

CougarRx News

WASHINGTON STATE UNIVERSITY

Events

Give Now

Top Stories

Alumni Updates

Faculty Scholarship

October 2019

A NOTE FROM LINDA GARRELTS MACLEAN

Dear Alumni, Colleagues, and Friends:

I am pleased to report that our college is making a mark in the world of pharmacy—and I mean that literally. I recently returned from a trip to the United Arab Emirates, where several WSU faculty members presented their research at an international pharmacy conference attended by deans, faculty, pharmacy and health organizations, and pharmacists from around the globe. The International Pharmaceutical Federation meeting (FIP) was held in Abu Dhabi and I thought you might enjoy seeing a few photos from that trip (see photos).

Additionally, Dr. Baker arranged for our WSU contingency to meet with leadership at Gulf Medical University (GMU) and participate in the “Advances in Pharmacy Practice: USA and UAE Perspectives” symposium at GMU. Following the symposium, we signed a memorandum of understanding between WSU and GMU, strengthening the partnership already in place. Dean Sherief Khalifa and his team have much to be proud of as they move forward with the development of a new drug information center.

The diversity of our countries and cultures is evident in many ways, but one thing that unites us all is the need for affordable, accessible and high-quality health care. It’s exciting to learn how other countries are utilizing pharmacists to meet the health care needs of their communities and share our innovative approaches. And it’s gratifying to know that the WSU College of Pharmacy and Pharmaceutical Sciences is not only at the table, but leading many of these discussions. We are leaders globally and locally, and we are making a difference.

Speaking of leaders who make a difference, I hope you will join us on Friday, October 18 in Spokane as we honor William Gaskins, class of 1969, who served as the Pullman Regional Hospital’s pharmacy director for over 40 years. Bill taught, and continues to mentor, many of our pharmacy alumni and current student pharmacists. The accolades and tributes we have been receiving from our alumni, students, and friends, about Bill are terrific. If you have a memory or photo to share, please send it to gocougs@pharmacy.wsu.edu. It’s not too late to sponsor the event or purchase tickets, which are \$75 each. Here’s the link to sign up: <https://apps.pharmacy.wsu.edu/pharmweekend/>. Proceeds from the event will benefit the newly-established William and Felicia Gaskins Scholarship in Pharmacy, and if you’d like to learn more about Bill and Felicia Gaskins, please [click here](#).



Signing of the memorandum of understanding between WSU and GMU.

At the Crimson Gala, we will also recognize our Alumnus of the Year, as well as the Preceptors and Mentors of the Year. These leaders in pharmacy are at the core of our success and we are truly grateful for their hard work and dedication to our students and our college. It's a privilege to honor them on October 18. On Saturday, October 19 we will officially dedicate the R. Keith Campbell Applied Patient Care Laboratory in the PBS Building in Spokane. Registration and other details for Pharmacy Homecoming Weekend can be found at this link: <https://apps.pharmacy.wsu.edu/pharmweekend/>.

Come home for Homecoming to renew friendships, connect professionally, and delight in all that it means to be a part of the Cougar pharmacy family.

With Cougar Pride,



Linda Garrelts MacLean, interim dean
WSU College of Pharmacy and Pharmaceutical Sciences

Top Stories

Filling gaps in primary care takes creativity

By Addy Hatch, [WSU News](#)

A need to fill gaps in primary care is driving new approaches to health care workforce development in Washington, including at the WSU College of Pharmacy and Pharmaceutical Sciences.

Panelists discussed their organizations' strategies at Inland Northwest State of Reform, an annual health policy conference.

Julie Akers, clinical associate professor at the WSU College of Pharmacy and Pharmaceutical Sciences, said the college is preparing students for a future that may look quite different from traditional pharmacy roles.

State law in Washington allows pharmacists to provide direct patient care for uncomplicated illnesses or conditions. Akers said pharmacists are already providing that care in public health systems such as the Indian Health Service and VA Health Care, but most private insurers and community pharmacies are still trying to determine efficient ways to reimburse pharmacists for that work.

Throughout the health care system, however, there's a push to have professionals at every level practicing at the "top of their license," or to the full extent of their education and training.

"We really need to see pharmacists and other health care providers step in and help with the primary care shortage," Akers told the audience.

To prepare pharmacists for that role, WSU offers courses to build students' critical thinking and leadership skills alongside traditional clinical education. Students also participate in team-based interprofessional education with nursing and medicine students at WSU Health Sciences.

Similarly, CHAS Health is taking a fresh look at caregiver roles within the community health organization, said panelist Kelley Halverson, vice president of administrative services there. CHAS offers medical, dental and behavioral health care, plus pharmacy, at its clinics, which gives greater opportunity for collaboration than a traditional primary-care clinic might.

CHAS also offers apprenticeships, and it launched a nurse practitioner residency program in 2015. Halverson said CHAS is reevaluating clinical training programs to give preference to those educating professionals most likely to stay and work in the region.



From left: Kelley Halverson, Jiquanda Nelson and Julie Akers

The third panelist, Jiquanda Nelson, senior manager for equity, inclusion, diversity and workforce development at Kaiser Permanente, said the insurer had just launched a new apprenticeship program for medical assistants with features to lower barriers and attract a more diverse workforce. The program includes prominent health care employers and labor unions, and includes assistance with childcare and transportation – things that might have prevented qualified applicants from taking advantage of previous programs, she said.

The panel on workforce development was offered as part of the all-day State of Reform conference. Spokane was the first stop in the nine-state series; for more information visit <https://stateofreform.com/all-conferences/>

Far from home: student pharmacist visits from UK

This summer Cardiff University pharmacy student Joseph Thomson spent five weeks more than 4,000 miles away from home.

Thompson visited Spokane from July 1 through August 4 to participate in specialty pharmacy experiences hosted by the Washington State University College of Pharmacy and Pharmaceutical Sciences (CPPS). Back home, he attends the [School of Pharmacy and Pharmaceutical Sciences](#) at Cardiff University in Wales, one of the top-rated pharmacy programs in the U.K.



Just as CPPS Doctor of Pharmacy students are able to apply to participate in an elective international rotation during their fourth professional year, student pharmacists from our partnering international institutions have the opportunity to apply to come participate in professional shadowing experiences in Spokane.

Thomson spent his first two weeks of the experience at the CPPS Drug Information Center (DIC)—a drug information service which responds to inquiries from health care professionals about interactions, side effects, and other drug-related topics.

“I really enjoyed the time in the DIC,” said Thomson. “That’s something I’ve never experienced before.”

The next two weeks were spent first in conversations with college faculty members about their areas of expertise then shadowing at a local pharmacy.

One of the most surprising things to Thomson was the difference between pharmacies in the U.K. and the U.S.

“There are lots of independent pharmacies,” said Thomson, “back home it’s all retail.”

Thomson added that one of the biggest differences was in the counting of pills, explaining that in the U.K. the pills were all pre-packaged.

The final week of Thomson’s stay was spent shadowing the Providence Visiting Nurses Association (PVNA). According to Thomson, this was also his favorite site location.

“They work together as a team and collaborate,” said Thomson. “It’s like House without the cool bit of Hugh Laurie being there.”

He also appreciated the chance to interact in the home, saying it gave him the opportunity to see how people can be overwhelmed.

When he wasn’t engaged in pharmacy experience activities, Thomson had the opportunity to explore Spokane.

“I really liked the hikes and the green spaces,” he said. “Eagle point was lovely”

Thomson so enjoyed his time in Spokane, he said he would recommend the experience to classmates, saying, “It’s definitely worthwhile to see the differences across continents... I’d do it again.”

Thomson's experience was organized through the WSU CPPS [Office of Experiential Services](#). International rotations are once-in-a-lifetime opportunities that allow student pharmacists the opportunity to experience the practice of pharmacy in diverse cultural and clinical settings.

Spokane student pharmacists traveling to Wales as part of this exchange are exposed to all aspects of community pharmacy practiced in the UK including National Health Service, reimbursement mechanisms, NHS contracts, prescription pricing bureau, professional organizations. The community pharmacy is part of the Co-Op chain and located in Cardiff (the capital of Wales) about two and a half hours by train west of London.

Research day rewards

On August 19, current and future scientists gathered to show off their work at the College of Pharmacy and Pharmaceutical Sciences (CPPS) Research Day. The all-day event is a celebration of the broad range of research that is ongoing in the college, and an opportunity for trainees to obtain valuable presentation experience and feedback on their research.

"I'm so proud of these students," said Associate Dean for Faculty and Student Development Kathryn Meier. "The energy and enthusiasm that they put into their scientific discoveries is a joy to their mentors, and helps to move research projects forward in new directions."



Research day participants with Dr. Kathryn Meier (left)

The day began with keynote speakers, Drs. Ashley Snider and Mandi Hopkins, Ph.D. are both alumnae of the CPPS graduate program who provided personal insights into career paths in academia and the Pharmaceutical industry, respectively.

Following the keynotes, Summer Undergraduate Research Fellowship (SURF), Summer Research Fellowship (SRF) and current CPPS graduate and professional students presented posters describing their research projects. The posters are judged in three categories – 1) undergraduate, 2) professional and 3) graduate. Prizes are awarded for first and second place. Postdoctoral trainees and Pharm.D. fellows give oral presentations; which are also eligible for awards.

This year's poster topics ranged from drug interactions with cinnamon to new drug delivery approaches. Oral presentations covered chemo-resistant prostate cancer and the way lack of sleep might contribute to cancer risk.

ORAL PRESENTATION WINNERS:

Tyler Bland, a CPPS pharmaceutical sciences postdoctoral research associate in Wu lab, received first place for the presentation, "Exploring and exploiting acetylcholine signaling in chemoresistant prostate cancer."

Bala Koritala, a CPPS pharmaceutical sciences postdoctoral research associate in Gaddameedhi lab, received second place for the presentation, "Unraveled mechanisms behind night shift and cancer in humans."

SURF STUDENT POSTER WINNERS:

Matthew Thompson received first place for the poster, "Pentagalloyl glucose (PGG) suppresses IL-1 β -induced pro-inflammatory cytokine production and matrix metalloproteinase activation in human osteoarthritis synovial fibroblasts."

Martina Hunt received second place for the poster, "Interaction of microRNA 485-5p with the 3'UTR of UGT2B7 and UGT2B10."

PROFESSIONAL STUDENT POSTER WINNERS:

Bahar Adamzadeh received first place for the poster, "Inhibition of CYP2A6 enzyme by cinnamaldehyde and 2-methoxycinnamaldehyde, major constituents of cinnamon."

Christopher Bran-Morales received second place for the poster, "Characterizing inhibition kinetics of silymarin flavonolignans against organic anion transporting polypeptide transporters."

GRADUATE STUDENT POSTER WINNERS:

Christopher Szlenk received first place for the poster, “Molecular dynamics simulations reveal a possible membrane-involved microkinetic mechanism for long-lasting action of salmeterol, a β 2-Adrenergic receptor agonist.”

Tarana Arman and **Xinyue (Sheena) Dong** tied for second place.

Arman presented the poster, “Microcystin-LR renal toxicity in nonalcoholic fatty liver disease.”

While Dong presented the poster, “Neutrophil membrane-derived nanovesicles target inflamed brain.”

Research Day also serves as the culminating event for the SURF program. According to Meier, who serves as the director of the SURF/SRF program, SURF is an incredible opportunity for students to gain valuable experience in federally-funded research groups.

SURF provides a hands-on research experience for college students with demonstrated scientific aptitude who have expressed an interest in pursuing graduate studies and/or research careers in pharmaceutical, biomedical or health sciences. SURF students are given the opportunity to work with CPPS scientists on a project. In fact, one of this year’s SURF students, Martina Hunt contributed to work by the team of Dr. Phillip Lazarus, Boeing distinguished professor and chair of the Department of Pharmaceutical Sciences, enabling the paper to be accepted into the journal, *Molecular Pharmacology*.

The SURF program is supported by a grant from the American Society of Pharmacology and Experimental Therapeutics, which provides funding for five undergraduates each summer with cost-sharing by the college through endowment funds from the Sue Harriet Monroe Mullen Innovative Cancer Prevention Research Fund. SURF applicants come from all parts of the country, and are selected by faculty members comprising the SURF committee. The goal of the ASPET funding is to increase the number of students seeking Ph.D. degrees in Pharmacology; research experience is a critical component of applications to graduate school.

In recent years, Research Day has been expanded beyond just SURF students to include all trainees in the college, including Summer Research Fellowship (SRF), graduate, and professional students.

The college has also recently increased the number of SRF fellowships offered to CPPS student pharmacists. SRF students, also selected from submitted applications, attend the same weekly career-oriented sessions as the SURF students. The goal of the SRF program is to increase interest in the Pharm.D. Honors Program and the Pharm.D./Ph.D. career path available in the college. Funding to support the SRF program is provided by the James and Diann Robbers Student Research Fund.

Funding for Research Day is provided by the Louise Holzer Darden Memorial Research Quasi-Endowment Fund.

Spotlight on Success



LAB HIGHLIGHT

Check out this great photo of the Paine lab team! From left to right: Deena Hadi, Sabrina Judson, Rakshit Tanna, Karen Vo, James Nguyen and Keti Bardhi with Mary Paine seated.

The Paine laboratory, led by Mary F. Paine, RPh and PhD, researches how herbal and other natural products can adversely affect the disposition and action of conventional (prescription and non-prescription) medicines.

PHARM.D. NEWS



Student pharmacists visited Valleyfest to provide flu shots to the community on the weekend of September 20-22. Their booth was right next to WSU partner BECU. Valleyfest is Spokane Valley's community festival held annually at Mirabeau Point Park. This year Valleyfest celebrated 30 years of the event.

PHARM.D. NEWS



Two new student groups were recently established at the College of Pharmacy and Pharmaceutical Sciences (CPPS). The Industry Pharmacists Organization (IPhO) was established in January while the National Community Oncology Dispensing Association (NCODA) was established in June.

Recently, the two groups welcomed CPPS alumni Manpreet Chahal, class of 2010, to speak at their joint meeting about oncology pharmacy.



PHILANTHROPY FOCUS

The CPPS was well represented at the WSU Foundation Gala held on September 20, 2019 in Pullman. Pictured are: Leon Alzola, '91, and a member of the WSUF Trustee Board; Lindsey Fischer Chahal and Manpreet Chahal, '10, and co-chair of the WSU Alumni Association Inland Empire Chapter; and WSU Faculty Dr. Mary Paine and PhD student Rakshit Tanna, who accepted the Crimson Benefactor Recognition on behalf of James, '57 and Diann Robbers, '59. Jim, a former faculty member at WSU, and his wife Diann, a WSU education major, have made a significant investment in the PhD program at the CPPS for more than 30 years and named the James and Diann Robbers Student Research fund in 2001.

Alumni Updates

- We were happy to see Former Senator **Linda Evans Parlette** on campus for a tour on October 2. She is a class of 1968 pharmacy alum and was our commencement speaker two years ago.
- We caught up with class of 2017 grad, **Shelby Williams** recently. Since graduating she's completed a clinical veterinary pharmacy residency at NC State College of Veterinary Medicine and is currently the pharmacy manager at UW Veterinary Care, the Veterinary Teaching Hospital at the University of Wisconsin School of

Veterinary Medicine. She also is the residency director for the Clinical Veterinary Pharmacy Residency program, teaches a Veterinary Pharmacy Therapeutics elective course at the University of Wisconsin School of Pharmacy, and is a preceptor and clinical instructor for the University of Wisconsin School of Pharmacy and Concordia University School of Pharmacy. She still teaches the WSU Veterinary Pharmacy Elective that started in Spring 2017 as well. Approximately 300 student pharmacists have taken the course over the past three years.

Want to be listed in our alumni updates? Send us your career information or let us know what you've been up to at gocougs@pharmacy.wsu.edu!

Other News

Supplements are big business, but study shows little impact to heart health, longevity

John White talked to the Spokesman Review about the use of vitamins and supplements.

[Read more from the Spokesman Review](#)

Surprising, unhealthy ingredients found in vape juices

WSU College of Pharmacy and Pharmaceutical Sciences' doctors Lazarus and Denton shared their expert knowledge.

[Read more from KREM](#)

Program offers training in suicide awareness and prevention

Suicide awareness and prevention is a task that more pharmacists are including with their patient care services. A program at the College of Pharmacy and Pharmaceutical Sciences trains student pharmacists to recognize patients in need of suicide intervention. Pharmacotherapy Clinical Assistant Professors Christina Buchman and Megan Willson shared information about the program at the 2019 American Association of Colleges of Pharmacies (AACP) Annual Meeting in Chicago, Illinois.

[Read more from Pharmacy Times](#)

Meeting the future pharmacy and health care needs of students, community in Yakima

We're excited to announce a new agreement between the Washington State University (WSU) College of Pharmacy and Pharmaceutical Sciences and Yakima Valley College (YVC) which will allow YVC students to take all of the necessary prerequisites for the WSU Doctor of Pharmacy program without leaving the Yakima area. Please join us for a Signing and Celebration of the collaboration in Yakima on Friday, October 4.

Events



Crimson Gala

October 18 | DoubleTree
Spokane, Washington



Homecoming Tailgate

October 19 | DoubleTree
Pullman, Washington



Alumni & Friends reception at NCPA

October 27 | Marriott Marquis San
Diego Marina | San Diego, California

Faculty Scholarship

PUBLICATIONS

Pharmacotherapy Clinical Associate Professor **Kimberly McKeirnan**, Allen I. White Distinguished Associate Professor **Joshua Neumiller** and Research Associate **Andrew Yabusaki** published the poster, “Extending the learning tree: 4th year APPE students learning through teaching during their academic rotation,” exhibited July 14 at the 2019 American Association of Colleges Pharmacy (AACP 2019) Pharmacy Education meeting in Chicago, Illinois.

Kim McKeirnan, Pharmacotherapy Clinical Associate Professor **Megan Willson**, Pharmacotherapy Clinical Associate Professor **Julie Akers**, Pharmacotherapy Clinical Associate Professor **Jennifer Robinson** and Pharmacotherapy Clinical Associate Professor (Yakima) **Christina Buchman** published the poster, “Implementation of a suicide prevention training program,” exhibited July 15 at AACP 2019.

Kim McKeirnan, Pharmacotherapy Clinical Associate Professor and Assistant Dean for the Yakima Extension of the Doctor of Pharmacy Program **Angela Stewart**, Pharmacotherapy Clinical Assistant Professor (Yakima) **Anne Kim** and co-authors published the poster, “Study behaviors of high-performing students within an active learning classroom environment,” exhibited July 15 at AACP 2019.

Pharmaceutical Sciences Assistant Research Professor **De Cheng**, Pharmaceutical Sciences Clinical Associate Professor **Shuwen Wang**, Pharmaceutical Sciences Professor **Jiyue Zhu** and three co-authors published, “Engineering a humanized telomerase reverse transcriptase gene in mouse embryonic stem cells,” in the July, 2019 issue of Scientific Reports, a peer-reviewed journal by Nature Publishing Group. [Read article](#)

Pharmaceutical Sciences Assistant Professor **John Clarke** and six co-authors published, “A pharmacokinetic natural product-disease-drug interaction: a double hit of silymarin and nonalcoholic steatohepatitis on hepatic transporters in a rat model” in the peer-reviewed Journal of Pharmacology and Experimental Therapeutics in August 2019. [View abstract](#)

John Clarke and four co-authors published, “Sub-chronic microcystin-LR liver toxicity in preexisting diet-induced nonalcoholic steatohepatitis in rats,” in the peer-reviewed journal Toxins in July 2019. [View abstract](#)

Pharmaceutical Sciences Staff Scientist **Anil K. Singh**, Pharmaceutical Sciences Professor **Salah-uddin Ahmed** and four collaborators published, “Suppression of monosodium urate crystal-induced inflammation by inhibiting TGF- β -activated kinase 1-dependent signaling: role of the ubiquitin proteasome system,” in Cellular and Molecular Immunology, a peer-reviewed journal of basic and clinical immunology research, in September 2019. [View abstract](#)

Salah-uddin Ahmed and two collaborators published, “HLA-C: an accomplice in rheumatic diseases,” in ACR Open Rheumatology, a peer-reviewed journal of the American College of Rheumatology, in September 2019. [Read article](#)

PRESENTATIONS

Kim McKeirnan and co-presenters spoke at the NACDS Foundation Breakfast Connection and Bridging the Gap from Fellow to Faculty: Building Effective Research Programs for Pharmacy Education 2019 at AACP 2019 on July 13-17, 2019 in Chicago, Illinois.

John Clarke presented, “Increasing the precision of precision medicine by characterizing multifactorial pharmacokinetic interactions,” for the American Association of Pharmaceutical Sciences Rocky Mountain Discussion Group in Hillsboro Oregon on August 27, 2019.

SERVICE

Pharmacotherapy Chair and R. Keith Campbell Distinguished Professor in Diabetes Care **John R. White Jr.** was extensively quoted in the Spokesman Review article, “Supplements are big business, but study shows little impact to heart health, longevity.” [Read article](#)

AWARDS

Washington was named one of the 20 teams chosen to participate in the first cohort of the multi-year Flip the Pharmacy Program. Flip the Pharmacy aims to transform community-based pharmacies away from point-in-time, prescription-level care processes and business models to longitudinal and patient-level care processes and business

models through the use of hands on coaching. Practice Transformation Teams will act as implementation arms for locally-based community pharmacy practice transformation efforts. CPESN® USA has partnered with CPF to serve as the Coordinating Center for Flip the Pharmacy. [Learn more](#)

Megan Willson and **Christina Buchman** were awarded and showcased as the Laboratory Innovation and Teaching Excellence (LITE) Award Winners for Laboratory Instructors SIG Innovation at AACP 2019.

Pharmaceutical Sciences Assistant Professor **Travis T. Denton** was named an inaugural fellow for the Steve Gleason Institute for Neuroscience. [Read more](#)

GRANTS

Jiyue Zhu received \$150,000 from National Institute of General Medical Science for the research project titled, “Repression of the hTERT gene during cell differentiation.” This is an administrative supplement for equipment, for purchasing a flowcytometry cell sorter.

EVENTS

The laboratory of Dr. Salah Ahmed invites you to join our team, “WSU Spokane Research,” for the Arthritis Foundation Jingle Bell 5K Run/Walk on Saturday, December 7. The Arthritis Foundation of the Inland Northwest has named Dr. Ahmed as their Medical Honoree for 2019. [Join the WSU Jingle Bell Run team](#)

STUDENT ACHIEVEMENT

DOCTOR OF PHILOSOPHY (PH.D) STUDENTS

Mahamudul Haque (pharmaceutical sciences, Ahmed Lab) with faculty co-authors **Anil K. Singh** and **Salah-uddin Ahmed** and three others published, “Suppression of monosodium urate crystal-induced inflammation by inhibiting TGF- β -activated kinase 1-dependent signaling: role of the ubiquitin proteasome system,” in Cellular and Molecular Immunology in September 2019. [View abstract](#)

Ruby J. Siegel (pharmaceutical sciences, Ahmed Lab) with faculty co-author **Salah-uddin Ahmed** and one collaborator published, “HLA-C: An accomplice in rheumatic diseases,” in ACR Open Rheumatology in September 2019. [Read article](#)



College of

Pharmacy and
Pharmaceutical Sciences

WASHINGTON STATE UNIVERSITY

WSU College of Pharmacy and Pharmaceutical Sciences
412 East Spokane Falls Blvd., PBS 130, Spokane, WA, 99202-2131

www.pharmacy.wsu.edu