Dear Friends and Colleagues:

It is difficult, and maybe inappropriate, to begin any commentary on any subject today without acknowledging the devastation experienced by the residents of Houston and surrounding areas in the wake of Hurricane Harvey. We have reached out to our two sister programs in the region, the University of Houston and Texas Southern University, to explore ways in which we might assist their students and faculty as the area recovers. Residents of the Gulf Coast are obviously kept closely in our thoughts these days.

We had the distinct pleasure of welcoming our new first-year students in Spokane and Yakima with White Coat ceremonies on August 17 and 18. This is an extremely deep and talented class of young professionals. In my “other job” as a member of the faculty, I have greatly enjoyed interacting with our Spokane-based students as they begin to learn the mysteries of pharmacokinetics, and am looking forward to my next trip to Yakima to interact with our students there. I also have been extremely impressed with our newest batch of students in the pharmaceutical sciences graduate program. Enrollment of Ph.D. intending students now stands at 30, which represents significant program growth over a short period of time.

It often is difficult for faculty to look at a class of students and view them as individuals instead of simply as members of a larger group. It is not uncommon to hear faculty colleagues from around the country comment that students do not appear to be fully engaged with their studies, that students “game” the learning process, or that students simply are not sufficiently “professional”. (I might also express my disappointment that students today do not write on wax tablets or know the intricacies of using a slide rule, but that’s just me.)

There was a recent op-ed piece in the New York Times that, while focused on students pursuing associate and baccalaureate degrees, is relevant for understanding contemporary students pursuing the Doctor of Pharmacy degree (and other professional doctorates as well). The author, Gail Mellow, presented some truly surprising statistics, among which are: about 25 percent of undergraduates are 25 years of age or older, more than 40 percent of students work a minimum of 30 hours per week outside of school, and approximately 25 percent of students are single parents. We do not have accessible comparative data for pharmacy students, but the overall profile rings true: our students are increasingly more mature, have increasing out-of-school responsibilities, and have suffered, perhaps disproportionately, from lingering economic pressures associated with the Great Recession. Taken together, these factors suggest that students today will behave differently than students from past generations. And it is time that we faculty concede that those differences are ok, because that is recognizing the world for what it is as opposed to what some of us might wish it to be.

I wish all our students well as they begin a new academic year. We have a great deal of pride in them, and look forward to celebrating with them as they continue along their individual educational journeys.
WSU College of Pharmacy continues to align for future success

Google. Amazon. Warby Parker. These disruptors of business and industry have some common characteristics: innovation in thinking, transformation of the status quo, flexibility in their growth.

These traits are not necessarily associated with institutions of higher education, especially ones who may have just celebrated a 125-year history, but our vision is to be a leader in advancing, promoting and protecting human health. To be true to that mantra while educating outstanding health care professionals and scientists, we have chosen to lead by example and make a trail that can hopefully guide others to join the movement in transforming health care education for the better.

Five years ago, the Washington State University College of Pharmacy made a commitment to the transformation and innovation of the way it educates health care professionals and scientists. The college strives to provide a transformative educational experience with a focus on student-centered learning that will contribute to the patient-centered care teams of the future, and to challenge the status quo in order to develop practice-ready graduates who will lead tomorrow’s health care solutions.

Our successes can be measured in many ways. One is demonstrated in the milestone we reached this year with the third cohort of Doctor of Pharmacy (Pharm.D.) students beginning their pharmacy education in Yakima. Our decision to extend...
our Pharm.D. program to a second location on the Pacific Northwest University of Health Sciences campus was spurred by our commitment to extend access to high-quality education within our state. Plus, offering our program in Yakima was a perfect catalyst for the transformation of our Pharm.D. curriculum into a student-centered and active-learning model.

What we have accomplished so far has garnered national attention. This year we hosted our second Transformation in Pharmacy Education (TIPed) Institute which drew attendees from our peer institutions across the U.S., and within our own university we have been highlighted as a program to emulate.

Over the summer, the college made several organizational and administrative shifts in order to put us in a better position to accommodate the evolution we have undergone and more importantly capitalize on the opportunities we now face for the future. Here’s what you may have missed at the WSU College of Pharmacy this summer:

**WSU graduate program in pharmaceutical sciences gets new leadership, structure**
Administration of the pharmaceutical sciences graduate program has been moved within the Department of Pharmaceutical Sciences. As chair of the department, Dr. Phil Lazarus will provide overall leadership for the graduate program and Dr. Susan Marsh has been named the new director of graduate studies. Christina Brelia is now a program coordinator supporting the graduate program.

**New role for faculty and student development**
Our former associate dean for graduate education, Dr. Kathryn Meier, has transitioned into a new role as associate dean for faculty and student development. WSU President Kirk Schulz has identified faculty development, excellence in teaching, and the delivery of a transformative student experience as keys to the success of the Drive to 25 initiative. Meier’s efforts in this new position are therefore of strategic importance to the college and the university.

**Professional education realigns for better focus on Doctor of Pharmacy residency programs**
As the future of pharmacy evolves to envelope personalized medicine through integration of genomics and technology, specialization through post-graduate pharmacy residency programs continues to gain importance.

Our former associate dean for professional education, Dr. Brian Gates, has transitioned into directing the post-graduate pharmacy resident training program offered by the Department of Pharmacotherapy, to focus on working directly with students and residents. He will also continue his practice site at Providence Visiting Nurse Association of Spokane.

**New role at pharmacy strengthens interprofessional collaboration in education**
Dr. Brenda Bray has accepted a new role as director of interprofessional education, leading the Department of Pharmacotherapy’s integration into campus-wide interprofessional education at WSU Health Sciences Spokane. This initiative supports our commitment to prepare our students for the patient-centered care teams of the future. This is a high priority activity as the Elson S. Floyd College of Medicine welcomes its first class of physicians in Spokane this year.

The college’s emphasis on data-supported decision-making within our office of assessment and accreditation will continue under Sue Wright as director of analytics. Hannah Lee will continue to provide support for the college’s block testing activities until a new associate dean for professional education is identified.

**New director of student services for the Doctor of Pharmacy program**
Kim Mickey has rejoined the College of Pharmacy in the new role of director of student services. Mickey has been with WSU over 12 years, previously serving as an assistant director in undergraduate admissions, as an assistant director in student services with the College of Pharmacy, and most recently serving as the WSU Health Sciences Spokane campus registrar for the past two years.

“Our milestones will be defined by how well we capitalize on our strengths, seize opportunities, and embrace audacious excellence.” –Kirk H. Schulz, President, Washington State University
New teaching faculty join WSU Doctor of Pharmacy program extension in Yakima

As the new cohort of student pharmacists begin classes at the Washington State University College of Pharmacy, there are also four new faces among the teaching faculty at the Doctor of Pharmacy program extension in Yakima, Washington.

The WSU College of Pharmacy began offering its Doctor of Pharmacy program in Yakima in 2015. Now beginning its third year, the program has seen steady growth and resounding success thanks to the college’s formal partnership with the Pacific Northwest University of Health Sciences (PNWU). The WSU pharmacy program is located on the PNWU campus where the program emphasizes preparing pharmacists to be members of health care teams to match the evolving health care landscape, ultimately expanding the availability of health services to underserved populations in rural settings. The program in Yakima offers students the unique experience of sharing a small campus with the medical students in the PNWU Doctor of Osteopathic Medicine program.

The four new WSU pharmacy faculty complete the teaching corps that support the student pharmacists located in Yakima:

**Dana Bowers, clinical assistant professor**
Dana Bowers joins WSU from the University of Arizona College of Pharmacy where she served as a clinical instructor in pharmacy practice and science.

Bowers received her Doctor of Pharmacy from WSU in 2009. She completed a two-year clinical research fellowship specializing in infectious diseases at the University of Houston College of Pharmacy and St. Luke’s Episcopal Hospital before joining the Kingman Regional Medical Center in Kingman, Arizona, as a clinical specialist where she was in charge of the hospital’s antimicrobial stewardship program.

Bowers teaches in the WSU Doctor of Pharmacy program extension in Yakima. Her main research interest is in combination therapy for multi-drug resistant Gram-negative bacteria.

**Nicholas Giruzzi, clinical assistant professor**
Nicholas Giruzzi received his Doctor of Pharmacy from the Albany College of Pharmacy and Health Sciences in Albany, New York. He is a registered pharmacist in Washington, Pennsylvania and New York. He is also board certified as a pharmacotherapy specialist (BCPS), and holds a Pennsylvania Authorization to Administer Injectables.

He completed a postgraduate pharmacy practice residency at the University of Pittsburgh Medical Center (UPMC) St. Margaret, and a second-year postgraduate pharmacy residency in ambulatory care also at UPMC St. Margaret.

Nicholas teaches in the WSU Doctor of Pharmacy program extension in Yakima and serves as the co-instructor of record for the Pharmacy Calculations, Health Care Systems, and Public Health and Emergency Preparedness/Response courses. His main interests include clinical ambulatory care practice and interprofessional education and development.

**Megan Giruzzi, clinical assistant professor**
Megan Giruzzi received her Doctor of Pharmacy from the Albany College of Pharmacy and Health Sciences in Albany, New York. She is a registered pharmacist in New York and Texas. She is also board certified as a pharmacotherapy specialist (BCPS), is certified in basic and advanced cardiac life support through the American Heart Association, is certified in pharmacy-based immunization delivery, and holds a teaching and learning certificate through the Texas Tech University Health Sciences Center (TTUHSC) School of Pharmacy.

Megan completed a two-year postgraduate pharmacy residency in pharmacotherapy at the TTUHSC School of Pharmacy in Abilene, Texas.

Megan teaches in the WSU Doctor of Pharmacy program extension in Yakima.

**Rustin Crutchley, clinical associate professor**
Rustin Crutchley joins WSU from the University of Houston College of Pharmacy where he served as a clinical assistant professor and then clinical associate professor. While at University of Houston, he also spent a time as the program director.
Student Spotlight: National foundation awards two WSU student pharmacists research grants

Two students in the Doctor of Pharmacy (Pharm.D.) program at Washington State University received Gateway to Research Scholarships in the amount of $5,000 from the American Foundation for Pharmaceutical Education (AFPE).

“There were only 15 award winners nationally, so this is quite an accomplishment,” said Brian Gates, an associate dean at the WSU College of Pharmacy.

The AFPE is a national, non-profit organization dedicated to supporting pharmaceutical sciences education at U.S. schools and colleges of pharmacy, in part by awarding fellowships and grants. The Gateway to Research Scholarship program provides funding for student pharmacists to participate in a faculty-mentored research project.

Nawsheen Zarar is a student pharmacist located in Yakima and will be working with Dr. Scott Vanhorn at Virginia Mason Memorial Hospital. Paul Hardy is a student pharmacist located in Spokane and will be working with Dr. Mary Paine in the WSU Department of Pharmaceutical Sciences. The two were notified of their selection this May and their research will run over the next year.

Research Spotlight - AFPE Gateway to Research Scholarship

Name: Nawsheen Zarar
Class of: 2019
Hometown: Jacksonville, Florida

What is the title of the research project you will be working on?
Strategies to Improve Quality-of-Care in a Pharmacy-Managed Oral Oncolytic Program

Where will the research activities be located?
The North Star Lodge at Virginia Mason Memorial hospital in Yakima, Washington.

Tell me about what you will be doing, and what groups/people will you be working with?
Throughout the study period, I will have the opportunity to work with several outpatient clinical pharmacists at North Star Lodge. While I investigate the medication-wastage part of the project, I will get to work with medical assistants, pharmacy technicians, and financial counselors. I will also engage with our OCM nurse navigators to collect timelines for oral oncolytics as well as other necessary data. Thus, I will serve as a vital pharmacy representative on the North Star Lodge OCM-care team.
I will also have access to graduate students and pharmacy residents at various times during the research period. North Star Lodge Pharmacy serves as an experiential rotation site for third- and fourth-year pharmacy students, as well as first-year post-graduate (PGY-1) pharmacy residents. This exposure will provide me with an opportunity to collaborate on new ideas and share knowledge.

North Star Lodge embraces the principle of learning by doing, and encourages students and residents to seek out and take advantage of learning opportunities as they are presented. Thus, I will have an opportunity to thrive in a didactic and hands-on environment.

**What about this experience are you most looking forward to?**

I will be able to observe the current review, education and follow-up process that is in place at North Star Lodge. I will learn our existing approaches to manage oral oncolytics and improve upon them. As such, I will have ample opportunity to collaborate and address patient problems with a multi-faceted team of care providers. This will lead me to explore potential cross-disciplinary research opportunities in the future.

I will be relied upon to provide creative pharmaceutical input and will likely need to devise novel pharmacy-related strategies to achieve effective care solutions. The North Star Lodge OCM team convenes on a weekly basis to review and discuss health outcomes of patients and the status of the overall OCM program. I will be in a unique position to advise and recommend pharmacy-related interventions that can improve the quality of care delivered by the OCM team. I will also have an opportunity to distill her research into publications and present them at internal and external events. I will be encouraged to interact and engage with patients and clinical staff. It is through these interactions that I will gain valuable insight into the high-level of quality care that the clinic delivers.

**How does this relate to your Doctor of Pharmacy degree?**

My interest in pharmaceutical research is rooted in the desire to improve quality and outcomes of disease management. With this project, I have a unique opportunity to delve deeper into this problem from a clinical research perspective. Mismanaging cancers that have spread or have recurred, such as metastatic breast or prostate cancer, can lead them to evolve into chronic conditions. Thus, through this study, I am interested in developing pharmaceutical strategies to better deal with cancers by thoroughly quantifying the dynamics between physiological response, drug resistance, and efficacy of targeted therapies.

**Where do you want to work as a pharmacist?**

Thanks to my 2016 Introductory Pharmacy Practice Experience at the Overlake Hospital in Bellevue, Washington, I have a glimpse of research opportunities that exist for clinical pharmacists. Issues of omnichannel care, medication adherence, personalized treatment, patient safety, and health literacy have all sparked my interest. While in pharmacy school, I want to utilize these opportunities and serve our communities by improving existing strategies and proposing new ones to better manage diseases like cancer.

After graduation, my long-term career goal is to proceed on a path that not only allows me to develop hypotheses in diverse domains of pharmaceutical science but also provides me an opportunity to test the efficacy of these methods with real patients. Residencies, graduate fellowships, faculty and clinical-research positions are all potential options.

**Anything else you want to add?**

The goals and principles of the AFPE Gateway to Research Scholarship align with my own and I am confident that my academic and work experiences give me the skills necessary to thrive as a successful contributor to pharmaceutical science. I am an independent, self-motivated learner who takes initiative. I am hardworking, accepting of new challenges, and always in a mindset to learn. Overall, I strive to be a well-rounded individual, which I believe will serve me well in the field of research.
Dear Alums, Colleagues and Friends of Pharmacy,

We are looking forward to seeing you in just a few short months at our Pharmacy Homecoming Weekend that kicks off on Friday, October 20, in Spokane with the Crimson Gala.

We have been working with an outstanding group of alumni who serve on our host committee, and it is shaping up to be an evening you will not want to miss!

Our class captains are doing a phenomenal job of reaching out to classmates to “rally the troops!” We have learned that one class, thank you to CJ Cahoon and Anne Henriksen, will be initiating a challenge to their class to consider a contribution of “$2002” in honor of the year they graduated. John Oftebro, class of 1965 has challenged his class to once again have the highest attendance; remember, the class of 1965 won this distinction at the 125th Gala last November! We will provide more updates on all of these challenges in the next newsletter, so make sure to respond to your class captain and make your class “PROUD!”

I also want to say thank you to our event sponsors who are making a real impact on our ability to name our applied patient care lab in honor of Professor Emeritus R. Keith Campbell, who is our Lifetime Achievement Award gala honoree this year. If you are interested in contributing to this effort, please see our sponsorship information and contact Kelly Sylvester to get involved.

It would be impossible to mention Keith without also adding our deepest condolences to him and his family. Please see our alumni updates section below for complete details, and thank you to those in our amazing Cougar pharmacy family who have already reached out to us or Keith with your love and support.

We hope that our Pharmacy Homecoming Weekend will be an opportunity for us to reconnect, share in our support, and to celebrate together. I am looking forward to seeing you there!

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

Crimson Gala Sponsors
Cougar sponsors:
Douglas Crafton ’78 | Medication Review, Inc.
Wayne ’70 and Pamela Clemens
Rick ’71 and Jacquelyne Doane ’72
Greg ’82 and Doris Gibbons | Gibbons Pharmacies LLC.
Yvette Grando Holman ’90 and Steve Holman
Mark ’82 and Robyn Johnson | Tick Klock Drug
R. Grant MacLean ’73 and Linda Garrelts MacLean ’78
Sue Merk ’76
John Nguyen ’89
John ’65 and Deborah Oftebro
Chris Pierce ’00 | Costco Wholesale
William Sorrels ’73
Jill Kerrick Walker ’87 and John Walker

Crimson sponsors:
Harry Chinchinian
Matt Cox ’05 | South Bend Pharmacy
Washington State Pharmacy Association (WSPA)
ALUMNI NEWS

STUDENT NEWS

Tory Knebel, class of 2019, was appointed to a two-year term on the Student Leadership Council for the National Community Pharmacists Association (NCPA).

Read more »

WHITE COAT

During August we welcomed our class of 2021! White Coat Ceremonies were conducted in Spokane and Yakima for the incoming class.

View Spokane photos »
View Yakima photos »

THANK YOU

Our Pharm.D. program became fully implemented on the PNWU campus as we welcomed the third cohort of students. A reception was held to celebrate the partnership between WSU and PNWU.

View event photos »

ALUMNI UPDATES

• In Memoriam: Nicole Campbell, daughter of Professor Emeritus R. Keith Campbell, class of 1964, unexpectedly passed away in August. Our condolences to the whole Campbell family. View obituary »

• Huy Hoang, class of 2014, recently accepted a position as the coordinator for experiential advancement at the rank of assistant professor with Pacific University School of Pharmacy. Congratulations Huy!

• Kayla Hensley, class of 2011, checked in with us recently from Oregon City, Oregon. She works for Fred Meyer and has just been named their new division clinical sales manager! In this role she will be involved in the vision and delivery of innovative clinical pharmacy services at Fred Meyer. Congratulations Kayla! View photo »

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

FACULTY SCHOLARSHIP

Publications

• Pharmaceutical Sciences Assistant Professor Senthil Natesan and two co-authors published, “Determination of alternative ceftolozane/tazobactam (C/T) dosing regimens for patients with infections due to pseudomonas aeruginosa with MIC values between 4 and 32 mg/L,” in the Journal of Antimicrobial Chemotherapy, 2017, a peer-reviewed journal of British Society for Antimicrobial Chemotherapy. Read abstract »

• Pharmacotherapy Clinical Associate Professor Megan N. Willson and three co-authors published, “Toolkit for US colleges/schools of pharmacy to prepare learners for careers in academia,” in the Currents in Pharmacy Teaching and Learning journal in August 2017.

• Pharmacotherapy Associate Professor Joshua J. Neumiller and six co-authors published, “Medication discrepancies and potential adverse drug events during transfer of care from hospital to home,” in Advances in Patient Safety and Medical Liability an Agency for Healthcare Research and Quality on August 21, 2017. Read article »

• Joshua J. Neumiller published the book chapter, “Micronutrients and diabetes,” in American Diabetes Association


- Danial Baker published, “Insulin degludec/liraglutide,” in the journal Hospital Pharmacy.

- Danial Baker published, “For sale: FDA priority review vouchers,” in the journal Hospital Pharmacy.

- Danial Baker published, “Naldemedine,” in the journal Hospital Pharmacy.


Presentations

- Pharmacotherapy Clinical Assistant Professor Kimberly McKeirnan presented, “Implementing tuberculin skin test training in a skills lab,” at the American Association of Colleges of Pharmacy Annual Meeting in Nashville, Tenn. in July 2017.

- Kimberly McKeirnan and one co-author presented the poster, “Training pharmacy technicians to administer immunizations: phase 1,” at the American Association of Colleges of Pharmacy Annual Meeting in Nashville, Tenn. in July 2017.


- Pharmacotherapy Professor and Chair John R. White, Jr., presented, “Incorporating changing paradigms in diabetes care: approaches to improve glycemic control in patients with Type 2 diabetes mellitus,” as a continuing medical education activity provided by Haymarket Medical Education on July 12, 2017, at the Delano Las Vegas at Mandalay Bay.

• Pharmacotherapy Clinical Assistant Professor Cheyenne Newsome presented, “TRANSforming pharmacy practice to care for patients of the gender revolution,” as a webinar hosted by American Society of Health-System Pharmacists (ASHP) on August 15, 2017.

Service
• Joshua J. Neumiller was interviewed by Diabetes Core Update, a monthly audio podcast produced by the American Diabetes Association (ADA). The podcast is titled “Standards of medical care in diabetes 2017 – part 2: pharmacologic therapy,” posted on July 6, 2017. Listen here »

Awards
• Pharmaceutical Sciences Research Associate Anil Singh was awarded first place in the oral presentation category at the WSU College of Pharmacy Research Day for his presentation “IL-1β induces IL-1α production and stabilizes its endogenous expression in rheumatoid arthritis synovial fibroblasts.”
• Pharmaceutical Sciences Postdoctoral Research Associate Jeevan GC was awarded second place in the oral presentation category at the WSU College of Pharmacy Research Day for his presentation “Outside-in activation of integrin αVβ3 by 25-hydroxy cholesterol – probed by molecular dynamics simulation.”

STUDENT ACHIEVEMENT

Doctor of Philosophy (Ph.D.) students
• Panshak Dakup, pharmaceutical sciences (Gaddameedhi lab), was awarded first place in the graduate student category at the WSU College of Pharmacy Research Day for his poster, “Chronopharmacology of cisplatin: role of the circadian rhythm in modulating cisplatin-induced toxicity in melanoma mouse models.”
• Tarana Arman, pharmaceutical sciences (Clarke lab), tied for second place in the graduate student category at the WSU College of Pharmacy Research Day for her poster, “Microcystin-LR hepatotoxicity in non-alcoholic fatty liver disease.”
• Sihan Wang, pharmaceutical sciences (Z. Wang lab), tied for second place in the graduate student category at the WSU College of Pharmacy Research Day for her poster, “Bacterial membrane-formed nanovesicles as a vaccine prevents bacterial infections.”
• Shannon Kozlovich, pharmaceutical sciences (Lazarus lab), tied for third place in the graduate student category at the WSU College of Pharmacy Research Day for her poster, “Menthol exhibits stereospecific inhibition of the major tobacco carcinogen, NNAL.”
• Ana Vergara, pharmaceutical sciences (Lazarus lab), tied for third place in the graduate student category at the WSU College of Pharmacy Research Day for her poster, “Characterization of UDP-glycosyltransferase 3A (UGT3A) enzymes and their role in tobacco carcinogenesis.”

Doctor of Pharmacy (Pharm.D.) students
• The WSU College of Pharmacy Kappa Psi chapter, Beta Pi, won the Top Performing Chapter Award for the northwest province at the Grand Council Convention (GCC). View photo »

• James Nguyen was awarded first place in the professional student category at the WSU College of Pharmacy Research Day for his poster, “The effects of ATF5 hepatocyte ploidy and morphology.”

• Ila Srivastava was awarded second place in the professional student category at the WSU College of Pharmacy Research Day for her poster, “Mechanism of enzyme inactivation in succinic semialdehyde dehydrogenase (SSADH) mutants: a constant pH molecular dynamics simulation study.”