

UPCOMING EVENTS

COLLEGE NEWS

ALUMNI NEWS

FACULTY SCHOLARSHIP



## A MESSAGE FROM GARY M. POLLACK

February 2017

Dear Friends and Colleagues:

I have had the opportunity to speak often about the value of providing access to a high-quality education, and of generating new knowledge that can be applied to solving real-world problems. These are driving principles at Washington State University, and are reflected in our college's core values.

Under the leadership of President Schulz, Washington State University has revised its institutional strategic plan and launched a formal effort to rally our programs and colleges around a new goal, which appropriately places our students at the center and focuses on providing a meaningful, high-quality educational experience:

*Washington State University will be recognized as one of the nation's top 25 public research universities, preeminent in research and discovery, teaching, and engagement by 2030.*

This ambitious institutional goal is built on twin pillars, often viewed as distinct elements but in fact capable of informing one another, of offering a transformative educational experience to undergraduate, graduate, and professional students, and accelerating the development of a preeminent research portfolio.

During the process of promoting the university's "[Drive to 25](#)" efforts, the experiential and engaged learning elements of our pharmacy program have been highlighted as something to emulate across the university. For instance, our core [Doctor of Pharmacy curriculum](#) has now been "flipped" for all first and second year courses, resulting in active and engaging classrooms all day, every day; our [Teaching Fellows Program](#) has proven popular, and effective; and our graduate students enjoy exceptional mentoring and experiential opportunities through collaborations with external partners, such as the Pacific Northwest National Laboratory. Pharmacy was one of the very first areas of study offered at WSU, starting 125 years ago, and it is rewarding to see our pedagogical values today recognized as foundational to WSU's future.

As we continue to strive for excellence in teaching and learning, within our college and in the broader academic pharmacy community, efforts to share our experience and learn from that of others remain crucial. Following the success of our inaugural event last summer, the College of Pharmacy will host its [2017 Transformation and Innovation in Pharmacy Education Institute \(TIPed\)](#) in Spokane this coming June. We encourage pharmacy programs with an interest in implementing innovations to attend this three-day event, which is designed to inject meaningful momentum into your own efforts. We are also actively seeking partners to add their voice to TIPed, by sharing their experience implementing innovations and helping us foster the growing community of advocates for innovation and transformation within pharmacy education.

The WSU College of Pharmacy is bullish on the future of our university, of the pharmacy profession, and of the pharmaceutical sciences. This is indeed an excellent time and place to do what we do.

Best wishes,



Gary M. Pollack  
Dean, College of Pharmacy  
Washington State University

## UPCOMING EVENTS

FEB.

3

### Graduate Research Seminar

PBS 101, 12:10 p.m.  
[View seminar schedule](#)

MARCH

2

### The Allen I. White Lectureship

WSU Spokane, PBS 101  
[View details](#)

MARCH

26

### CougaRx Reception at APhA

San Francisco, Calif.  
[RSVP](#)

APRIL

21

### Celebrating Generosity

5:00 p.m.  
WSU Spokane  
[RSVP](#)

[More college events »](#)

## COLLEGE NEWS



### Examining genetic cancer risk in smokers

By Alyssa Patrick, Office of Research

Why do some smokers get cancer while others don't?

Dr. Philip Lazarus has devoted more than 25 years to studying mechanisms of tobacco-induced cancer. The Boeing Distinguished Professor in pharmaceutical sciences examines a group of enzymes called UDP-glucuronosyltransferases (UGTs), which help the body excrete carcinogens found in tobacco and tobacco smoke.

Individuals who have difficulty eliminating carcinogens have a greater risk of developing cancer. Because UGTs influence detoxification, they could play a key role in cancer susceptibility.

In 2015, the National Institutes of Health (NIH) awarded Dr. Lazarus a five-year, \$2.6 million grant to study the body's ability to prevent tobacco smoke components from causing cancer. In 2016, NIH awarded a supplemental grant to Ana Vergara, a WSU doctoral student in pharmaceutical sciences. Ms. Vergara is examining how genetic differences in UGTs

affect smokers' likelihood of contracting cancers of the lungs, head, and neck.

Together the two researchers will also study different forms of UGT proteins that are expressed by a process called "alternative splicing." These proteins may destroy the detoxifying activity of normal UGT proteins.

Research collaborators at Harvard University and Duke University will validate the team's findings in tissue samples from a large number of patients with lung, head, and neck cancers, as well as from healthy control subjects.

The study's findings could advance cancer prevention.

"If we could identify people at highest risk, then we could better target these individuals for tobacco cessation," Dr. Lazarus said.

The researchers' work could also lead to improvements in the treatment of cancer and a host of other conditions.

"A large percentage of drugs are metabolized by UGTs to get excreted," said Dr. Lazarus. "Understanding how UGTs work could help us identify which drugs to give to whom. If a quick genetic test could determine what drugs will or won't work well for a given individual, that would be a big step forward."



## WSU, Heritage University increase access to health education

SPOKANE, Wash. – The Washington State University College of Pharmacy and Heritage University have signed two agreements to streamline the path for Heritage students to become pharmacists, starting with the class entering in the fall.

"Access to health education within the state is part of the land-grant mission of WSU and the College of Pharmacy," said Gary Pollack, dean of the college. "These agreements provide another avenue for students in eastern Washington to obtain a doctor of pharmacy degree."

The first agreement extends the WSU doctor of pharmacy Save-A-Seat program to up to seven Heritage freshmen per year, essentially allowing them to reserve a spot while they complete undergraduate course requirements. As long as students maintain good academic standing, they can go straight into the Pharm.D. program at the Spokane campus or extension program at the Pacific Northwest University of Health Sciences campus in Yakima, Wash.

The second agreement guarantees graduates of Heritage's master of arts in medical sciences program an admission interview for the Pharm.D. program in Yakima as long as they meet WSU admission requirements.

"This new partnership between Heritage University and Washington State University's College of Pharmacy offers students a wonderful opportunity to define their educational trajectory and to establish connections with their graduate institution early in their college career," said Heritage Provost Laurie Fathe.

Prospective students can get more information by contacting: Tyson Miller, Heritage University, 509-865-0421 or [miller\\_t1@heritage.edu](mailto:miller_t1@heritage.edu); and Lindsey Friedly, WSU College of Pharmacy, 509-358-7702 or [lindsey.friedly@wsu.edu](mailto:lindsey.friedly@wsu.edu).

The agreements align with Heritage University's mission to provide quality, accessible higher education to multicultural populations that have been educationally isolated and with WSU's mission to extend knowledge through innovative educational programs and its land-grant mission of public service and accessibility to education across the state.

Learn more about Heritage University at <http://www.heritage.edu/>. Learn more about the WSU College of Pharmacy at <http://www.pharmacy.wsu.edu/>.



## WSU graduate student selected for national science mentoring program

Washington State University graduate student Ana Vergara has been selected by the American Society for Pharmacology and Experimental Therapeutics (ASPET) as one of 16 graduate students nationally for its 2017-18 cohort of the ASPET Mentoring Network, which is a program that provides career development and coaching for graduate students and postdoctoral trainees.

Each trainee is part of a six-person coaching group and will participate in both group and individual meetings throughout the year. The program focuses on professional development beyond the research bench including interview skills, communication and networking. Vergara will receive a \$1,000 travel award to attend the program's kickoff luncheon at the Experimental Biology 2017 conference in Chicago this April where she will meet her faculty coaches and also share her research in a poster presentation.

Vergara graduated with honors from Columbia Basin College and cum laude from WSU Tri-Cities with a Bachelor of Science in biology and minor in chemistry. She is completing her Ph.D. in pharmaceutical sciences and working in the lab of Pharmaceutical Sciences Professor Philip Lazarus at the WSU College of Pharmacy.

This year, Lazarus and Vergara received a \$104,000 research supplement over two years from the National Institutes of Health. The award is designed to specifically promote diversity in health-related research. She also won first place for the Best Poster presentation competition at the International Symposium on Microsomes and Drug Oxidations (MDO) in Davis, California, in October.

Vergara is currently studying UGT3A enzymes to determine their expression in aerodigestive tract tissues and activity against tobacco carcinogens. According to her research, UGT3A enzymes may play an important role in the local detoxification of tobacco carcinogens, and variations in their expression or activity can be a potential marker for susceptibility to tobacco-related cancers.

Research at the WSU College of Pharmacy supports the university's land-grant mission to address some of society's most complex issues, specifically WSU's efforts surrounding developing practical solutions to challenging problems in health care delivery, health care access and disease prevention.



## PRECEPTOR PRESS

In coordination with our experiential services team, we will be publishing this new quarterly section within CougaRx News. The goal of Preceptor Press is to provide communications to our valued alumni and preceptors about current events, resources and highlights within experiential services. One of the primary highlights will be the many dedicated and hardworking preceptors who play such a vital role in the development and mentorship of our WSU student pharmacists. Experiential services has the distinct pleasure of building relationships with our preceptors, which makes up the part of our mission to advance human health through excellence in clinical education.

Within Preceptor Press, you will have the opportunity to meet some of our esteemed preceptors through the Preceptor Spotlight, as well as receive updates on current events, preceptor resources, specific needs, and (most importantly) how to get involved. We are very excited to connect with our alumni and preceptors through this new section!



### PRECEPTOR SPOTLIGHT

The profound impact Chris Greer has on our student pharmacists both personally and professionally is immeasurable. What makes Chris an extraordinary preceptor is the characteristic traits he possesses as an individual. [Read more »](#)



### ADJUNCT FACULTY

Active WSU pharmacy preceptors are invited to join the College of Pharmacy with adjunct faculty status. More details on benefits and requirements can be found on our [website](#).



### GET INVOLVED

Interested in serving as a preceptor for WSU student pharmacists? Contact Luke Rice, Assistant Director of Experiential Services for more information on how you can make an impact on the future of pharmacy at 509-358-7659 or [lerice@wsu.edu](mailto:lerice@wsu.edu).

## BECOME A MENTOR!



One of the great things about being a Cougar pharmacist is getting to learn & develop within the WSU community.

LEARN MORE

## A MESSAGE FROM LINDA GARRELTS MACLEAN



Dear Alums, Colleagues and Friends of Pharmacy,

This time of year our student services office is busy with several processes: kicking off the spring semester, conducting admission interviews for our class of 2020 (it is always an exciting time on campus hosting the aspiring pharmacy leaders of the future), and also matching our first-year student pharmacists with their alumni mentors.

I suspect that many of you, like me, are grateful for mentors. Many of our former deans including Allen White, Larry Simonsmeier, Bill Fassett, Jim Kehrer, and Bill Campbell were important to me. In fact, it was Dean White and Professor Keith Campbell who sent me to Edryn H. Jones in Spokane after graduation; the rest, as they say, is history. Ed's guidance and advice shaped my view on business, inspired me to become the co-owner of Jones Pharmacy in Spokane, and influenced how we would care for patients in new ways, while Keith's mentorship led me to become a certified diabetes educator. Leaders in the Washington State Pharmacy Association motivated me to be involved professionally; I see that legacy continuing with our current students!

We started our [Alumni and Student Mentor Program](#) with the help of Fred Meyer in 2014 to provide our students with the opportunity to build a unique professional relationship and support network with a professional external to the college. This program gives students exposure to a current professional's perspective and contributes to our mission to develop outstanding healthcare professionals.

If you have not already done so, I encourage you to serve as a mentor to a student pharmacist because we still have students who need mentors! See more information on how you can make an impact as a volunteer mentor here: <http://bit.ly/wsupharmacymentors>.

I also wanted to reiterate my thanks to all our alumni and friends who joined us to celebrate our 125th anniversary in 2016. We received many comments and messages after our 125 gala in November telling us how special it was to get together with classmates, faculty and friends, and how much fun you had with us. Based on this outpouring of enthusiasm, we have decided to launch another coordinated effort to bring together the CougaRx Nation in mass again this fall. Stay tuned for details as we formalize plans, but please mark your calendars now to join us in Spokane before the WSU Football Homecoming Weekend on October 20! Our goal is to provide opportunities for you to maintain and enhance relationships, network, and reconnect with fellow alumni, so please plan to join us for fun with fellow alumni and friends in 2017. Our [online events calendar](#) will be updated as details get announced.

Looking forward to the “next 125 and counting” with Cougar Pride,



Linda Garrelts MacLean, BPharm, RPh  
Vice Dean of External Relations  
Clinical Professor

## ALUMNI NEWS



### STUDENT NEWS

This past fall, APhA-ASP provided a number of community health screenings and vaccination clinics, including a new initiative to screen for HIV. [Read more »](#)



### WAVE THE FLAG

The winner of our wave the flag contest is Ryan Nottingham and James Leonard, both class of 2016! Thank you to everyone who submitted a photo. [View all entries here »](#)



### GENEROSITY NEWS

Thank you to Greg, class of 1992, and Doris Gibbons, for their recent contribution to the [Greg and Doris Gibbons Scholarship Endowment](#) and the [Dean's Endowed Professorship](#).

## ALUMNI UPDATES

- Classmates Julie Akers and Brian Courtney, both class of 2000, had a chance to catch up during the ASHP Midyear meeting in Las Vegas! Akers is a clinical assistant professor at the WSU College of Pharmacy. Brian is the vice president of sales and marketing at Fagron. [View photo »](#)
- We recently heard from Mylinh Nguyen, class of 2013! Mylinh shared a photo with us of her and her fiancé who she met on the Vietnam Health Clinic mission four years ago. [View photo »](#)
- Jon Bernhoft, class of 1977, passed away in December. Our deepest condolences to the Bernhoft family. [View story »](#)

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

## FACULTY SCHOLARSHIP

### Publications

- Pharmaceutical Sciences Professor and Associate Dean for Graduate Education **Kathryn E. Meier** published, “Editor’s Note,” in the journal *Molecular Pharmacology* in January 2017. Meier serves as editor for the journal, which is a publication of the American Society for Pharmacology and Experimental Therapeutics (ASPET). [read article »](#)
- **Kathryn Meier** and one co-author published the book chapter, “Free fatty acid receptors and cancer: from nutrition to pharmacology,” in the *Handbook of Experimental Pharmacology* published in October 2016 by Springer Berlin Heidelberg. [read abstract »](#)
- Pharmacotherapy Clinical Professor **Terri L. Levien** and Pharmacotherapy Professor and Associate Dean for Professional and Continuing Education **Danial E. Baker** published, “Drug evaluation – crisaborole topical ointment 2%: preliminary evaluation,” in *Wolters Kluwer Health’s The Formulary Monograph Service (FMS)* in November 2016. Wolters Kluwer Health is a drug and health information publisher, the FMS is a resource used in the formulary decision making process for hospitals and managed care systems on recently released and investigational drugs.
- **Danial Baker** published, “Drug evaluation – plecanatide: preliminary evaluation,” in *The FMS* in November 2016.
- **Danial Baker** published, “Drug evaluation – apaziquone (Qapzola): preliminary evaluation,” in *The FMS* in November 2016.
- **Danial Baker, Terri Levien** and one co-author published, “Drug evaluation – telotristat etiprate: preliminary evaluation,” in *The FMS* in November 2016.
- **Terri Levien** and **Danial Baker** published, “Drug evaluation – irinotecan liposome injection (Onivyde),” in *The FMS* in November 2016.
- **Danial Baker** published, “Drug utilization evaluation – methylnaltrexone injection & oral (Relistor),” in *The FMS* in November 2016.
- Pharmaceutical Sciences Assistant Professor **Zhaokang Cheng**, Pharmaceutical Sciences Postdoctoral Research Associate **Peng Xia** and one author published, “Signaling pathways in cardiac myocyte apoptosis,” in *Biomed Research International*, a peer-reviewed, open access journal from the Hindawi Publishing Company (2016:9583268. doi: 10.1155/2016/9583268. Epub 2016 Dec 22). [read article »](#)
- Pharmacotherapy Clinical Assistant Professor **Shannon G. Panther**, Pharmacotherapy Associate Professor and Assistant Dean for Assessment and Accreditation **Brenda S. Bray** and Pharmacotherapy Professor and Chair **John R. White, Jr.**, published, “The implementation of a naloxone rescue program in university students,” in the *Journal of the American Pharmacists Association*.
- **Terri Levien, Danial Baker** and one co-author published, “Sugammadex,” in the independent, peer-reviewed journal *Hospital Pharmacy* in August 2016 (2016;51(7):585-596). [read article »](#)
- **Danial Baker** and one co-author published, “Defibrotide,” in the journal *Hospital Pharmacy* in November 2016 (2016;51(10):847-854).
- **Anne Kim** and **Danial Baker** published, “Daclizumab,” in the journal *Hospital Pharmacy* in December 2016 (2016;51(11):928-939).
- **Danial Baker** published, “High drug prices: so who is to blame?” in the journal *Hospital Pharmacy* in January 2017 (2017;52(1):5-6). [read article »](#)

### Presentations

- Pharmacotherapy Associate Professor **Joshua J. Neumiller** and two others presented, “Individualizing insulin therapy for Type 2 diabetes mellitus,” as a midday symposium and live webinar conducted at the 51st ASHP Midyear Clinical Meeting and Exhibition on December 5, 2016, in Las Vegas, Nevada.
- **Joshua Neumiller** and one co-presenter delivered, “2017 ADA Standards of Medical Care,” via webinar for the American Association of Diabetes Educators (AADE) on January 26, 2017.

### Service

- **Joshua Neumiller** served on the professional practice committee and as a sub-group leader that updated the American Diabetes Association [Standards of Medical Care in Diabetes-2017](#).
- **Josh Neumiller** served as an abstract reviewer for presentation submissions at the 77th Scientific Sessions of the

American Diabetes Association.

## Grants

- **Kathryn Meier** received continued funding in the amount of \$27,000 over three years from the American Society for Pharmacology & Experimental Therapeutics (ASPET) for the WSU College of Pharmacy's Summer Undergraduate Research Fellowship (SURF) Program.
- Pharmacotherapy Clinical Associate Professor **Lisa Woodard** received \$10,000 over one year from the Washington State Department of Health and Spokane Regional Health District to continue the project titled, "State and local public health actions to prevent obesity, diabetes, heart disease, and stroke." The project was originally funded through the Spokane-based non-profit organization Better Health Together under the title, "1422 grant to improve health for all Americans."
- Pharmacotherapy Clinical Assistant Professor **Kimberly McKeirnan**, Pharmacotherapy Research Resident in Medication Optimization **Kyle Frazier** and Pharmacotherapy Clinical Professor and Vice Dean for External Relations **Linda Garrelts MacLean** received \$5,847 over six months from Albertsons Companies, LLC for the project titled, "Idaho Pharmacy Technician Immunization Training (pilot)."
- Pharmaceutical Sciences Associate Professor **David Liu** received \$452,841 over three years from the National Institutes of Health for the project titled, "Mechanism of ATF5 addition in breast cancer."

## Awards

- **Danial Baker** was one of 23 members of the Healthcare Quality and Safety Expert Committee that was selected for the U.S. Pharmacopial Convention (USP)'s 2016 Award for Outstanding Contribution to USP Standards. An award certificate will be presented at a special awards ceremony during the meeting of the USP's governing bodies on February 13, 2017, in Rockville, Maryland.

## STUDENT ACHIEVEMENT

### Doctor of Philosophy (Ph.D.) students

- **Yili Zhong**, pharmaceutical sciences (Pollack lab), successfully defended her thesis, "Development of hysteresis analysis as a model-independent approach," in the summer 2016.
- **Victor Bii**, pharmaceutical sciences (Trobridge lab), successfully defended his thesis, "Retroviral vector mutagenesis screens to identify cancer driver genes and prognostic biomarkers," in the fall 2016.
- **Kari Gaither**, pharmaceutical sciences (Liu lab), presented, "ATF5 is important for cellular homeostasis and transformation in breast cancer cells and is regulated by microRNA," as part of the WSU College of Pharmacy Graduate Research Seminar Series on December 16, 2016.
- **Xinyue (Sheena) Dong**, pharmaceutical sciences (Zhenjia Wang lab), presented, "Cell membrane-derived nanovesicles prevent cerebral ischemia/reperfusion injury," as part of the WSU College of Pharmacy Graduate Research Seminar Series on December 9, 2016.
- **Sihan Wang**, pharmaceutical sciences (Zhenjia Wang lab), presented, "Bacterium membrane-derived nanovesicles as a vaccine for prevention of Pseudomonas aeruginosa infection," as part of the WSU College of Pharmacy Graduate Research Seminar Series on December 2, 2016.
- **Ana Vergara**, pharmaceutical sciences (Lazarus lab), was selected by the American Society for Pharmacology and Experimental Therapeutics (ASPET) for its 2017-18 cohort of the ASPET Mentoring Network. Vergara will receive a \$1,000 travel award to attend the program's kickoff luncheon at the Experimental Biology 2017 conference in Chicago this April.
- **Yuening Liu** pharmaceutical sciences (Cheng lab), with faculty co-authors **Zhaokang Cheng** and **Peng Xia** published, "Signaling pathways in cardiac myocyte apoptosis," in Biomed Research International (2016:9583268. doi: 10.1155/2016/9583268). [read article »](#)
- **Ana Vergara** presented, "Characterization of UDP-glycosyltransferase 3A (UGT3A) enzymes in tobacco carcinogen metabolism," as part of the WSU College of Pharmacy Graduate Research Seminar Series on January 27, 2017.
- **Panshak Dakup**, pharmaceutical sciences (Gaddameedhi lab), presented, "Understanding the role of the circadian clock in modulating cisplatin-induced DNA damage repair and its therapeutic efficacy against cancer," as part of the WSU College of Pharmacy Graduate Research Seminar Series on January 13, 2017.

## Doctor of Pharmacy (Pharm.D.) students

- The WSU chapter of the American Pharmacists Association Academy of Student Pharmacists (APhA-ASP) coordinated four community health screenings during the 2016 fall semester. WSU student pharmacists administered 316 influenza vaccinations, provided 87 cholesterol and blood sugar screens, and screened 14 people for HIV.
- **James Kent** published the article, “From advocacy to implementation in Washington State,” a Q&A interview with Washington State Pharmacy Association CEO Jeff Rochon, in the APhA Student Pharmacist Magazine in November 2016. [read article »](#)
- **James Kent** published the article, “‘Together we can’ in action,” in the Journal of the American Pharmacists Association, Volume 56, Issue 6, pages 617-618. [read article »](#)
- **Uzoma Mbogu** and faculty co-authors **Danial Baker** and **Terri Levien** published, “Drug evaluation – telotristat etiprate: preliminary evaluation,” in The FMS in November 2016.

## JOBS

- [Clinical Assistant Professor](#)  
Pharmacotherapy - Yakima Valley Memorial Hospital
- [Clinical Assistant Professor](#)  
College of Pharmacy - Yakima