TOGETHER WE WILL

PharmD students Simon Kim and Christopher Andrews train to become full members of the health care team in our Bracken Pharmacy Learning Center.
As UW School of Pharmacy alumni, we have a unique opportunity to join an alumni association dedicated to us, in addition to the broader UW Alumni Association. These two alumni associations offer us the best of both worlds. We can be a part of the larger UW alumni community while taking advantage of the close-knit School of Pharmacy Alumni Association (PAA) member family.

Why join PAA? PAA is our alumni association. We have an entirely volunteer-driven board committed to helping you navigate the changing profession of pharmacy through connection, networking, and education. As a PAA member, you can be assured that your support will directly support activities at the School of Pharmacy including:

- The twice-annual print edition of Dawg Scripts with in-depth stories that will keep you up-to-date with our faculty, students and alumni;
- New members-only e-communications;
- The annual Don B. Katterman Memorial Lecture featuring speakers on the leading-edge of pharmacy, science and medicine (mark your calendars this year for the evening of Thursday, May 12th);
- New opportunities beginning this summer for PAA members to connect and network over dinner and other events (For news about events, stay tuned on Facebook.com/UWSOP); and
- The opportunity to strengthen the student-alumni connection by supporting our future colleagues through PAA student scholarships.

As one of only two School-based alumni associations at UW, we are more than a membership organization. We are a special group of committed alumni who advise and advocate for our alma mater. Through scholarships, we make a difference to students like Chris Andrews (p. 4) and by supporting Dawg Scripts, we keep alive the history of alumni legends like Gordon Tweit and Shirley Bridge. To join or renew go to sop.uw.edu/PAA or email rxalumni@uw.edu.

Gary Harris, ‘72, President, Pharmacy Alumni Association

Your membership in the Pharmacy Alumni Association (PAA) supports Dawg Scripts, special networking events and lectures, and UWSOP students—our future colleagues—through the UW PAA Scholarship. To join or renew, go to: sop.uw.edu/PAA
In this issue of Dawg Scripts, you will see our 2015-2020 Strategic Plan come to life. With our plan in place, we have a clear path to becoming the global leader in education, research and service. I’m pleased to report that our peer schools of pharmacy confirmed our progress. We improved to a #9 ranking in U.S. News and World Report this year (see page 7).

On page four, you will find a story about a pharmacy student-initiated Interprofessional Health Fair. This Fair showcased the undaunted leadership that is a hallmark of our students, the unparalleled educational experience available here in the UW Health Sciences and our commitment to serving the public good. Our students embraced their Interprofessional Education curriculum and created a new health fair that brought UW Health Sciences together.

I hope you’ll read Christopher Andrews’ address (page 5). He spoke to our scholarship donors and shared with eloquence the enormous impact your generosity has had on him and his fellow students. The Scholarship Reception is a highlight every year as it connects our donors and students directly.

Our faculty and students continue their proven impact in research, practice and service as you will see throughout this issue. We remember the history of the School of Pharmacy with a visit to Fairhaven Pharmacy and a look back to the extraordinary Shirley Bridge. Shirley was a pioneer in pharmacy. She helped shape the perception of pharmacists as health providers in Washington state, and actively supported our female students and faculty.

We would love for you to come back to campus and see us! Our annual Don B. Katterman Memorial Lecture is Thursday, May 12. This year’s topic, “Community Partnerships: Improving Patient Outcomes Across the Continuum of Care,” will be a panel discussion with UWSOP’s Jennifer Bacci, Josh Akers from Kelley-Ross and Anne Casey from Virginia Mason. At the Dean’s Recognition Reception, we will recognize Mitch Higashi and Nanci Murphy for their outstanding work and leadership as our Distinguished Alumni Award recipients. And then stay on until Friday, May 13, when we will have a day-long symposium in honor of Deans Sid Nelson and Tom Baillie. It will be a great day for science, networking and camaraderie.

As always, we are indebted to you, our alumni and friends, for all that you give to the school, whether you are precepting our students, supporting scholarships, or volunteering. Thank you on behalf of our entire School community.

Sean D. Sullivan, Professor and Dean, UW School of Pharmacy
UWSOP PharmD students take on organizing health sciences Interprofessional Education Health Fair

In November 2015, student leaders in Phi Lambda Sigma met with Director of Student Leadership Programs, Nanci Murphy, to brainstorm how best to use a $2000 leadership grant awarded to create opportunities for pharmacy student leadership.

By the end of the meeting, the students had an ambitious idea: to create a health fair for the community—an interprofessional one that included pharmacy students as well as groups from across the UW Health Science disciplines—and to do it within just two months.

There was just one small problem: none of them had organized a health fair from scratch before.

The students reached out to faculty, administrators and students across UW’s Health Sciences. “It was daunting, especially when we started talking with people who had organized health fairs before. But people were really generous, sharing their time and expertise,” said Nick Larned, one of the three lead organizers. “In a couple of weeks, we booked a site and connected with students in medicine, dentistry, audiology, and physical therapy and had a plan.”

The New Year’s Health Fair took place on Sunday, January 24, 2016, in Magnuson Park, near multiple transitional and lower income housing units. “UWSOP is regularly held up as a national leader for interprofessional education because we’ve been doing it so well for so long.”

JENNIFER DANIELSON, ASSISTANT PROFESSOR AND DIRECTOR OF EXPERIENTIAL EDUCATION IN INTRODUCTORY PRACTICE

The students saw about 50 patients the morning of the NFL playoffs. They took advantage of the time to learn more about each other and their training. “The great part of this event,” said Assistant Professor Jennifer Danielson, Director of Experiential Education in Introductory Practice for UWSOP, “was that the students learned so much about each other’s disciplines and had the chance to share their skills and knowledge. Pharmacy students showed first year medical students the basics of how to take blood pressure and glucose testing. Dental students examined pharmacy students.”

Co-organizer Arianne Duong shared, “I had no idea how much you could learn from a thorough dental, head and neck exam. Dentists are a great first line check for blood pressure problems.”

Interprofessional Education (IPE) has been a key part of UWSOP’s curriculum for over twenty years, ahead of other schools of pharmacy and health sciences. “When I first applied to the UW for pharmacy, I didn’t fully understand the advantages of an IPE curriculum,” said co-organizer Phoebe Stracener. “But through my training, I see the difference it makes to be so close to the other health sciences. It will be less intimidating when I’m on my rotations next year, now that I have learned how differently each of the professions approach health care problems and know what each of us brings to the table to help patients.”

A dental student examines a pharmacy student, showcasing the breadth of information that can be gained in a head, neck and dental exam.
EVERY YEAR, WE HONOR our scholarship donors and invite a student to talk about the proven impact scholarships have had on their education. This year, Christopher Andrews, ’17, shared his story, an excerpt of which appears here.

“Like many of you here tonight—both students and alumni—my parents have significantly invested in me, first as an undergraduate student, and now in my pursuit of a PharmD. I have also invested significantly in myself, taking out loans well worth the incredible education we receive. This year, however, as an out-of-state student from Hawaii, I have struggled to find a way to support my education. At a time when I wasn’t sure if I could stay in the program, my Walgreen’s Diversity Scholarship made the difference. Believe me when I say that I am grateful tonight to represent every student in this room and that I am a proud student of the School of Pharmacy because the Pharmacy family, my family, has invested in me. The outstanding support of our pharmacy family is the reason I am here, and it’s the reason that we as students excel. Like many of my peers, my scholarship allows me to focus on professional development through coursework and extracurricular activities. Personally, I’ve enjoyed serving as an Education Assistant for the first year pharmacy practice skills lab. In this role, I’ve received direct, hands-on practice in education, something I could see myself doing as a preceptor in the future. Among other activities, I’ve also been able to intern at Virginia Mason Medical Center, where I just completed a mini P&T project. I’ve been grateful to attend regional and national conferences for WSPA and ASHP.

“I came to the UW for all the usual reasons—the outstanding ranking, the beautiful campus, the urban environment. What has kept me here, however, is the Pharmacy family, the ohana, that has supported me in my professional development.”

CHRISTOPHER ANDREWS, PHARMD STUDENT, ’17

respectivey, while also representing the UW as the ASCP student chapter president and presenting posters at the ASCP annual meeting & exhibition. I am constantly impressed by my peers, too—many of them fellow scholarship recipients—who see a need in our school or community and build a solution to address that need. Our School’s new pediatric organization, PediaPUPS, the Script Your Future campaign, and our award-winning shadowing program are all examples of the extracurricular learning and leadership that donors’ support of students can help make possible. To the scholarship donors here this evening, I’d like to thank you again for making our exemplary education a possibility. Your gifts help us to thrive in the classroom and to lead and grow in the health care field and community. For me and for the students in this room, you are opening doors, and you are creating a healthier world. For all you are empowering us to do together, mahalo nui loa.”
In 2011, faculty connected with the Pharmacological Sciences Training Program, known as the Training Grant program, wanted to promote diversity in the Schools of Pharmacy and Medicine. They formed a new recruiting initiative, the Pharmacological Sciences Summer Diversity Program (PSSDP). Now in its sixth year, PSSDP offers talented undergraduate students from diverse social and cultural backgrounds an opportunity to perform hands-on research in drug metabolism, pharmacokinetics, cellular pharmacology, molecular pharmacology, and biophysical virology in the laboratories of research faculty mentors.

In summer 2015, three students came to UWSOP through PSSDP. Their research included drug-drug interactions that could alter the clearance of drugs and toxins from the kidneys with Joanne Wang in Pharmaceutics, discovered how to disrupt the protein's function that could lead to new drug designs in the ongoing war against influenza with Kelly Lee in Medicinal Chemistry, and learned how certain drugs can interrupt the cholesterol biosynthesis pathway with Medicinal Chemistry's Libin Xu. “It’s a wonderful collaborative effort between Medicinal Chemistry, Pharmaceutics, and Pharmacology,” said Medicinal Chemistry Professor Allan Rettie, one of the original members of PSSDP’s founding group. “We fund travel, stipends, and dormitory accommodation for up to three undergraduate students per year, each in a different department.”

Students choose faculty mentors, perform bench research and present the results of their research in a variety of formats, including a combined poster session along with summer research undergraduates from programs such as Amgen Scholars and NIH’s PREP fellowship. “Students have applied to the Training Grant programs after spending the summer here as PSSDP interns,” added Medicinal Chemistry Assistant Professor Abhi Nath, who administers the program. Michelle Redhair, a PSSDP alum, joined the Medicinal Chemistry Ph.D. program in 2012 as a Training Grant recipient. Two students were recently chosen for summer 2016 from over 40 applicants. Tiffany Huwe is a McNair scholar at the University of North Dakota in Grand Forks, majoring in Molecular and Integrative Biology. She has conducted undergraduate research at UND and the Mayo Clinic. Tiffany is “looking forward to spending the summer way out west” and working with mentor Dr. Richard Gardner (Pharmacology). Monica Saha, a junior at the University of Kansas, will work with mentor Dr. Nina Isoherranen (Pharmaceutics). Monica intends to pursue a Ph.D. in pharmaceutics, pharmacology, or related fields, has an interest in genomics, and says that UW is a “dream school.”

This experience opened my eyes about graduate school and options I might not have had before. It was a supportive team experience for me and I learned new techniques for research.”

BRIANNA MORGAN, 2015 PSSDP SCHOLAR
UWSOP Researching Heart Disease and App for Pregnancy Drug Use

UW School of Pharmacy faculty were awarded many significant grants for their life-changing research. More details are available at sop.uw.edu/news.

DEPARTMENT OF MEDICINAL CHEMISTRY
Rheem Totah

Rheem Totah, Associate Professor in UWSOP’s Department of Medicinal Chemistry, is the co-lead investigator on two NIH funded grants totaling almost $6M with faculty from CHRU. Totah and Nona Sotoodehnia MD MPH (Cardiology) will co-lead “CYP2J2 Mediated Eicosanoids in Arrhythmias and Sudden Cardiac Arrest.” Totah and Rozenn Lemaitre PhD MPH (Internal Medicine) will co-lead “Epoxyeicosatrienoic acids, diabetes, and cardiovascular disease.” Collectively, these two grants will provide comprehensive information on the epidemiology of epoxyeicosatrienoic acids (EETs) in three large National Heart, Lung, and Blood Institute of the National Institutes of Health (NHLBI-NIH) funded prospective studies, including association with cardiovascular and cardiometabolic disease outcomes. The projects will additionally investigate the molecular mechanism of EETs protection, discover pathways that regulate EET biosynthesis in cardiac tissue, and identify EETs-related pathways affected by diabetes, with the ultimate aim of identifying novel, potentially modifiable drug targets to improve cardiovascular health. “These grants perfectly merge population and basic science so that we can comprehensively elucidate the role of EETs in cardiovascular disease and diabetes complications,” said Totah. “The two grants were high-risk, high-reward and we are excited that they were selected for funding.” This research was supported by National Heart, Lung, and Blood Institute of the National Institutes of Health (NHLBI-NIH) under award numbers R01RHL128709 (CYP2J2 Mediated Eicosanoids in Arrhythmias and Sudden Cardiac Arrest) and R01RHL130880 (Epoxyeicosatrienoic acids, diabetes, and cardiovascular disease).

DRIVEN TO DISCOVER

DEPARTMENT OF PHARMACEUTICS
Carol Collins

In medication counseling during pregnancy, a mobile application might be a way to provide healthcare professionals with immediate, reliable information on the risks of a mother’s drugs on her baby’s development. Carol Collins, Clinical Associate Professor in Pharmaceutics, in collaboration with faculty from UW Medicine, UW HCDE and rightanswer.com have received a $150,000 Small Business Innovation and Research grant from the Centers for Disease Control and Prevention to create a mobile app that will help convey information about drug risks for pregnant women. Carol will bring her expertise in drug safety information and the design of drug safety databases to this important project.

UWSOP ranks #9 in U.S. News & World Report

UW CONTINUES ITS CONSISTENT RECORD by ranking in the top ten nationwide of Schools of Pharmacy. One of the smaller Schools at the UW, Pharmacy has been well-known for providing transformative training in research and pharmacy practice since its founding as one of the first three colleges at the UW.

“I am so pleased that our peers have recognized our continued excellence in pharmacy education,” said Sean D. Sullivan, Professor and Dean of the School of Pharmacy. “This ranking validates that we are on the right track in our vision to be the global leader in pharmacy education and our mission to develop exceptional, innovative and diverse pharmacy leaders and scientists.

I am proud and honored to be a part of this terrific team of faculty, staff, students, and alumni.”

Schools of Pharmacy are ranked by peer institutions every four years by U.S. News and World Report. In 2013, the last time U.S. News & World Report ran the survey, UWSOP ranked No. 10, amongst 125 schools of pharmacy.

In this 2017 survey, UWSOP improved to No. 9 amongst a larger field of 135 schools of pharmacy.

UW School of Pharmacy’s faculty were highly ranked for their productivity and research breakthroughs on multiple lists, including Shanghai Jiao Tong University (#3) and Taiwan University (#8).
Jenny Bacci’s poster, “Assessing students’ readiness to provide self care using a school-wide electronic documentation system” was accepted for the American Association of Colleges of Pharmacy/Nonprescription Medicine Academy (AACP/NMA) conference.

Don Downing has been busy (as usual). His commentary, “Coming of age: pharmacy practice in the 21st century,” was published in the Israel Journal of Health Policy Research.

He won the UW Health Sciences Martin Luther King, Jr. Community Service Award and WSPA’s Rodney D. Shafer Award for his pioneering contributions to the profession. He also led a webinar titled “Pharmacists as Medical Providers: More than a New Job Title” https://vimeo.com/155878829

Yushi Li, Clinical Instructor and one of the coordinators of the QFC-UW PGY-1 residency program, was recently recognized as January’s Preceptor of the Month by Drug Store News.

MedChem Asst Prof Libin Xu is seeking the underlying mechanism of and developing treatment for Smith-Lemli-Opitz Syndrome, an inherited disorder that affects a person’s ability to make cholesterol. Those who have this disorder cannot make enough cholesterol to support normal brain development. Libin said, “For this project, we want to understand how the specific mechanisms related to 7-DHC-derived oxysterols are involved in the pathophysiology of this disease. We have identified over 15 oxysterols so far.”

Anirban Basu has been awarded the 2016 ISPOR Award for Excellence in Methodology in Pharmacoconomics and Health Outcomes Research for his paper “A Framework for Prioritizing Research Investments in Precision Medicine,” published in Medical Decision Making.


Peggy Odegard and an interprofessional team won a “Golden Eddy” Award for Outstanding Patient and Family Educator for their new ‘train the trainer’ diabetes education program in UW Medicine clinics that has already shown good patient outcomes.

MedChem Research Associate Eri Nakatani-Webster was named to the Institute of Translational Health Science’s KL2 training program. She will seek to increase the understanding of protein self-assembly relating to infectious disease, particularly biofilm formation and mechanisms of antibiotic resistance.

Two of our School’s top-performing staff members, Sarah Egan, the Advancement team’s events manager, and Pharmaceutics research manager, Barbara Kavanaugh, were nominated for the very prestigious UW Distinguished Staff Award. Great job and congratulations!
Intercollegiate, interdisciplinary team will study natural product-drug interactions

Herbal remedies are a multi-billion dollar industry. Sales of natural product supplements have nearly tripled in the past twenty years. Fueled in part by the assumption that “natural” means “safe,” as well as rising costs for conventional health care, many people turn to these supplements to both alleviate symptoms and illnesses as well as reap perceived health benefits, often without consulting their health care provider. However, natural doesn’t always mean safe. In fact, little is known about how natural products may alter the therapeutic effects and safety of prescription and over-the-counter medications. A national team of researchers from UWSOP, WSU College of Pharmacy, and University of North Carolina at Greensboro (UNCG) Department of Chemistry and Biochemistry has partnered to study potential interactions between select natural products and commonly used medications. The cross-institutional collaborative team, known as the Natural Product Drug Interaction (NaPDI) Center, was funded by a $10M five-year grant from NCCIH. The goal for the team is multi-fold: assess existing gaps in the scientific literature regarding the potential for natural products to significantly interact with common medications; investigate how natural products may interact with common medications; establish a set of best practices to address the unique challenges in the study of natural product drug interactions; and develop and maintain a database accessible through a public web portal. The administrative team, led by Co-Principal Investigator Dr. Danny Shen and Co-Investigator Dr. Jeannine McCune of UWSOP, will provide overall administrative coordination and support and will develop and disseminate best practices on natural product-drug interaction research. The pharmacology team, led by UWSOP alumna and Co-Principal Investigator Dr. Mary Paine of the WSU College of Pharmacy, will identify and prioritize the 4-6 natural products to be studied, including green tea and cannabinoids (marijuana), seek to uncover the mechanisms of natural product-drug interactions, and design appropriate preclinical and clinical studies to address scientific gaps. The analytical team, led by Dr. Nicholas Oberlies, a natural products chemist at UNCG, will acquire the materials for study and ensure their consistency and sufficient supply. The informatics team, led by UWSOP’s Dr. Isabelle Ragueneau-Majlessi, will ensure that the results and research best practices are clearly communicated by creating a data and information repository available to researchers, practitioners and the public through a website, app and blog. UW and WSU will collaborate on this aspect of the project—bringing together investigators from WSU’s College of Communication and UW’s Drug Interaction Database (DIDB) team. The NaPDI Center plans to have initial results available within two years, with more to follow over the remainder of the project. The five-year, $10M NCCIH grant was funded as a large-scale research program of the National Institutes of Health under a cooperative agreement award (1U54AT008909-01).
Baillie, Garrison and Murphy announce their retirement

Thomas Baillie, Professor of Medicinal Chemistry and Dean Emeritus, retired in March of 2016. Tom has had an enormous positive impact on the School of Pharmacy. He has been a tireless and highly effective advocate for our research, teaching and training missions within the School, UW, and across industry. Over the years, he has been a strong mentor and keen supporter of our faculty, students, trainees and alumni. During his long career as a scientist, Tom has made many high-profile contributions in the areas of drug metabolism, drug toxicity and drug safety and was recognized as one of the topmost cited (top 1%) researchers in the area of Pharmacology & Toxicology by Thompson Reuters for work begun here at UW in collaboration with our late Dean Emeritus Sid Nelson. We thank Tom for his service to our School and wish him and his wife, Kathleen, the absolute best in their next adventures.

Pharmaceutical Outcomes Research & Policy Program Professor Lou Garrison will retire in July 2016 as Professor Emeritus. Lou joined the School of Pharmacy faculty in 2004. Prior to the UW, he worked as an economist in the pharmaceutical industry, including serving as head of health economics and strategic pricing at Roche Pharmaceuticals in Basel, Switzerland, director of the Project HOPE Center for Health Affairs, where he worked on a wide variety of health policy issues, and at the Battelle Human Affairs Research Centers in Seattle. Lou's research interests include national and international health policy issues related to pharmacogenomics and personalized medicine, regulatory benefit-risk analysis, insurance, pricing, reimbursement and risk-sharing agreements. He is President-elect of the International Society for Pharmacoeconomics and Outcomes Research (ISPOR) and will serve a three-year term.

Nanci Murphy will retire from UWSOP on July 1, 2016. She began her career as a community practice preceptor in 1989, later joining UWSOP as Associate Director of Academic and Student Programs in 1990. She was promoted to Assistant Dean and then served as Associate Dean from 2001-2014, until she became Director of Student Leadership Programs supporting student initiatives such as the student-run New Year’s Health Fair (see p. 4). Nanci has initiated many programs and projects to promote student involvement in the profession and has been a driving force in Interprofessional Education (IPE) at the UW and nationally, through her work with the American Association of Colleges of Pharmacy (AACP). She will be recognized as the Distinguished Alumni Award winner at this year’s Dean’s Recognition Reception on May 12 (see page 20).

Congratulations to Dr. Wendel Nelson who marks 50 years as a faculty member at our School! He holds degrees in Pharmacy and Medicinal Chemistry and teaches PharmD Program courses and Medicinal Chemistry graduate courses. Wendel earned his B.S. in 1962 from Idaho State University and his Ph.D. in 1965 from the University of Kansas. His research interests include chemical aspects of drug metabolism and drug action, stereocchemical aspects of drug disposition, and putative metabolic intermediates and chemical mechanisms for their formation. Congratulations to Dr. Nelson for five decades of service to the UW School of Pharmacy!
Pharmaceutics Clinical Professor Isabelle Ragueneau-Majlessi was named a UW CoMotion Presidential Innovation Fellow for 2015-2017. The prestigious fellowship program debuted in 2011 to foster entrepreneurial thinking across UW.

UW President Ana Mari Cauce announced Isabelle’s appointment along with 16 other new members to the University’s prestigious CoMotion Presidential Innovation Fellows program last fall. “These 17 faculty members are an integral part of our innovation ecosystem and have encouraged industry, business and other academic institutions to take notice of UW and to consider us first when seeking partnerships to help address some of our world’s most challenging problems,” Cauce said.

“I am delighted to learn about the fellowship,” Isabelle shared, “and to have an opportunity to become an active member of the University of Washington’s innovation community."

“I believe strongly that the Drug Interaction Database could, in the coming years, become a source of high-quality, unbiased information for clinically-oriented platforms and services, as part of a larger effort to promote drug safety.”

ISABELLE RAGUENEAU-MAJLESSI, CLINICAL PROFESSOR

In her work on drug-drug interactions, she is interested in continuing to expand the impact of the Database program within and outside the University. The focus of her fellowship work will be to share her experience with the DIDB platform, which has been fully run at the University for almost 15 years through a successful licensing program offered by CoMotion.

Throughout their two-year terms, the 17 new fellows serve as mentors to other UW faculty, researchers and staff pursuing entrepreneurial aspirations, and share their experiences at campus innovation events. At the end of the term, fellows are encouraged to continue participation in the program and to serve as program and activity advisors to CoMotion.

Isabelle is the co-author of the Drug-Drug Interaction (DIDB) and Pharmacogenetic (e-PKGene) applications, Principal Investigator and Director of the Drug Interaction Database program. Her publications look at clinical pharmacology, drug disposition and the regulatory framework and clinical relevance of drug-drug interactions. She earned her medical degree from St Antoine University in Paris, France, and specialized in Clinical Pharmacology.

For over six years, Isabelle designed and supervised clinical studies in the private sector and academia. She started working at the UW in 1999, first as a Research Associate, and then Principal Research Scientist and Project Manager for the Drug Interaction Database. In 2009, she joined the Pharmaceutics faculty as Clinical Associate Professor. She graduated from UWSOP’s Master’s Degree in Biomedical Regulatory Affairs (BRAMS) in 2010.
H. Steve White Named Chair of Dept of Pharmacy

H. Steve White, RPh, Ph.D. began as the new Chair of the School’s Department of Pharmacy earlier this year. Steve earned his baccalaureate degree in Pharmacy and an M.S. in Pharmacology at Idaho State University and began his career as a practicing pharmacist in the small town of Salmon, Idaho, until his mentor invited him to a career-changing pharmacology conference. From there, he earned his Ph.D. in Pharmacology at the University of Utah, where he rose through the academic ranks after joining the College of Pharmacy faculty in 1986. “Steve is a compassionate leader and a great colleague with a passion for collaboration, science, patient care and student mentoring,” said UWSOP Dean Sullivan. A leader in translational research in anticonvulsant drug therapies, Steve led the NIH-sponsored Anticonvulsant Drug Development (ADD) Program at Utah to identify novel anticonvulsant drugs using established animal seizure and epilepsy models before joining UWSOP. The efforts of this program contributed to the successful development of nine new antiepileptic drugs for the treatment of refractory partial epilepsy including felbamate, rufinamide, topiramate, retigabine and lacosamide. He has collaborated with UW Pharmaceutics faculty, including Associate Professor Nina Isoherranen and Professor Emeritus Rene Levy, Steve’s laboratory, which will relocate to the UW as a partnership between the School of Pharmacy and UW Medicine, features a broad-based research program aimed at gaining a further understanding of the factors that contribute to the expression and prevention of seizure activity. These investigations will hopefully lead to the design and development of more efficacious and better tolerated therapies for the prevention and treatment of epilepsy. “Of the 65 million people worldwide who have epilepsy, over 22 million people don’t respond to drugs,” said Steve. “Through partnerships across UWSOP, UW and Seattle, I look forward to developing a holistic approach to managing and preventing epilepsy.”

5 THINGS YOU DIDN’T KNOW ABOUT STEVE WHITE

1. Steve enjoys traveling with his wife, Kathryn, hiking and fishing—he is looking forward to exploring the mountains and fisheries of the PNW.

2. Two of his three children have pursued pharmacy as a career. One son works in neuroscience critical care, while the other is a working artist in Portland. His daughter will earn her PharmD from Utah in May. “Family is big. We get together for every occasion—next is my daughter’s upcoming graduation and we look forward to her residency at Swedish next year!”

3. Everyone in the family is a certified scuba diver.

4. He has come to learn his preferred cup of coffee is termed “a drip with room.”

5. His health science idols are the neurologists and neuroscientists he’s worked with in epilepsy research. “Their heart shows in their work and their passion is inspiring and keeps me focused.”
Medicinal Chemistry graduate student Mark Benhaim (Lee lab) has been accepted into the NIH-supported Molecular Biophysics Training Program. His proposed research thesis, “Deciphering the Antiviral Activity of Human Defensins: Inhibiting Influenza Virus Fusion,” won him a two-year tenure on this predoctoral training grant.

AFPE renewed the Fellowship for Medicinal Chemistry graduate student Robert Pelletier for his project, “Selectivity and Mechanism of Chlormethiazole CYP2E1 Inhibition and Potential Application in CYP2E1 Metabolism Mediated Toxicities.”

At the Pacific Northwest Association of Toxicologists (PANWAT) meeting, Pharmaceutics students Elijah Weber earned first place in student platform presentation and Kevin Lidberg placed third for student poster presentations.

Pharmaceutics graduate student Cate Lockhart, PharmD, was awarded the 2016 Ocular Toxicology Specialty Section-Covance-OSOD Graduate Student/Postdoctoral Fellow Research Award and the Young Scholar Award by Dove Medical Press Ltd for her work on the pathophysiology of Bietti’s crystalline dystrophy (BCD).

In addition to being a newly-minted Ph.D., Jenna L. Voellinger is also an exhibiting artist—her image, “Human Kidney Tubule Cells,” created as a graduate student in the laboratory of Pharmaceutics’ Associate Professor Edward J. Kelly, graces T-473 in the UW Health Sciences Building.

STUDENT NEWS

At the 20th North American ISSX meeting in Orlando, UWSOP had four predoctoral abstracts selected—Marc Vrana, Jenny Sager, Michael Liao, and Vineet Kumar—one postdoc finalist, Li Wang, and a grad student podium presentation given by Gabriela Patilea-Vrana, titled, “Importance of Hepatic Transporters in Understanding and Predicting Hepatobiliary Clearance And Hepatic Concentrations of Drugs: Introducing the Novel Concept of FTNET.” Marc Vrana (Prasad lab) won first place, the Best Presentation Award: Predoctoral Research, for his poster titled “Differential Tissue Expression of ADME Proteins in Humans.” Jenny Sager (Isoherranen lab) won second place in the predoctoral category for her poster titled, “New Metabolic Pathways of Bupropion in vivo Reveal an Important Role of CYP2C19 and 11B-HSD in Bupropion Clearance; CYP2B6 Contribution to Bupropion Clearance is Minor.” Two of our grad students were finalists for best poster: Michael Liao (Mao lab), “The differential roles of P-glycoprotein (mdr1) in limiting brain and fetal exposure to norbuprenorphine in pregnant mice” and Vineet Kumar (Unadkat lab), “Quantification of transporter expression in the plasma membrane vs. intracellular compartments using biotinylation and LC-MS/MS based proteomics.” Li Wang (Unadkat lab) was selected as a postdoctoral finalist and awarded third place in the Best Presentation category for “Quantification of transporter expression in liver tissue from subjects with alcoholic or hepatitis C cirrhosis.”

Students in our Biomedical and Regulatory Affairs program (BRAMS) recently had the chance to tour CMC Biologics in Bothell to discuss good manufacturing practices.

PharmD students Andrew Nguyen, Iris To, Nina Kim and Shirley Quach were runners-up in the AMCP 2016 Pharmacy and Therapeutics Competition. They looked at the appropriate place in therapy of inhaled iloprost for pulmonary arterial hypertension.

ASHP Chapter President Nick Larned won the Outstanding Professional Development Project Award at the ASHP Midyear Clinical Meeting in New Orleans. His poster showcases the chapter’s Multi-Institutional Shadowing Program utilizing 23 pharmacists from 6 organizations in the Seattle area.

PharmD students performed A1c screenings at Verdant Wellness Community Center at the Stop Diabetes Initiative event, and 21 UW student pharmacists participated in administering Twinrix (Hepatitis A + B) vaccines to beneficiaries of the Salvation Army Adult Rehabilitation Center.

Ryan Delacruz (second from the left), PharmD class of 2017 was part of team Novel Gram + Therapeutics in the UW Foster School of Business’ 2016 Health Innovation Challenge. The team earned the “Judges Also Liked” citation in the inaugural campus-wide competition. Working with Dr. Fred Buckner and Dr. Erkang Fan of UW Medicine, they discovered novel antibiotic compounds that have great bioavailability and potency against drug-resistant Gram-positive bacterial strains, have shown no observed toxicity in mice tests, and can be administered via IV or oral pill.
Gordon Tweit,’52, former owner of Fairhaven Pharmacy, was one of the early members of the Pharmacy Alumni Association at UW. Fairhaven Pharmacy closed last fall, but we recently had an exclusive behind-the-scenes tour of its fantastic Museum with Gordon.

Fairhaven Pharmacy opened in 1889 in a small town just outside Bellingham, Washington. Gordon began working there in 1941 as a delivery boy when he was just 14 years old. In 1962, he bought the pharmacy. On the 50th anniversary of Gordon’s first year at the Pharmacy, he sold it to Rob Johansen, ’70, who had also worked as a delivery boy. Rob was the fourth delivery boy to become an owner. For decades, Fairhaven Pharmacy served the community, even opening at 2 a.m. to help a patient.

Sadly, the pharmacy closed its doors last fall. But Gordon is working with Washington State Pharmacy Association Foundation’s Museum of Pharmacy to house some of the wonderful history of Fairhaven and its corner pharmacy.

Gordon Tweit, ’52

To join PAA, go to: sop.washington.edu/PAAmember

CELEBRATING OUR PAA FAMILY

WE > ME
**Norma K. Geil, ’49**

Norma passed away July 15, 2015, at age 87. She was born in Seattle to Nora and John Nielsen and grew up in Ballard, where she attended Ballard High School. Norma graduated from UWSOP with a B.S. in pharmacy, earning a Phi Beta Kappa key for scholastic excellence. She was always a strong supporter of UW, whence two of her children, Jack and Ann, also graduated. Norma was married to John R. Geil, who was also a pharmacist. They moved to Tonasket, WA, in 1954, where they owned and operated Tonasket Drug Store for many years and raised their children Jack, Ann, Bill, and Tom. Norma moved to Kingston, WA, in 2005, after 51 years in Tonasket. She was preceded in death by her son, Jack and grandson, Connor. She is survived by children, Ann, Bill, and Tom; seven grandchildren; and four great-grandchildren. In lieu of flowers, the family would appreciate donations to the fund to provide a memorial bench in Kingston in memory of Norma (send to Ann Williams at 4932 Rochelle Ave., Irvine, CA 92604) or to your favorite charity.

**Robert Ohashi, ’51**

Bob passed away on November 21, 2015, peacefully in his home. He is survived by sons Arnold and Ross, grandsons Kristopher and Alexander, and granddaughters Tani and Taryn. Bob is preceded in death by soul mate Marian, and sons Robert and Gordon. Memorial services were held in December.

**Mary Jo Mulholland, ’57**

Mary of Garwin, Iowa, passed away October 5, 2015, in Gladbrook, Iowa at age 80. Mary is survived by her four children: Michael, Sheila, Shan and Colleen; four grandchildren, and her brother, John. Condolences may be sent to www.andersonfhs.com.

**Norman Reed Johnson, ’63**

Norman died Wednesday, Sept. 23, 2015, in Poteau, Oklahoma. Norman was born June 26, 1939, in Wenatchee, WA, to Norman E. and Dorothy Johnson. He was a pharmacist. Norman was preceded in death by his parents. Survivors include his wife, Carol, his four daughters, Cheryl, Dawn, Victoria, and Jessica, six grandchildren, and one great-grandson, numerous nieces, nephews and other relatives, loved ones and friends. Services were held in October.

**H. Richard (Dick) Miyoshi, ’74**

Dick Miyoshi died of pancreatic cancer on December 16, 2015, at age 67. Clinical Professor at the UW in the Department of Psychiatry and UWSOP, he served as a Harborview Medical Center psychiatric clinical pharmacist for almost 40 years. He grew up on the family farm in Auburn, son of Hank and Mosi Miyoshi. His first pharmacy job was at Harborview, in a then-new program that put clinical pharmacists out on the hospital floors. He began in surgery, worked on the burn unit, became interested in the treatment of pain, which led him to psychiatry. He acquired a comprehensive and nuanced knowledge of psychopharmacology and was the go-to consultant for difficult clinical questions throughout the Puget Sound region. He was a valued member of Harborview’s Ethics Committee for almost 20 years. His insight, caring and humor made him a sought-out mentor to decades of faculty and trainees in both psychiatry and pharmacy. He took pleasure in language and its power, loved theater, irreverent humor, volleyball, and smoking cigars while pruning unruly shrubbery. A memorial event was held in February at Harborview. Please consider a gift to one of these organizations: Seattle Repertory Theatre, ACT Theatre, The Seattle Public Library Foundation, or Keiro Northwest.

**Robin Davis, ’82, ’84**

Robin of Albuquerque, New Mexico died December 31, 2015, of complications from multiple sclerosis. She received her B.S. and PharmD from UWSOP and was the first female faculty member of the University of New Mexico College of Pharmacy in 1985. In fact, at her new employee processing, a Human Resources employee sized her up and exclaimed “You mean that a bunch of cowboys hired a WOMAN?!” She is survived by her devoted and caring husband Terry Duber; sister Linda Forman; her brother Stanley Davis; as well as her brother-in-law Ronald Duber; nephew, nieces and great-niece. Although her disease left her a quadriplegic, the advancement of voice-activated computers allowed her to keep in touch with family and friends all over the country. Her assistance dogs over the years, Heidi, Gus and Julie, treasured her as much as she treasured them. Funeral services were held in Wilmette, IL in January. Donations in Robin’s memory can be made to the National Multiple Sclerosis Society, The Milagro New Mexico Boston Terrier Rescue or Chabad of New Mexico.
A LEGEND, UNDAUNTED

Clockwise from left: Shirley (Selesnick) Bridge in her UW graduation gown; Shirley and Herb at their wedding; Herb in uniform; Shirley with UWSOP faculty Gail Anderson, Karan Dawson, and Joy Plein; Hillary Clinton with Shirley; Herb and Shirley.

“When you really want something, you don’t give up.”

A look back at legendary pharmacist, civic and women’s advocate, Shirley G. Bridge

This story continues a series begun in Fall 2015. As we near our 125th Anniversary in 2019, we continue to remember our history and the alumni legends in science and pharmacy practice who laid the groundwork for our collective success.

BORN IN 1922 at Swedish Hospital in downtown Seattle, Shirley (Selesnick) Bridge’s life began at the center of the city she loved. Shirley’s early family life was modest. Her father was a tailor and her mother ran the elevator in a department store downtown. They lived in a 4th floor apartment on Capitol Hill, in a building that had no elevator. The trolley down Denny Hill to the grocery store cost five cents each way, so she saved her money and walked up and down the hill instead.

Working for the public good was central to Shirley’s identity as an advocate for women, children, health care, human rights, and projects in the Jewish community. Over the course of her life, she helped develop housing for people living with AIDS, brought improvements to Harborview Medical Center, supported the Northwest School for Hearing-Impaired Children, served as president of the Seattle Women’s Commission, and was a founding member of the Women’s Endowment Foundation of the Jewish Federation of Greater Seattle.

After graduating from high school, she borrowed $200 from an aunt to enroll at the UW to study pharmacy in 1940. “Our mother was the one who pushed us into pharmacy,” she said in the Oral History interview. “She always said to me that you should be able to support yourself and your kids.” Shirley loved chemistry and had a knack for it, studying with a teacher in high school whose class was so rigorous, that, in her first year at the UW, she didn’t have to study at all.

“We used slide rules and we did practical pharmacy,” she recalled. “We did something called ‘pharmacognosy’ which is just like botany.” She worked two jobs and even took a year off to support her studies and those of her sister, Beverly, who was also studying pharmacy. Despite those challenges, Shirley graduated magna cum laude in 1945, and went on to be one of the state’s first female pharmacists, spending her entire career in community pharmacy.

She met her husband, Herb Bridge, at a picnic in 1947 while on a double date. Only Shirley wasn’t on a date with Herb; she was with his friend. Undaunted, Herb pursued Shirley and proposed on their second date. A few weeks later, he presented her with an engagement ring. In his autobiography, he describes their conversation. “Do you like it?” he asked. “Well, yes,” she said. “Fine. We’re engaged.” With that and a promise to support her career as a pharmacist, Herb’s search for a smart, career-oriented woman with a mind of her own was successful. They wed on January 25, 1948.

Herb and Shirley Bridge made their first home at 604 East Union, where
Shirley “was a mentor to me and to all the women faculty of our School at a time when schools of pharmacy had few women faculty,” said Joy. “She earned her successes, which were many, and she was a role model for the rest of us—very competent, confident, compassionate and engaging. She would invite the women faculty to breakfast and we knew that along with the laughter and friendship she would go around the table and ask each of us what we were working on. We all wanted to have something to report and she frequently asked how she could help. We loved and admired her and she loved us and her alma mater.”

“I was very honored to learn that Shirley considered me one of her mentors. I have always known that it was the other way around.”

JOY PLEIN, PROFESSOR EMERITUS, UWSOP

In the practical way of a survivor of the Great Depression, Shirley maintained her pharmacist license until the day she passed. In his autobiography, Herb joked, “She wanted something to fall back on in case my [Ben Bridge] jewelry business didn’t work out.”

Shirley was also a cancer survivor, having fought five different primary cancers: colon cancer in 1955, then uterine, bladder, breast, and cecum cancer over her lifetime. “No sooner would she get out of the hospital than she would go on with her fundraising or working as a pharmacist,” said Herb. After a 53-year battle with cancer, Shirley passed away in 2008 with her family at her side. Her legacy in pharmacy and advocacy live on here at the UW and in her family, who have continued to serve the public good.

The family endowed a professorship in Shirley and Herb's name to fund female faculty and research in geriatric pharmacy. Shirley and Herb Bridge Endowed Professor Peggy Odegard established UW Pharmacy Cares with other UWSOP faculty, creating a faculty practice that provides a new approach to training our PharmD students, along with medication-related consultation and education to community-based partners. “The Bridge Endowment means a lot to this school,” said Peggy. “Without an endowment, innovative advances to pharmacy education and research are difficult to establish.” Shirley's son, Jon, graduated magna cum laude with honors in economics at UW, followed by UW Law School, nine years active duty in the Navy and 22 in the reserve. Today, Jon shares leadership of Ben Bridge Jewelry as general counsel and co-CEO and with his cousin Ed Bridge, and serves on the Board for the Alliance for Education. With his wife, retired state Supreme Court Justice, Bobbe, herself an alumna and affiliate professor of law at UW, they founded the Center for Children and Youth Justice, a nonprofit for the reform of the juvenile justice and child welfare systems. Shirley's son Dan became a Rabbi and served as Executive Director of Hillel UW from 1988-2007. After retiring from Hillel, he has consulted to many non-profits across Seattle. He currently serves as the Interim Executive Director of the Seattle Audubon Society and is the Emeritus Executive Director of Hillel UW. His wife Simcha Shultt has a private practice as a psychotherapist.

In Shirley's obituary, Herb remembered her as being “so instrumental in encouraging me in the right way and letting me know I could do things, whether it was the Navy or business or in the community. She was the material reason for any success I've enjoyed.”

This story owes a debt of gratitude to Herb Bridge's autobiography, Building Bridges, and the Oral History of Shirley G. Bridge by the Jewish Women's Archive.
Gregory Hovander, ’72, RPh won Washington state’s Bowl of Hygeia Award, which recognizes an exemplary pharmacist who has made outstanding contributions in the area of community service. In the mid-1970s, Greg started the first Class A pharmacy and implemented clinical pharmacy services for the Farm Workers Family Health Center in Toppenish, Washington. He also served as the chair of the first task force considering prescriptive authority for pharmacists. Greg continues his 43-year career as a pharmacist as the sole proprietor of Sultan Pharmacy & Natural Care, which specializes in natural, dietary, and self-care in conjunction with medical care.

Glenn Adams, ’97, ’98, PharmD won WSPA’s Pharmacist of the Year Award, which honors a pharmacist who possesses qualities of excellence in routine practice and association activities. “Glenn is an exemplary role model and who has contributed to the service and skill of WSPA during the past year. He has been an outspoken advocate for pharmacists and was involved in pharmacy rules and legislation to ensure pharmacists can continue to provide high quality care to patients and the community.”

Steven Erikson, ’72, ’94, PharmD was presented the WSPA’s Bill Mueller Outstanding Mentor Award, which recognizes a pharmacist or technician who has been an outstanding mentor in the field of pharmacy. Steven worked collaboratively with colleagues to establish a clinically focused community pharmacy in Monroe, Washington, where he has practiced for the past 34 years. He was one of the first pharmacists in the state of Washington to practice under a collaborative practice agreement. His pharmacy has been a community residency site for UWSOP students since the late 1980s and is now the longest continuously operating pharmacy residency program in the country.

Steve Singer, ’81, RPh was awarded WSPA’s Generation Rx Champions Award, which recognizes a pharmacist who has demonstrated excellence in community-based prescription drug abuse prevention. Steve is actively involved in the pharmacy community, serving on advisory panels and as a member of the WSPA Board of Directors. Steve is an advocate for pharmacists and their role in Opioid Overdose Rescue and will assist any trained pharmacist in obtaining a CDTA for Opioid Overdose Rescue.

UWSOP alumnus Brian Beach, ’00, received the National Community Pharmacists Association’s (NCPA) award for educating the community about safe drug handling.

ASPET awarded Pharmaceutics alumna Lily Liu, ’12, the James R. Gillette Drug Metabolism Best Paper of 2015 for her publication titled “Modulation of P-glycoprotein at the Human Blood-Brain Barrier by Quinidine or Rifampin Treatment: a PET Imaging Study.” Lily was a grad student in Jash Unadkat’s lab when she did this research.

Alumnus Ryan Oftebro, ’03, was interviewed by KIRO-TV about Kelley-Ross Pharmacy’s life-saving Naloxone program. http://on.fb.me/1XyRi7N

Congratulations to Dawn Ipsen, ’01, owner of Kusler’s Compounding Pharmacy, for being inducted as a Full Fellow to the American College of Apothecaries!

Laura Hart, PharmD, ’14, and PORPP master’s degree student was awarded the 2016-2017 UW Retirement Association Graduate Student Fellowship in Aging.

Dan Smart, ’12, is now Pharmacist-in-Charge at MedOrganize Pharmacy in Poulsbo, WA. He is using technology to improve medication adherence, a service available to patients, their families and caregivers in the state of Washington.

Lara Andjelkovic, ’05, welcomed baby girl Nina into the world in February 2015 weighing 8 lbs, 7 oz at 19.25 inches long!

Say hello to Mark Holzemer’s, ’73, granddaughter. Nice onesie! (To get your UWSOP onesie, just email Nicole Angus at angusnm@uw.edu!)

Has your class hit a graduation milestone this year? If you would like to create an alumni gathering to celebrate, please contact Nicole Angus at angusnm@uw.edu.

Don’t be shy — tell us what you’ve accomplished! Your successes inspire and add value to all of us. Send updates and photos to Sarah Guthrie at gu3@uw.edu!
Professional Networking Day, UW HUB, Seattle
October 9, 2015
We thank our friends at Walgreens for sponsoring networking opportunities for our students. Scores of industry and retail partners came to campus to meet with students at the day’s events.

Corporate Advisory Board, UW HUB, Seattle, September 17, 2015
Our valued partners, members of our Corporate Advisory Board, gathered in Seattle to share scientific and outcomes information with our research faculty and students and to give insight into industry trends.

WSPA Winter Board Retreat 2016

Symposium to Honor Joy Plein, UW Botanical Gardens, November 10, 2015
Pharmacy deans celebrated with Joy: Tom Baillie (UW emeritus), Bill Fassett (WSU emeritus), Jack Orr (UW emeritus), Sean Sullivan (UW), Joy Plein, Bill Campbell (UNC emeritus), Wayne Kradjin (OSU emeritus).

Scholarship Reception, UW HUB, Seattle
February 25, 2016
Students Matt Binder and Audrey Nguyen (right) were able to meet donor alumnus Herbert Tsuchiya, ’58, and his daughter Kerry Chew. See story on page 5 for more about the event.
No matter how long it’s been since you’ve been to campus, your Pharmacy ties remain strong. We have a host of events coming up this spring and summer to give you a chance to reconnect with colleagues.

Katterman Lecture and Dean’s Recognition Reception
Thursday, May 12, 5:30-8:30 PM
HUB, UW Seattle Campus

UWSOP Assistant Professor and Kelley-Ross Fellow Jennifer Bacci and Josh Akers, pharmacist at Kelley-Ross, along with collaborators from Virginia Mason and Bellwether Housing, will describe how partnerships have facilitated innovation in pharmacy practice and increased patient access to care. The Dean’s Recognition Reception immediately follows with formal recognition for the 2015 PAA Distinguished Alumni Award recipients, Nanci Murphy and Mitch Higashi. To register go to: http://tinyurl.com/2016Katterman

UW Symposium on the Past, Present, and Future of ADME Sciences, Dedicated to Deans Sid Nelson and Tom Baillie
Friday, May 13, 8:30 AM-7:30 PM
HUB, UW Seattle Campus

To honor Dean Nelson’s contributions and Dean Baillie’s retirement, join us for a forum for scientific and social exchange between faculty, students, alumni and colleagues. The speakers will deliver historical perspectives, describe the latest advances in research, and offer a vision for the future of research and training in drug metabolism and drug interactions. Cost $150/ticket. To register go to http://tinyurl.com/SOPMay13

50+ Reunion Celebration
Saturday, June 18, 11:30 AM-1:30 PM
Ivar’s Salmon House, Seattle, WA

Please join us for a very special reunion celebration and lunch for the classes of 1966 and before! Cost $30/ticket. Contact Sarah Egan at 206-616-7613 or sgegan@uw.edu for tickets.

Dean’s Club Night at the Mariners
By invitation only
Tuesday, July 19, 5:30-9:30 PM
Safeco Field, Seattle, WA

Join Dean Sean Sullivan and fellow Dean’s Club Members in cheering on the Seattle Mariners as they battle the Chicago White Sox. Dinner and suite ticket included. Cost $40/ticket, limited to Dean’s Club members only, 2 per household. For tickets contact Sarah Egan at sgegan@uw.edu or 206-616-7613. To become a Dean’s Club Member contact Nicole Angus at angusnm@uw.edu or (206) 616-5371.