



UPCOMING EVENTS

COLLEGE NEWS

ALUMNI NEWS

FACULTY SCHOLARSHIP

A MESSAGE FROM GARY M. POLLACK



September 2018

Dear Friends and Colleagues:

Well, the summer has flown by, as summers tend to do (although the rate of flow seems to increase exponentially from one year to the next), and we already are a couple of weeks deep into the fall semester. We had the honor of welcoming students in Spokane and Yakima into our Doctor of Pharmacy program with a traditional white coat ceremony, as well as welcoming seven new students into our Ph.D. program. Watching a new group of students take the first steps on the next leg of their academic journeys is a distinct pleasure. The WSU College of Pharmacy and Pharmaceutical Sciences is fortunate to have such a talented group of young professionals and scientists, and I look forward to seeing how their journeys unfold.

The pharmacy profession continues to provide outstanding opportunities for our graduates. A [recent analysis](#) by Glassdoor of the 25 highest-paying professions in the United States placed pharmacy professionals (“pharmacy managers” and “pharmacists”) second and third, respectively, behind “physicians.” This is tangible evidence of the value placed on the pharmacy profession by our society. Compensation, while important, is of course only part of the picture. The opportunity to have a positive impact on individuals and communities is an intrinsic element of the pharmacy profession, and one that is valued highly by practitioners.

Opportunities for pharmacists in our own state continue to be robust. Washington [labor projections](#) indicate that the need for new pharmacists will exceed the number of new graduates from the two in-state programs over the next five years. Much of this need falls outside of the urban corridors in Seattle and Spokane, and speaks to the crucial need to address disparities in access to care in rural areas, in Washington and throughout the United States. Our program extension in Yakima is preparing future practitioners to meet this need, and we are looking forward to the first Yakima-based graduating cohort in May 2019.

With one final welcome to the new students, staff and faculty who have joined our college, best wishes for the coming semester.

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



UPCOMING EVENTS



Career Seminar
12:00 p.m. – 1:00 p.m.
PBS Walgreens Auditorium,
Spokane



**Virtual Pharmacy
School Fair**
9:00 a.m. – 6:00 p.m.



CPPS Research Seminar
12:00 p.m. – 1:00 p.m.
PBS Walgreens Auditorium,
Spokane



**Pharmacy Homecoming
Weekend**
September 28-29
Spokane & Pullman

[More college events >>](#)

COLLEGE NEWS

WSU Spokane researchers develop potential drugs to help curb smoking

[WSU Insider article](#) by Eric Sorensen, WSU News

SPOKANE, Wash. – Washington State University researchers have created more than a dozen candidate drugs with the potential to curb smokers' desire for nicotine by slowing how it is broken down in the body. The researchers hope the substances can help people reduce their consumption of tobacco, if not quit altogether.

The discovery, published in the [Journal of Medicinal Chemistry](#), targets a liver enzyme, called CYP2A6, which metabolizes nicotine. Canadian researchers in the mid-90s found that people who have fewer copies of a gene for the enzyme tend to smoke less and are less likely to be addicted to smoking.

Nicotine triggers the release of dopamine and serotonin, two pleasure causing chemicals produced by the body. But as it gets metabolized, users can experience withdrawal symptoms like tingling in the hands and feet, sweating, anxiety and irritability.

This is the feeling that the researchers are targeting, said [Travis Denton](#), assistant professor of pharmaceutical sciences, lead author and a former tobacco chewer who has been working on solutions to nicotine dependence for 15 years.

"I quit cold turkey and I know how hard it is. Would this have helped? I believe so, because again, the people who want to quit, really want to quit," he said. "They just can't because it's too doggone hard. Imagine if you could take this pill and your jitters don't come on as fast – it's just super reinforcing to help you quit."

Denton and [Philip Lazarus](#), co-corresponding author of the paper and Boeing distinguished professor of pharmaceutical sciences, designed dozens of molecules that bind to CYP2A6 and inhibit its ability to metabolize nicotine.



“If you inhibit CYP2A6, it shouldn’t bother your overall health,” said Lazarus. “If we could specifically target this enzyme, people should be fine, and it will possibly help them stop smoking or at least decrease their amount of smoking.”

So far, the researchers have tested their candidate drugs to make sure they don’t disrupt other major enzymes that help the body metabolize other substances. This helped narrow the number of potential drugs down to 18.

Once the Food and Drug Administration verifies a drug’s safety, clinical trials would begin to see how it works in a human.

Other researchers working with Denton and Lazarus are Pramod Srivastava, Zuping Xia, Gang Chen, Christy Watson and Alec Wynd. All are currently or were previously in the College of Pharmacy and Pharmaceutical Sciences at WSU Spokane. The work was supported by the Health Sciences and Services Authority of Spokane County.

Better treatments for RA the focus of this graduate fellowship award

Ruby Siegel is searching for a better way to treat rheumatoid arthritis.

According to Siegel, this painful auto-immune disease affects one percent of the population worldwide and currently there is no cure. Siegel recently received a Graduate Student Fellowship from the Rheumatology Research Foundation (RRF). The fellowship includes \$1,000 to Washington State University and \$3,000 directly to Siegel to fund her research.

Siegel is a Ph.D. student in the Pharmaceutical Sciences Graduate Program at the WSU College of Pharmacy and Pharmaceutical Sciences (CPPS). She works in the research lab of Associate Professor Salah-uddin Ahmed on the WSU Health Sciences campus in Spokane. Her research involves cultured cells from the synovial lining of the joints of patients with rheumatoid arthritis. She is looking into how these cells propagate inflammatory signals which lead to bone and cartilage destruction.

“A better understanding of inflammatory signaling pathways in human joint cells can point the way for targeted drug development for rheumatoid arthritis,” Ahmed said.

Siegel started on the project this summer, and will provide a final report on her findings to the RRF next year.

“Once we understand the target molecules, we can test compounds from natural sources or small-molecule inhibitors intended to halt progression of the disease,” Siegel said.

The RRF is the nation’s largest private funding source of rheumatology research and training. The RRF fellowship is designed for mentor-mentee pairs to encourage new researchers to specialize in the area rheumatology. Ahmed and Siegel submitted a project proposal in May 2018. The award includes complimentary registration and travel for the American College of Rheumatology (ACR) annual meeting in Chicago this October, where the research duo will be recognized along with other fellowship winners.

“I am excited to present a poster of our data in the Rheumatoid Arthritis Animal Models session at the ACR meeting,” Siegel said. “There are thousands of attendees, from researchers to rheumatologists to



Siegel

nurses to pharmacists. I will have the opportunity to present data from this project, to network with top rheumatology researchers, and to gather ideas for my future dissertation research.”

Siegel’s poster presentation will be at the McCormick Place convention center in Chicago on October 21, 2018.

“Truly this award would not have been possible without the mentoring and encouragement provided by Dr. Ahmed, and the support of others in the lab,” Siegel said. The Ahmed lab researchers include a post-doctoral fellow, Anil Singh, and graduate students Sabrina Fechtner and Mahamudul Haque.

Siegel is from Spokane, Washington. She completed a bachelor’s degree in biology at Gonzaga University, and a master’s degree in biology and biotechnology at Eastern Washington University.

“I was impressed by the variety of research specialties and high caliber of the faculty here [at WSU]. It is exciting to see the growth of medical research here as well,” Siegel said. After completing her Ph.D., Siegel hopes to become the director of her own clinical laboratory.

Siegel’s research project will contribute to advancing human health through collaborative research, which is part of the WSU CPPS mission. Health science research in Spokane also contributes to the [WSU Grand Challenges](#) research initiative, specifically to the pursuit of healthier people and communities, deepening our understanding of health and the onset and progression of disease.

Spokane: an international summer destination for pharmacy school

Penny Prime originally wanted to study medicine. Charlotte Hambly started in dentistry.

“I was interested in the health care/patient care aspect, so I did an experience (job shadow) in pharmacy and liked it,” Hambly said.

“I did a work experience in pharmacy and really liked it. Prior to that I had no idea about what the job was,” Prime said.

Having found the pharmacy profession, both girls are attending the [School of Pharmacy and Pharmaceutical Sciences](#) at Cardiff University in Wales, one of the top-rated pharmacy programs in the UK. The two student pharmacists came to Spokane this summer to participate in specialty pharmacy experiences hosted by the Washington State University College of Pharmacy and Pharmaceutical Sciences (CPPS).

International and camp rotations are once-in-a-lifetime opportunities provided through the WSU CPPS [Office of Experiential Services](#). These unique rotations allow our student pharmacists the opportunity to experience the practice of pharmacy in diverse cultural and clinical settings.

Just as our 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 here in Spokane.

Hambly and Prime were in Spokane from July 2 through August 5. They were able to participate in or observe pharmacy practice at the WSU Drug Information Center, Sixth Avenue Pharmacy, the Providence Visiting Nurses Association (PVNA), as well as spend dedicated time learning from a variety of clinical and research faculty at the college. They also got bonus visits to the Sacred Heart Birth Place



from left: Charlotte Hambly and Penny Prime

where they got to interact with Alyson Blum (WSU class of 2014) who serves as a specialty pharmacist to the birthing unit, and to the Spokane Mann-Grandstaff VA Medical Center where they got a tour from Cheyenne Newsome and learned about automated dispensing machines, IV preparation, and pharmacists' role in the inpatient setting.

"It was a great opportunity we didn't think we would get," Prime said.

Prime is originally from East Sussex and Hambly is from Neath, South Wales. They are both part of the class of 2020 at Cardiff and are both interested in pursuing careers in hospital pharmacy.

"I am jealous of the fourth year here," Hambly said. "Experiential is after you graduate in Wales. Here you get to try a bit of everything and get a taste for each specialty."

That was not the only difference they noticed about pharmacy practice in the U.S.

"Here, pharmacists are used a lot more. It's a higher career," Hambly said. "I would say the experience has opened doors, made me realize there are more options than you'd think. The fact that you can specialize is a cool thing, it's a career you can take anywhere. This was a very good experience."

While they were here, the duo also had the opportunity to experience some the non-pharmacy aspects of the Greater Spokane area, including a Spokane Indians baseball game and kayaking on Priest Lake.

"Thank you to all the people who made this experience what it was! Everyone was helpful, friendly, lovely really," Prime said.



REGISTRATION NOW OPEN!

Crimson Gala SEPT. 28

TAILGATE SEPT. 29



Dear Alums, Colleagues and Friends of Pharmacy,

We are so fortunate to have an alumni base that is committed to our college. It is the contributions from many that make our pharmacy school so special—second to none across the country. Our Crimson Gala this year celebrates that alumni dedication as we invite classes to gather and reminisce, honor all of the individuals recognized as Alumni of the Year, Preceptor of the Year or Mentor of the Year, and remember a very special person: Dean Emeritus Larry Simonsmeier.

If you are part of the 1958, 1968, 1978, 1988, 1998, or 2008 classes, be sure to join us at the Crimson Gala for your class reunions! Our class captains are rounding up classmates for the September 28 event. For example John Swenson, class captain for 1968, has been helping us by reaching out to classmates to attend. Gerald Briggs, though not able to attend this year, will be writing a recap to his class (as he did when the class gathered together twenty years ago). Holly Whitcomb Henry, class of 1978, has been in communication with our class and we already know that Linda Peterson (and Stan, class of 1976) and Phyllis Chun Robinson are looking forward to seeing everyone during the Pharmacy Homecoming Weekend. So, class of '78, send those reservations in and we will seat everyone together! (Do you all still want to sit at the back of the room?)

We will also gather to honor the legacy that Larry M. Simonsmeier left for so many of us. We are beginning to hear your stories, but would urge each of you to send us a memory about how Larry touched you! Ron Schleif, class of 1976, sent us this note:

“Carol (Nightingale, class of 1979) and I both knew Larry. He taught the pharmacy law class when I was in my final year and was truly a breath of fresh air. Extremely personable, full of cheer and optimism. I can still remember Larry literally hopping on both feet down the stairs of College Hall one morning. Carol and I applaud the College of Pharmacy for making this effort and are keen to contribute.”

I would like to close with perspective provided by Larry Simonsmeier in The WSU Pharmacist from 1980. I suspect many of you can “hear” his voice:

“This may be the first time you’ve ever read a memo from an acting dean. Some of you have queried as to what an acting dean does, while others have accused me of impersonating a ‘real’ dean or pretending to be a dean! This makes some members of the faculty nervous, and they claim that I am beginning to ‘act more and more like a dean as time goes by!’”

Our “acting dean” who ended up as our emeritus dean was an inspiration to us. His words encouraged us to go on to do “great things for the profession,” provided us with the impetus to strive to be our best and reminded us to value each other and the relationships that were created in pharmacy school. As noted in many of our communication pieces, Larry was a friend to all.

There is still time to register, communicate with your classmates or sign up as a sponsor for this special event. So please join us!

With Cougar Pride,



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

ALUMNI NEWS



WSU AWIS RECOGNIZED FOR STEM ADVOCACY

The WSU student organization affiliated with the Association for Women in Science (AWIS) was recognized for its STEM advocacy activity this past year.

[Full story on page 8 »](#)



ALUMNI VOLUNTEERS NEEDED!

We are looking for some help from our CougaRx Nation on September 12 to live chat with prospective students during the AACP hosted Virtual Pharmacy School Fair.

[Sign up online »](#)



WHITE COAT

During August we welcomed our class of 2022! White Coat Ceremonies were conducted in Spokane and Yakima for the incoming class.

[View Spokane photos »](#)

[View Yakima photos »](#)

ALUMNI UPDATES

- We are sad to report the death of **Thomas Ray Jerrells**, Ph.D., in May. Tom was a professor at WSU in the department of pharmaceutical sciences from 1995-1999, and served as the director of the pharmacology/toxicology graduate program from 1996-1999. Our deepest condolences to his family. The academic community and WSU has lost a terrific scientist, educator, and alumni. [Read more »](#)
- **Bert Porter**, class of 1950, received the Paul Harris Fellow award from The Rotary Foundation of Rotary International. [Read more »](#)
- Professor Emeritus **R. Keith Campbell** received the 2018 Lifetime Achievement Award from the American Association of Diabetes Educators. His daughter Kimberlee Campbell accepted the award during the AADE Annual Meeting in Baltimore in August. [See her post about it »](#)
- We discovered **Natasha Heimbigner**, class of 2014, is an avid blogger! She chronicled her adventures in Ecuador this summer as a pharmacy preceptor for our international APPE partner [One Heart Global Ministries](#). Check out her blog, [Tale of the Traveling White Coat](#)

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.



WSU graduate student organization recognized for STEM advocacy

The Association for Women in Science (AWIS) Inland Northwest-Washington State University affiliated student organization was recognized for its activity in STEM advocacy this past year in Spokane.

AWIS is a global network with 80 grassroots chapters and affiliates connecting more than 100,000 professionals in STEM worldwide. The WSU group, based on the WSU Health Sciences campus in Spokane, was selected as one of 10 affiliates nationwide for the AWIS STAR Award.

The AWIS Star Award, announced in April, honors the affiliate groups which have accomplished key objectives outlined in the group's strategic plan. According to AWIS, the WSU-affiliated activities over the past year have focused on breaking down the systemic issues women in STEM face, which was a key factor in the group's selection for the award. WSU AWIS activities included two leadership summits, a series of special topic events that covered issues ranging from time management to implicit bias, involvement fairs, and work on a childcare subsidy program for students.

"Being selected for the AWIS Star Award has been an honor. We are launching a Mentoring Circle Program for the 2018-19 academic year and hope it serves to propel women in science at WSU Health Sciences to pursue leadership positions in research-related careers," Ana Vergara said. She is a graduate student in pharmaceutical sciences in Spokane.

WSU AWIS officers include:

Ana Vergara, co-founder and president
Kari Gaither, co-founder and vice president
Yadira Perez-Paramo, programs director
Irina Teslenko, communications director
Priyanka Bushana, secretary
Senada Karnak, visiting scholar volunteer

This recognition is an example of how the WSU College of Pharmacy and Pharmaceutical Sciences is committed to developing outstanding scientists through providing opportunities for graduate students to participate in advocacy for STEM and for their future profession.

The AWIS vision is for women in STEM to be compensated fairly and without discrimination, advanced equitably and without bias, exposed to successful role models in leadership positions, and recognized and respected for their scientific and leadership achievements. This aligns with The WSU Grand Challenges research initiative at WSU, specifically regarding advancing opportunity and equity by promoting women and historically underrepresented groups entering STEM disciplines.

Graduate students at WSU Health Sciences in Spokane interested in getting involved or seeking information on events can contact the affiliate group at awis.inlandnw@wsu.edu.



2017-2018 WSU AWIS chapter officers and faculty advisors



DOCTOR OF PHARMACY

AACP

Virtual Pharmacy School Fair - September 12

We need volunteers!

FACULTY SCHOLARSHIP

Publications

- R. Keith Campbell Distinguished Professor and Pharmacotherapy Chair **John R. White Jr.** and three co-authors published, “From randomized controlled trials to the real world: putting evidence into context,” in The Journal of Family Practice, a peer-reviewed publication from MDedge, in August 2018.
- **John White** and four co-authors published, “Low incidence of gastrointestinal adverse events over time with a fixed-ratio combination of insulin glargine and lixisenatide vs lixisenatide alone,” in the peer-reviewed medical journal Diabetes, Obesity, and Metabolism in June 2018. [View abstract »](#)
[Video summary of findings »](#)
- Allen I. White Distinguished Associate Professor **Joshua J. Neumiller** and one co-author published, “2018 standards of care update: pharmacologic approaches to glycemic management in people with Type 2 diabetes,” in Diabetes Spectrum, a peer-reviewed publication from the American Diabetes Association in August 2018. [View abstract »](#)
- **Joshua Neumiller** and one co-author published, “Pearls for your practice: a clinician’s guide to recently published guidelines and position statements,” in Diabetes Spectrum in August 2018. [View abstract »](#)
- Pharmaceutical Sciences Assistant Professor **Travis T. Denton**, Pharmaceutical Sciences Associate Research Professor **Zuping Xia**, Pharmaceutical Sciences Associate Research Professor **Gang Chen**, Pharmaceutical Sciences Associate in Research **Christy J.W. Watson**, Boeing Distinguished Professor and Pharmaceutical Sciences Chair **Philip Lazarus** with two co-authors published, “Identification of the 4-position of 3-alkynyl and 3-heteroaromatic substituted pyridine methanamines as a key modification site eliciting increased potency and enhanced selectivity for cytochrome P-450 2A6 inhibition,” in the Journal of Medicinal Chemistry, a peer-reviewed publication from the American Chemical Society, in July 2018.
- Pharmacotherapy Professor and Associate Dean for Professional and Continuing Education **Danial E. Baker** published, “Drug evaluation – lofexidine (Lucemyra): preliminary evaluation,” in Wolters Kluwer Health’s The Formulary Monograph Service (FMS) in August 2018. 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.
- Pharmacotherapy Clinical Professor **Terri L. Levien** and **Danial Baker** published, “Drug evaluation – sodium zirconium cyclosilicate (Lokelma): updated evaluation,” in the FMS in August 2018.
- **Danial Baker** published, “Drug evaluation – polyethylene glycol 3350, sodium ascorbate, sodium sulfate, ascorbic acid, sodium chloride and potassium chloride for oral solution (Plenvu),” in the FMS in August 2018.
- **Danial Baker** published, “Drug evaluation – avatrombopag (Doptelet),” in the FMS in August 2018.
- Pharmacotherapy Specialty Resident in Drug Information **Kalvin Stoker** and **Danial Baker** published, “Drug evaluation – erenumab-aooe (Almovid): updated evaluation,” in the FMS in August 2018.

- **Danial Baker** published, “Drug utilization evaluation – sodium zirconium cyclosilicate (Lokelma),” in the FMS in August 2018.
- Pharmaceutical Sciences Professor and Associate Dean for Faculty and Student Development **Kathryn E. Meier** and one co-author published “The role of CCN4/WISP-1 in the cancerous phenotype,” in the peer-reviewed journal Cancer Management and Research in August 2018. [View abstract »](#)
- Pharmacotherapy Clinical Assistant Professor **Kimberly McKeirnan** and Pharmacotherapy Clinical Assistant Professor **Taylor Bertsch** published, “ITCA 650,” in Clinical Diabetes, a peer-reviewed publication from the American Diabetes Association in July 2018.
- **Travis Denton** and fifteen co-authors published, “Rewiring of glutamine metabolism is a bioenergetic adaptation of human cells with mitochondrial DNA mutations,” in Cell Metabolism in May 2018. [View abstract »](#)

Presentations

- **Joshua Neumiller** and three co-presenters presented the Medscape program, “FRC therapies: improving glycemic lowering while minimizing side effects,” at the Annual Meeting of the American Association of Diabetes Educators (AADE) on August 18, 2018, in Baltimore, Maryland.
- **Joshua Neumiller** and three co-presenters presented the Medscape program, “Basal insulin in the modern era: the CDEs role in improving utilization and outcomes” at the AADE on August 19, 2018, in Baltimore, Maryland.
- Pharmaceutical Sciences Assistant Professor **Zhenjia Wang** was an organizer for the symposium, “Nanomedicines: from fundamentals to applications,” at the fall national meeting of the American Chemical Society, August 19–23, 2018, in Boston, Massachusetts.
- **Zhenjia Wang** presented the invited talk, “Neutrophil-based drug delivery systems,” at the fall national meeting of the American Chemical Society in Boston.
- Pharmacotherapy Clinical Assistant Professor **Cheyenne Newsome**, Pharmaceutical Sciences Clinical Assistant Professor and Director of the Advancement of Teaching and Learning Excellence **Connie Remsberg** and one co-presenter presented “Student perceptions and engagement level in flipped learning vs. lecture-based instruction,” at the American Association of Colleges of Pharmacy (AACCP) Annual Meeting July 21–25, 2018, in Boston, Massachusetts.

Awards

- **Travis Denton** and two others were selected for the WSU I-Corps program with the team, “MakTay Neurosciences,” Now as part of the National Science Foundation (NSF) National Innovation Network, the team is now designated as an “NSF-funded project” which allows them to apply through the NSF National I-Corps program and NSF SBIR/STTR Grants.
- **Travis Denton** was named co-PI on a National Science Foundation Major Research Instrumentation (MRI) award for the project, “Acquisition of a Single Crystal X-ray Diffractometer to Serve as a Regional Resource.” Award No. 1827313

STUDENT ACHIEVEMENT

Ph.D.

- **Laken M. Kruger** (pharmaceutical sciences, Denton lab) presented the poster: “Synthesis of biologically relevant a-ketphosphonates,” at the American Chemical Society’s 73rd Northwest Regional Meeting (NORM18) June 24, 2018, in Richland, Washington. Co-authors include: **Dunxin Shen** (pharmaceutical sciences, Denton lab) and faculty mentor **Travis Denton**.
- **Dunxin Shen** presented the poster: “Synthesis, in vitro and in vivo analysis of phosphonate analogues of lanthionine ketimine: development of small molecule treatments for neurological disorders,” at NORM18 June 24, 2018, in Richland, Washington. Co-authors include: faculty mentor **Travis Denton** and three additional co-authors

Pharm.D.

- **Khuntia Porter** and **Duy Ho** placed third in the Student National Pharmaceutical Association (SNPhA) National Clinical Skills Competition.
- **Duy Ho** received the Rite Aid Community Leader of the Year Award.



College of

**Pharmacy and
Pharmaceutical Sciences**

WASHINGTON STATE UNIVERSITY

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