCNP, clinical associate professor, Department of Pharmaceutical Sciences earned the 2022 William H. Briner Distinguished Achievement Award in Nuclear Pharmacy Practice. The award recognizes an American Pharmacists Association – Academy of Pharmacy Practice and Management member who has made significant or sustained contributions to the practice of nuclear pharmacy. Galbraith has been practicing in nuclear pharmacy for over 30 years and is recognized for attaining distinction as an outstanding practitioner through multiple publications, exceptional student mentorship, and dedicated involvement in the APhA–APPM Nuclear Pharmacy Practice special interest group.

The selection of recipients of the American Pharmacists Association Academy of Pharmacy Practice & Management Awards and APhA Academy of Pharmaceutical Research & Science Awards was part of the 2022 APhA Awards and Honors Program and honorees were recognized this past March at APhA2022 in San Antonio. The APhA Awards and Honors Program is the most comprehensive recognition program in the profession of pharmacy.

Galbraith received her bachelor of science and doctoral degrees, both in pharmacy, from OU. She also earned the APhA-APPM Innovative Practice Merit Award four times for student-led contributed poster presentations and was awarded lifetime Fellow Status in 2015 by the American Pharmacists Association.

Other recipients of the William H Briner Award with OU ties are Dean Rodney D. Ice, Ph.D. (1976-1984), and Joseph C. Hung, Ph.D. (1982-1986).





A Prescription 4 Wellbeing Program:

A Partnership With Douglass High School in Oklahoma City

While there is no specific definition of wellbeing, most would agree that it includes the presence of positive emotions and a satisfaction of life. Whereas social justice programs typically address one or two issues facing a specific population within a community. Programs look at food insecurity or the need for adequate housing. A specific program may look at ways to improve an individual's health. But rarely does it holistically look at addressing needs for high school freshmen through seniors.

Located in a historically Black high school in the Oklahoma Public School District, Frederick A. Douglass High School holds the distinction of being the longest continually operating high school in the state (since 1893). It currently has 418 students, grades 9-12. Demographically it is 94 percent minority, with a 10% rate of homeless students. The average ACT score is 14 and only 46 students participated in advanced placement courses for the 2020-2021 school year.

Despite issues facing the neighborhood and Douglass students and teachers, the community is a positive light, working hard to combat the problems they face for sustainable solutions. Douglass is not a school in despair – instead, it's a vibrant community where the students and teachers take pride in the history of the school and look to find ways to combat the inequities that make it more difficult for students to achieve the same results as other well-off schools. Through the proposed "Prescription 4 Wellbeing Program," OU College of Pharmacy will work with two teachers of the DHS Senior Seminar classes and the coaching staffs of the football, basketball and baseball teams to impact approximately 150 DHS students.

Although OU College of Pharmacy already has a successful, student-led tutoring program for high school seniors, a broader program that broadly addresses academic and overall wellbeing challenges may further prime students to pursue pharmacy school and higher education.

Since the athletics tutoring program began in 2018, it has exponentially grown with 54 COP student tutors on a consistent basis. Additionally, our students frequently attend athletics and school events to support the DHS students. With the creation of the Prescription 4 Wellbeing program, our goal is to continue to have at least 60 COP students participating in the program on a consistent basis. Our goal is also to add at least 15 COP faculty/staff who can also participate on a consistent basis. We will also continue to work with the teachers, guidance counselors, coaches and DHS administration to administer this program. The tutoring program will be incorporated into the Prescription 4 Wellbeing program.

There are overwhelming unmet needs in the Douglass High School community that go beyond obtaining education. In order to break down systemic systems of inequity and healthcare disparities, it takes our community to band together and provide for unmet needs. This program allows a great opportunity to measure our ability to impact these students' and

their families' wellbeing for a lifetime. It is also a great opportunity to provide basic knowledge and care regarding a pharmacist's role in community health and inspire some of these students to emulate the student pharmacists and faculty pharmacists they come into contact with or are mentored by in this program. Additionally, this is a unique opportunity for our students to interact with future patients from historically underrepresented and under-resourced backgrounds in a meaningful way that can inform them as practitioners in the future and perhaps inspire them to pursue bridging health care disparities in these communities. Our goal for this program is that it will also foster trust and empathy for all so that healthy patient/pharmacist relationships and interactions will continue in the future.

The Prescription 4 Wellbeing program can address some of the basic needs/challenges/obstacles these students face and that overworked and understaffed public high schools just can't tackle alone without community support. This whole-person

approach is emblematic of the impact a pharmacist can have on a patient's whole health from patient education, medication adherence, understanding of nutrition, vitamins, supplements, and diet and exercise on the quality of life their patient will sustain.

Because of the diversity scholarship provided to the college, the Prescription 4 Wellbeing program will start this fall, under the direction of Jennifer Richardson, director of admissions at OU College of Pharmacy. For more information about the Prescription 4 Wellbeing program, please contact Richardson at the College of Pharmacy Student Affairs Office.

-Jennifer Richardson

LEAD ON: The University of Oklahoma's Campaign for the Future

For more than a century, generations of leaders and dreamers have shaped the University of Oklahoma into the life-changing place it is today. Thousands of OU Pharmacy alumni are a living testament to its transformative legacy, and progress of the State of Oklahoma has been ignited by OU's innovative spirit.

The University of Oklahoma is excited to announce the launch of **Lead On**. The University of Oklahoma's Campaign for the Future.

Now is a pivotal moment: In recent memory, we have stood witness to events of global magnitude – turning points that will forever be engrained in history. And yet, as the OU Family, we see this as a time of opportunity – one rich with possibility and excitement for the future of our university. With your help, we can aspire to new heights, ensuring OU's excellence is attainable for all with the talent and drive to make a difference, that our students are equipped with all they need to be successful, and that our university's discoveries help our state, nation and world meet the challenges of today and tomorrow. Together, what we achieve will be nothing short of remarkable.

As the main contact for philanthropic support for the College of Pharmacy, I'm often asked this question: **What are the college's greatest needs?**



At the heart of our university's purpose is the student experience – the kind that truly changes lives. For four decades, the Henry D. and Ida Mosier Pharmacy Building served COP students and faculty well. Their bequest provided for the facility we have today. But much like the field of pharmacy itself, teaching, learning and research have evolved considerably since 1983.

We need to dramatically upgrade and expand our students' learning environment. Although some remodeling and technology updates have occurred thanks to past gifts, it is time to update our

pharmacy practice labs, pharmaceutical labs, classrooms, student support spaces and the technological infrastructure required to keep it all running.

Our students receive excellent training and the high-quality of our graduates has stayed consistent. But, with the help of our alumni and friends, we can invest more resources in our research potential, community programs like the Oklahoma Center for Poison and Drug Information, and provide our students and faculty with a premier educational facility.

Please consider what the OU College of Pharmacy has meant to your own career, your livelihood, your family and your future. And when you consider the positive impact this institution has had on your own life, choose to make a gift that helps put us on a path to do bigger and more incredible things for countless others. It is time for us to take a step into the future, together, to continue the OU College of Pharmacy's quest for excellence

-Lydia Chapman, Director of Development, OUHSC. Lydia can be reached by e-mail: lydia-chapman@ouhsc.edu.



NACDS Foundation Presents College with Diversity Scholarship Award

Brian Nightengale presents Dean JoLaine Draugalis a check from the NACDS Foundation Scholarship Program. Nightengale ('90) serves on the OU College of Pharmacy national advisory board and was named chair of the board for NACDS.

The National Association of Chain Drug Stores Foundation presented the University of Oklahoma Health Sciences Center College of Pharmacy with a \$15,000 grant through the NACDS Foundation Scholarship Program. The grant application was prepared by Jennifer Richardson, admissions and recruitment manager. OU College of Pharmacy was one of three diversity scholarship winners presented with their awards at a recent NACDS Foundation event.

These scholarships encourage and support educational diversity by awarding institutions based on their current or proposed diversity programs to advance pharmacy education in under-represented populations. Awardees were selected from a competitive pool of applications submitted from

accredited colleges and schools of pharmacy across the country.

OU College of Pharmacy will enhance a successful, student-led tutoring program for high school seniors to more broadly address academic and overall wellbeing challenges and to help prime students to pursue pharmacy school and higher education.

The NACDS Foundation Scholarship Program is designed to fund prospective projects that have the potential to significantly advance patient care and engage pharmacy students. Accredited colleges and schools of pharmacy were asked to submit applications for projects that may include community-based research projects and patient-centered coursework, or other innovative curricula.

"We are thrilled to announce this year's NACDS Foundation scholarship awardees and the innovative, educational initiatives that these schools and colleges of pharmacy will launch to help improve community-based health outcomes and advance patient care," said NACDS Foundation President Sara Roszak. "We are extremely grateful for our benefactors' outstanding and ongoing support of the Program. It is their contributions that continue to help empower future leaders in the pharmacy setting."

Since the inception of the NACDS Foundation Scholarship Program, more than \$4.5 million in scholarships have been provided for pharmacy education thanks to the program's generous supporters.

Creating and Recreating Connections for Future Pharmacists

When the COVID-19 pandemic began in 2020, everyone had to adapt and find new ways of connecting and continuing our lives as we bunkered down in our homes. In an arena such as pharmacy school recruitment, which already faced challenges prior to the pandemic, the college Student Affairs office also had to adapt to a rapidly changing environment. The response found the office wading into the new world of Zoom by learning to convert previous in-person events and recruiting efforts to this virtual environment. Fortunately, as we slowly returned to utilizing physical space once again, the office was able to integrate those new ways of recruiting into the pre-2020 recruitment efforts.

One of the new challenges in this new environment was how to leverage our former ways of building connections with pre-pharmacy students in a new world. While challenging, it was also rewarding to find that our reach is now greater using virtual methods in addition to the in-person experience that can't be replaced when a prospective student steps into our college. This past year, new ways to connect were created and then

recreated to these future pharmacists. There were three areas where recruitment efforts were focused.

OU College of Pharmacy Recruitment Efforts:

- Pharmacy School Interview Prep Workshop. This is an annual event; hybrid (Zoom and in-person).
- Camp BoomeRx. This is new event; virtual only.
- Douglass High School Tutoring Program. This is a year-long event; hybrid (Zoom and in-person).
- COP RxPerience Visit Day. This is new event; in-person only.
- Stillwater Medical Center Intern Visit Day. This is an annual event; in-person only.
- OU Health University of Oklahoma Medical Center Teen Volunteer Program. This is a new event; in-person only.

OU Health Sciences Center Campus Recruitment Efforts:

- HSC Advisor's Symposium. This is an annual event; hybrid (Zoom and in-person).
- OU Norman First Fridays. This is a year-long event; in-person only.
- An Afternoon with HSC. This is a year-long event; virtual only.

•HSC Discovery Day. This is an annual event; hybrid (virtual and in-person).

•Aspiring Health Professional Student Academy. This is an annual event; hybrid (virtual and in-person).

•Summer Immersion Program. This is an annual event; hybrid (virtual and in-person).

•Club Scrubs. This is an annual event; hybrid (virtual and in-person).

•Black Girls in White Coats. This is an annual event; in-person only.

Off-Campus Recruitment Efforts:

- Girls Scouts of Western Oklahoma Geekapalooza. This is an annual event; in-person only.
- Various Pre-Pharmacy/Health Clubs. This is a year-long event; virtual only.
- Minority Health Sciences Conference. This is an annual event; virtual and in-person.

The office of Pharmacy Student Affairs already has additional recruiting efforts planned for the next year including those listed as well as new opportunities to continue building those vital connections with prospective students as we continue to bring back some of our previous events and create new ones.

-Jennifer L. Richardson, M.S., ADC

Welcome, Morgan!



Morgan Strawn, OU College of Pharmacy's new recruitment and admissions coordinator, will be an important part in implementing new and old recruitment efforts alike.

Strawn works closely with prospective students and advises them on prerequisite coursework, and she helps plan and conduct recruitment events for students from middle school through college. Her favorite parts of working in recruitment are meeting students, hearing their stories, and helping those students place the first step-stones in their path to pharmacy school.

She recently graduated with her master's degree in English literature. She lives in Midwest City with her fiancé, Matthew, and her two cats, June and Zora. In her spare time, she loves to travel, read and attempts to keep her house plants alive.

College Ranked First In NAPLEX Pass Rate

For 2021, the University of Oklahoma College of Pharmacy was ranked first among U.S.-based and ACPE-accredited institutions with a NAPLEX first-attempt pass rate of 98%. This includes graduates who completed their program in 2021 and attempted the NAPLEX prior to the end of the calendar year.

Significant changes were made to the NAPLEX blueprint in January 2021 including, but not limited to, the number of content domains increasing from two to six and domain scaled scores no longer being

reported in favor of four ordinal achievement levels.

Of the 139 institutions that had new graduates attempt the NAPLEX for the first time in both 2020 and 2021 reporting years, 93 (66.9%) institutions had decreases in first attempt pass rates; 37 (26.6%) had increases, and 9 (6.5%) had no change. The first-attempt pass rate for all graduates from ACPE-accredited programs decreased from 87% in 2020 to 84% in 2021. **For OU graduates, the first-attempt pass rates increased from 91% in 2020 to 98% in 2021.**

Post-Graduation Employment Status – Class of 2021

Category Type	Category	Amount
Grand Total		52 (100%)
Completing post-graduate education or residency	Total	22 (42.3%)
	Fellowship/Graduate Program	2 (3.8%)
	Residency	20 (38.5%)
Employed within the profession of pharmacy	Total	28 (53.8%)
	Community Pharmacy – Corporate or Chain	15 (28.8%)
	Community Pharmacy – Independent	4 (7.7%)
	Hospital Pharmacy	6 (11.5%)
	Indian Health Service	1 (1.9%)
	Military	1 (1.9%)
	Pharmacy Benefits Mgmt	1 (1.9%)
Other	Unknown/Lost to Follow-up	2 (3.8%)





The White Coat ceremony for the Class of 2026 was Aug. 18 at the Nicholson Tower Auditorium.

Welcome, Class of 2026

GPA



Prerequisite



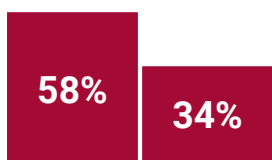
Overall



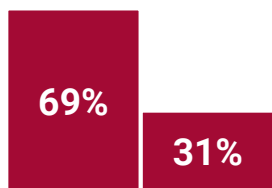
Science/
Math



Biology/
Chemistry



Minority Under Resourced Groups



Female Male

24

Average Age



Oklahoma Residents: 88%
Non-Residents: 12%

50

Class Size



Student Wins National Achievement Award

Tanara Ellis, Class of 2023, is a co-recipient of the 2022 Student Achievement Award from the Association of Black Health-System Pharmacists in December. The award, which includes a scholarship, was presented to Ellis at the ABHP luncheon on Dec. 6 at the American Society for Health-System Pharmacists Midyear meeting in Las Vegas. Ellis holds many leadership positions, including as president of the OU Health Sciences Center African American Student Association.

ABHP is a nonprofit organization governed by a board of directors elected by its membership. The ABHP was first established in December 1978 in San Antonio as the Black Pharmacists of ASHP. For more information, please visit www.abhpharm.org.



Graduate Student Earns Best Poster Award

Matt Dickson, graduate student, earned the Academy of Managed Care Pharmacy Foundation Nexus 2022 Best Poster Award in the Graduate Student category. His poster was based on "hospitalization and health service resource utilization in emergency department cases of diabetic foot infections, a nationally representative analysis."

The objective of this study was to assess hospitalization and health resource utilization associated with diabetic foot ulcer-related visits within emergency departments in the United States.

Best Poster Award recipients received a \$500 prize, a one-year AMCP membership, complimentary registration to AMCP 2023, and an engraved plaque. Dr. Grant Skrepnek serves as his faculty advisor.

Team of Students Earn Recognition for Clinical Pharmacy Challenge at Global Conference



Class of 2023 students Trenton Flanagan, Gabrielle Ford and Natasha Orcutt battled their way through the American College of Clinical Pharmacy Challenge during the fall of 2022 at the ACCP Global Conference in San Francisco. One hundred fourteen schools of pharmacy from across the globe enrolled in four competitive preliminary rounds. “Team Oklahoma” (including Flanagan, Ford and Orcutt) was one of only four teams that advanced to the semi-finals after winning their quarterfinal round in the live competition. Team Oklahoma defeated the previous year champions from University of Wisconsin and narrowly lost to this year’s winners from University of Toledo.

For Flanagan, he recognized that the competition represented a culmination of everything he learned during pharmacy school, both classes and rotations. “My involvement showed me how robust my didactic education was at OU Pharmacy. My rotation and research experiences have broadly built my overall clinical experience. My eventual goal is to become a critical care pharmacist,” said Flanagan.

Ford plans to pursue a clinical pharmacy residency with specialized interests in infectious disease and pediatrics. “My involvement really

clarified the importance of each team member’s skills are in order to accomplish certain goals. This experience will be so helpful in my career as I work with interdisciplinary health care teams,” Ford said.

Orcutt agreed that this team experience was positive. “In addition to the intrinsic value of having peers and colleagues in your corner that excel in different interests than yourself, this experience has given me a boost in confidence in my own clinical knowledge,” Orcutt said. All three students agree that their success was truly reflective of the didactic curriculum and knowledge they retained.

All three students commented that their faculty advisor, Paul Boylan, Pharm.D. assistant professor, was their biggest supporter throughout the competition. “He stayed late so we could compete in the online rounds after rotations, discussed questions we missed, and was a constant positive presence for us,” said Flanagan.

Orcutt agreed that Boylan was a major influence in their success during the competition. “There is a reason he was chosen as “Teacher of the Year” in 2022; his commitment to teaching and supporting his students is outstanding, even in extracurricular activities.”

Team Oklahoma is currently chartering a student chapter of ACCP. When established, it will be the first recognized student clinical pharmacy organization in Oklahoma.

College Highlights



Three faculty members were recognized at the annual spring faculty awards meeting at the University of Oklahoma Health Sciences Center. Dr. Katherine O'Neal earned the Sam K. Viersen Family Foundation Presidential Professorship, Dr. Susan Conway earned the Henry Zarrow Presidential Professorship and Dr. Misty Miller earned the Regents' Award for Superior Teaching. Dr. R. Chris Rathbun (left), chair for the Department of Pharmacy Clinical and Administrative Sciences, and Dean JoLaine R. Draugalis (right), were present for the awards. Presidential Professors are those faculty members who excel in all their professional activities and who relate those activities to the students they teach and mentor. The Regents' Award for Superior Teaching is for those who exhibit superior accomplishment in teaching.

Drs. JoLaine Draugalis, Michael Smith, Melissa Medina, Miller, Wei Yue, Shanjana Awasthi and Lucila Garcia-Contreras were inducted as members of the Educators in Excellence this past summer.

Katherine O'Neal (right), Pharm.D., MBA, BCACD, CDES, BC-ADM, AE-C, CLS, FADCES, associate professor, Department of Clinical & Administrative Sciences, was elected treasurer for the Association of Diabetes Care & Education Specialists.



Jessie L.-S. Au, Ph.D. (left), served on the FDA Oncology Drug Advisory Committee this past spring. ODAC makes recommendations on the development/approval of oncology drugs and service. Au serves as the research officer for Optimum Therapeutics, LLC and is also professor of research in pharmaceutical sciences for OU College of Pharmacy.

Amy Williams (right), senior instructional designer, Dean's Office and the Department of Pharmacy and Clinical Administrative Sciences, was selected by the OU Health Sciences Center Staff Senate as the September employee of the month. Williams serves as an instructional designer, where she provides academic program management and academic technology support. She also supports both the curriculum and assessment committees.



Rita Pierce (left), assistant to Dean Draugalis, was acknowledged by the staff senate for her 40 plus years of service to OU. She has invested all her time at OU College of Pharmacy.

Hayley Sewell, Pharm.D. (right), accepted a faculty position at OU College of Pharmacy as an assistant professor in the Department of Clinical & Administrative Sciences. She received her doctor of pharmacy degree from OU College of Pharmacy in 2020. Sewell will practice in the outpatient Internal Medicine clinics at OU Health to provide chronic disease state management to patients.



Julia McElyea, Pharm.D. (left), accepted a faculty position at OU College of Pharmacy as a clinical assistant professor in the Department of Clinical & Administrative Sciences. She attended OU for her undergraduate and then for her Pharm.D., where she also met her fiancé. McElyea will be providing comprehensive medication management services for primary care patients at Integris Medical Group South Clinic. Her clinical interests include diabetes, hypertension, dyslipidemia and heart failure.

Paul Boylan, Pharm.D. (right), earned the inaugural Teaching and Mentoring Award from the American College of Clinical Pharmacy Education and Training Practice and Research Network. It is given to a PRN member who has displayed excellence in teaching and mentoring. This year's theme was innovation; Boylan was recognized for his efforts in Pharmacy Practice VI and a research project evaluating standardized patients. For the research certificate, Boylan completed 26 hours of programming across multiple conferences, five online modules on research design, prepared and executed a research project, and presented a poster on the project. The title of his project was "Use of standardized patients in a third-year pharmacy student capstone course to identify medication therapy problems in an objective structured clinical exam. Boylan also graduated from the American College of Clinical Pharmacy Research and Scholarship Academy.



Staff member Trisha Wilhelm (left) earned this year's Tanya Mustin Staff Excellence Award. Wilhelm is a student systems coordinator with the College of Pharmacy Student Affairs Office. This award is given to one outstanding staff member in the areas of advising, mentoring, service activities or professional activities and best represents the OU Health Sciences Center mission. The award was presented by the OUHSC Student Government Association.



In Memoriam

H. Richard "Dick" Shough

Faculty, staff and students at the University of Oklahoma College of Pharmacy extend condolences to the family of Dr. H. Richard "Dick" Shough. He died on Aug. 17, at the age of 80.

Shough's tenure at the OU College of Pharmacy included service as associate, acting and interim dean, and as chair of the Department of Pharmaceutical Sciences. He was approved as professor emeritus in 2009.

He received both his bachelor of science degree in pharmacy and his doctorate in pharmaceutical sciences from the University of Tennessee-Memphis. He served as assistant and associate professor of pharmacognosy at the University of Utah of Pharmacy until 1978 when he accepted a faculty position at OU College of Pharmacy.

His numerous contributions to the college included holding chair positions for the admissions and development committees as well as the nuclear pharmacy operations group. He reprogrammed college database use from 1986 through the introduction of PeopleSoft in 2002. He also participated in the planning, dean's advisory and graduate affairs committees.

Vibhudutta Awasthi, Ph.D., professor and associate dean for research, said that Shough was "a giant of a wonderful person. I am thankful for the few years I spent under his mentorship. I admired his quick decision-making."

JoLaine R. Draugalis, Ph.D., dean of the OU College of Pharmacy, said kind words remembering Dr. Shough's commitment to the college.

"He was a special faculty member who represented our college well," Draugalis said. "I appreciated his candor and his support of the mission for the college. He was willing to do whatever was necessary to achieve our goals."



Advancing Research Related to Liver and Metabolic Diseases

Left to Right
Aditya D.
Joshi,
Autumn
Garza,
Iulia Rus,
Nikhil Patil

Nonalcoholic fatty liver disease (NAFLD), a common liver malady closely associated with both diabetes mellitus and obesity, affects over 90 million adults and children in the United States. NAFLD is characterized by excessive fat accumulation in liver (steatosis), apoptosis, inflammation and insulin resistance. Because there is an absence of FDA-approved therapeutics against NAFLD, identifying novel molecular targets and drugs which inhibit

hepatic steatosis have the promise to provide new treatment options against NAFLD.

The Aryl hydrocarbon Receptor (AhR) is a ligand activated transcription factor that regulates toxic responses to a variety of environmental pollutants, including polycyclic aromatic hydrocarbons and halogenated aromatic hydrocarbons including benzo[a]pyrene and 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). Historically, studies on

the AhR focused their efforts toward understanding the molecular basis for TCDD toxicity, which manifest as a broad spectrum of biological processes, including immune- and hepatotoxicity, liver and soft tissue tumor, non-Hodgkin's lymphoma, wasting syndrome and endocrine disturbances. Upon interaction with TCDD and other exogenous ligands, AhR regulates genes involved in xenobiotic metabolism - most notably cytochrome P450 1A1 (Cyp1a1).

Thanks to Dr. Aditya Joshi, assistant professor, Department of Pharmaceutical Sciences, his research has identified a tryptophan catabolite, cinnabaric acid (CA) as an endogenous AhR agonist capable of activating expression of AhR target gene, Stanniocalcin 2 (Stc2), but not Cyp1a1. This finding is noteworthy as CA-induced AhR-dependent Stc2 activation protects against hepatocyte apoptosis, steatosis and liver injury in both non-alcoholic fatty liver disease and alcohol-induced hepatotoxicity models. Joshi's independent research program is focused on understanding physiological role of Aryl hydrocarbon Receptor (AhR) signaling in normal liver physiology as well as in a plethora of hepatic and metabolic diseases. His research employs

cutting-edge cellular, molecular and biochemical methodologies as well as utilizes innovative technologies such as single-cell sequencing and CRISPR mediated genome editing.

For the college, Joshi is currently involved in teaching PHAR 7143 (Pharmaceutical Biotechnology), PHAR7133 (Principles of Drug Action) and PHSC5581 (Principles of Toxicology- graduate school). The Pharmaceutical Biotechnology course introduces professional students to the basic concepts and fundamentals of the state-of-the-art biotechnologies used in the production of biopharmaceutical drugs that are used in the diagnosis and treatment as well as helps them understand the nuances in the use of the relevant technology. While in the laboratory, Joshi's research group employs receptor-binding methods on routine basis, which fosters teaching in-depth about how the receptor theory works in the Principles of Drug Development course. Joshi said, "As a trained toxicologist, I am actively involved and enjoy teaching Principles of Toxicology Course to graduate students with focus on environmental toxicology."

After obtaining his graduate degree from the University of Texas Medical Branch, Galveston in 2008, Joshi accepted a

postdoctoral fellowship at Baylor College of Medicine in Houston. In 2011, he returned to the University of Texas Medical Branch as a research scientist. In 2019, he was promoted to assistant professor (research) at the University of Texas Medical Branch, Galveston.

Joshi received an NIDDK Research Scientist Career Development award (K01 grant from 2015 to 2019). In 2019, he received his first R01 as an early stage investigator. He accepted a position at OU College of Pharmacy as an assistant professor in 2020. Joshi said that the diverse and complementary research interests of the department faculty colleagues and the potential interactions at Harold Hamm Diabetes Center, where investigators were already working on the advancement of research related to liver and metabolic diseases, made it important for him to move to the University of Oklahoma. "Collaboration at the Harold Hamm Diabetes Center has been tremendously helpful as we examine the role of AhR-Stc2 signaling in non-alcoholic fatty liver disease. Additionally, our group received a pilot grant from Presbyterian Health Foundation to study CA-AhR-Stc2 signaling in non-alcoholic fatty liver disease," Joshi said.

Current Grant Listings

Vibhuti Agrahari, Ph.D.

"ROS-responsive nano-sensogel for prevention of cisplatin-induced ototoxicity and hearing loss." Capita Foundation; 10/01/2021-12/31/2022.

"Bio-responsive nano-sensogel for prevention of chemotherapy." Presbyterian Health Foundation; 07/01/2021-06/30/2023.

"Formulation and characterization of PLGA nanoparticles." Hough Ear Institute, 08/15/2022-02/15/2023.

Shanjana Awasthi, Ph.D.

"Surfactant protein-A regions as TLR4 immunomodulators." NIH/National Heart, Lung and Blood Institute; 07/01/2017-06/30/2023.

Vibhudutta Awasthi, Ph.D.

"Preclinical efficacy study in a rat model of stroke." DIRK, LLC; 10/01/2021-09/30/2024.

Anthony W. Burgett, Ph.D.

"Cellular mechanism of oxysterol-binding protein (OSBP) in viral proliferation." National Institute for Allergy and Infectious Diseases; 04/08/2021-03/31/2026.

"Drug development of ORP4-targeting compounds for the potential precision of ovarian cancer." Presbyterian Health Foundation; 07/01/2021-06/30/2023.

"Acquisition of an OUHSC Campus Lypophilizer/Evaporator." Presbyterian Health Foundation; 07/01/2022-06/30/2023.

"Single cancer cell mass spectrometry technology for the bioanalysis and effective drug treatment of ovarian cancer." Cancer Center Support Grant Pilot Project; 05/01/2022-04/30/2023.

Lucila Garcia-Contreras, Ph.D.

"Preclinical assessment of OHet72 as a new drug in the armamentarium against TB and MDR-TB." NIH/NIGMS, 07/01/2021-06/30/2022.

Michael Ihnat, Ph.D.

"Nephrotoxic mechanisms of f-low-rank coal (lignite) leachates in drinking water." NIH/NIEHS; 01/08/2022-12/31/2022.

"Experimental and computational studies to identify optimal conditions for immune-cytotoxic combination therapy." Presbyterian Health Foundation; 07/01/2022-06/30/2023.

"Development of a novel class of LDH inhibitors against pancreatic cancer." INBRE, SWOSU; 05/01/2022-04/30/2023.

Aditya D. Joshi, Ph.D.

"Novel mechanism of aryl hydrocarbon-receptor-mediated differential gene regulation." NIH/NIDDK; 11/01/20-04/30/24.

Anne Kasus-Jacobi, Ph.D.

"Characterization of changes in pathogenic amyloid beta aggregation induced by peptide drug candidates for Alzheimer's disease." OU College of Pharmacy Seed Grant; 09/01/2022-08/31/2023.

Dongin Kim, Ph.D.

"Role of renal lymphatics in blood pressure regulation." National Institutes of Health; 12/01/2018-11/20/2023.

"Developing smart molecular insecticide (RNAi-based) control method targeting Mormon crickets (orthoptera tettigoniidae)." Texas A&M University; 03/01/2021-02/28/2023.

"Towards field deployment of smart molecular insecticide." US Dept. of Agriculture; 05/10/2022-05/09/2023.

"Cancer exosome mediated antibody production for active tumor targeting treatment." Presbyterian Health Foundation; 07/01/2022-06/30/2023.

"Translational studies on extracellular vesicles in ovarian cancer." Stephenson Cancer Center Team Award; 05/01/2022-04/30/2023.

Motolani E. Ogunsanya, Ph.D.

"Quality of life of ethnically diverse Black prostate cancer survivors: Development of a conceptual model using grounded theory." Department of Defense; 10/06/2020 -06/30/2023.

"Validation of the cutaneous lupus erythematosus Quality" UTSW; 09/30/2022-09/29/2023.

"Development of a theory-based framework and measures of acculturation for African immigrants." Georgia College & State University; 08/12/2012-07/31/2025.

Katherine O'Neal, Pharm.D., M.B.A.

"Diabetes and hearing impairment." ASHP Research & Education Foundation; 01/24/22-7/24/2023.

Chris Rathbun, Pharm.D.

"HIV drug-assistance program (HDAP) to promote adherence." Oklahoma State Department of Health; 07/01/22 - 03/31/23.

Scott Schaeffer, BS

"Oklahoma Poison and Drug Information Center support and enhancement project." Oklahoma Health Resources and Services Administration; 09/01/2019 - 08/31/2024.

"Acute poisoning management and educational activities for Oklahoma." Oklahoma State Department of Health; 07/01/2021-06/30/2023.

Amanda Sharpe, Ph.D.

"Role of estrogen receptor- α in aging and sex-specific responses to 17 α -estradiol." Oklahoma Medical Research Foundation; 09/01/2021 - 06/30/2023.

"Astrocytic melanocortin 4 receptors and their role in inflammation and obesity." OU College of Pharmacy Seed Grant; 09/01/2022-08/31/2023.

Grant Skrepnek, Ph.D.

"Drug Utilization Review (DUR) board contract: Health care management for DUR/AD/MTM." Oklahoma Health Care Authority; 07/01/2021 - 06/30/2025.

"PMC Tele-MTM collaboration with the Oklahoma State Department of Health." Oklahoma State Department of Health; 06/30/2021-06/29/2024.

Kelly Standifer, Ph.D.

"Evaluation of PPL-138, a NOP/ μ partial agonist, for treatment of alcohol abuse in the context of PTSD." Florida Atlantic University/ Pharmacotherapies for Alcohol and Substance Use Disorders Alliance (PASA)/CDMRP; 12/01/2021-03/31/2024.

Wei Yue, Ph.D.

"Regulation of OATP1B1 and OATP1B3 by lysine acetylation and lysine deacetylase inhibitors." NIH/NIGMS; 09/01/2022-06/30/2026.

Editor's note: This listing is current as of December 15, 2022.

From the Oklahoma Center for Poison and Drug Information

The Definition of Patient Care is Constantly Changing: *A Perspective From the Director*

“Learn from yesterday, live for today, hope for tomorrow. The important thing is not to stop questioning.” The quote shared by Dean Draugalis on the inside front cover of this edition resonates deeply with me and is emblematic of the approach to patient care employed by the staff of the Oklahoma Center for Poison and Drug Information.

The dedicated professionals at the center spend every day honing their patient care skills and applying their training with the goal of ensuring the best possible outcome for the poisoned patient.

I often remind our staff that clinical toxicology is a bit different than other specialties. I also tell the pharmacy, nursing and physician associate students as well as the medical residents and fellows who rotate through the center, that the Institutional Review Board would frown upon the prospect of a multi-year,

double-blind, placebo-controlled trial designed to evaluate the human toxicity of a new product or to evaluate the efficacy of an as-yet untested intervention in

continues to demonstrate some advantage over the status quo, toxicologists might pool and analyze data in either a retrospective or prospective

fashion (with IRB approval, of course) and publish the results. If outcomes are truly improved through decreased morbidity or mortality, a new weapon in the treatment of poisoned patients may



Oklahoma Center for
Poison & Drug Information

(800) 222-1222

caring for a critically ill patient. Instead, advances in our field are slow, steady, and punctuated by occasional breakthroughs, often achieved by a perceptive clinician who has thought through the physiologic, biochemical and pharmacologic aspects of a potential treatment for a specific poisoning and employed that treatment in just one patient.

If the therapy is successful, that's just the beginning. A single case report can inspire others to try the therapy and refine its administration. If the treatment

have just been unleashed, even if it's just for one specific toxicant in a single patient population. Slow and steady progress, guided by continued questioning of what we know and think we know, is the goal.

The converse is true as well. If a new treatment didn't work, it's important to make others aware. This lets other clinicians either confirm the lack of efficacy or pursue other avenues of exploration. Negative results are difficult to get published, however, so maintaining open

lines of communication within our small but passionate clinical community is paramount.

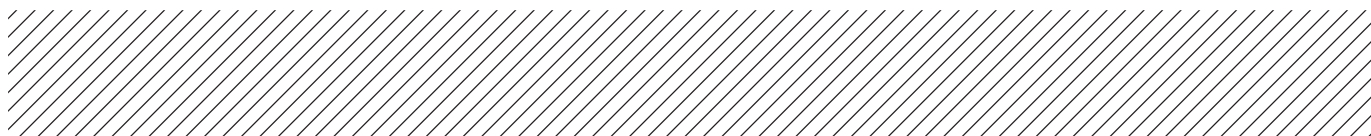
I've heard more than one esteemed toxicologist proclaim that more poisoned patients have been saved by solid supportive care than by the combined use of all antidotes. This is true beyond the shadow of a doubt. The thing is, the definition of solid patient care is constantly changing. Without continuous learning about new and changing methods of care unfamiliar to many pharmacists (for example, intubation/ventilation, hemodialysis and renal replacement therapy, extracorporeal oxygenation, and interpretation of ECGs) our value to the health care team would rapidly diminish. The same is true for pharmacists in all practice areas. We all have room for improvement and new things to learn every day. Do what you know and do it well. Constantly strive to improve your knowledge and skills. Think about how you can help improve patient outcomes or just make someone's day a bit better.

As I enter the twilight of my career, I plan to carry Einstein's quote with me as I seek new adventures. Every day will bring new challenges and opportunities to learn something new, see a new place, make a new friend, and work to make life better for others.

If you were to ask my wife, she'd probably add "...and take on a new hobby." Guilty as charged, Mrs. Schaeffer.



-Scott Schaeffer, D.Ph., DABAT, Poison Center Manager, Oklahoma Center for Poison & Drug Information



Congratulations 2022 Alumni Award Recipients

Blanche Sommers Alumni Award



John Little (center) earned his doctor of pharmacy degree in 2020 and was selected by the American Pharmacists Association as recipient of the 2020-2021 Executive Fellowship in Association Management and Leadership. Subsequently, he accepted a role with the APhA Foundation as the research and innovation project management specialist, where he helps to implement community-based pharmacy initiatives that advance pharmacy practice.

His professional interests include health care innovation, digital health and the pharmacist's evolving role as a valuable member of the health care team. He was also on the first-place team in the NCPA Pruitt-Schutte Business Plan Competition in 2019.

Ralph D. Bienfang Outstanding Practitioner Award

Dani Lynch (center) received her bachelor of science degree in pharmacy in 1982 and began working at Thrifty Pharmacy. In 1999, she bought Thrifty Pharmacy in OKC and Edmond. In 2015, she opened a satellite location at Epworth Villa.

She has passionately mentored new graduates and new pharmacy owners. She and her pharmacists have been recognized for excellent pharmaceutical care from the Oklahoma Reader's Choice, Oklahoma Pharmacy Heritage Foundation, the Edmond Sun, and Edmond Life and Leisure. She has served on countless boards and panels throughout her career in the pursuit of improving care.



Distinguished Alumni Award



Cmdr. Shannon Lowe received her Pharm.D. degree in 2008. She currently serves in the U.S. Dept. of Health and Human Services as an administrative officer for the Haskell Indian Health Center in Lawrence, Kansas.

As a commissioned officer in the U.S. Public Health Service, her deployments include the Remote Area Medical mission and the Office of the Assistant Secretary for Preparedness Mission Support Center in response to Hurricanes Harvey, Irma and Maria.

Her highest awards include the National IHS Director's Award, two Presidential Unit Citations, Crisis Response Service Award, COVID-19 Pandemic Campaign Medal and two Commendation Medals.

Outstanding Young Alumni Award

Ardath Plauche (center) is currently the infectious diseases clinical pharmacist at Memorial Hermann Katy Hospital in Katy, Texas. She received her doctor of pharmacy degree in 2014 and was a VALOR Intern with the OKC VA Medical Center. She received her bachelor of science in nursing from Southeastern Louisiana University and maintains active nursing licensure in Louisiana and Oklahoma. She completed PGY1 and 2 residencies.



She is the past president of the Gulf Coast Society of Health-System Pharmacists and most recently chaired the Texas Society of Health System Pharmacists Infectious Diseases Task Force and Strategic Planning Committee.

College Receives Accreditation with Commendation

The Accreditation Council for Pharmacy Education Continuing Pharmacy Education Commission and the ACPE Board of Directors reviewed the Continuing Pharmacy Education Program at OU College of Pharmacy for purposes of continued accreditation with commendation. This review was based on three elements: the provider's self-assessment report related to specific commendation criteria, the reviews of the report, and other communications received from the provider.



After discussion of the program, the board decided that accreditation of the continuing pharmacy education program is continued with commendation. The accreditation term continues for the Continuing Pharmacy Education Program at OU College of Pharmacy until June 30, 2027.



COLLEGE OF PHARMACY
The UNIVERSITY of OKLAHOMA HEALTH SCIENCES CENTER

P.O. Box 26901
Oklahoma City, OK 73126-0901

Non Profit Org.
U.S. Postage
Paid
Okla City, OK
Permit No. 220

11th Annual Adrenaline Run Slated for March 25



Thank you to all our volunteers at the 10th annual Adrenaline Run!

Get ready now to register for the 11th annual Adrenaline Run 5K/10k! Join us in person March 25 at the OU Health Sciences Center. All participants who register early will receive a long sleeve Sport-Tek T-shirt. There will be an awards ceremony following the race. This event is timed by EnMotive and sanctioned by USA Track & Field.

Last year marked the 10th anniversary of the Adrenaline Run. There were 262 registrants; 170 for 5K, 67 for 10K, and 25 virtual. We had at least 30 volunteers consisting of college students, faculty, staff, alumni and friends. We also had 17 businesses that either sponsored or donated for the event.

Participants and volunteers can sign up at <https://okc.enmotive.com/events/register/2023-adrenaline-run-5k-10k>.

Proceeds from the Adrenaline Run will benefit the OU College of Pharmacy through expansion of contemporary education, research and service. The Adrenaline Run is sponsored by the OU College of Pharmacy Alumni Association. For more information, please email cassidy-roberts@ouhsc.edu or leegile@yahoo.com.

We encourage you to follow the Adrenaline Run Facebook event page for further updates.

Alumni Association Officers 2022-2023

Welcome to our 2022-2023 Alumni

Association officers:

- President: Chelsea Price, Class of 2016
- President Elect: Lee Muñoz, Class of 1997
- Secretary/Treasurer: Alex McNeely Walker, Class of 2014

Be In The Know

We want to make sure we have the most up-to-date information to keep YOU informed about the innovative plans we have at OU College of Pharmacy.

If you haven't heard from us in a while, it's probably because we don't have a current email address for you. Please take a few minutes and update your email address with the college by reaching out to Cassidy Roberts, outreach liaison, at Cassidy-roberts@ouhsc.edu or (405) 271-6194. Please also keep in touch through our college website (pharmacy.ouhsc.edu) and our facebook page (facebook.com/oupharmacy).