

DAWG SCRIPTS

SPRING 2017

LIFE-CHANGING SERVICE



Student pharmacists Christian Michelet, '20, Derry McDonald, '19, and Kathleen Pierce, '19, provided flu vaccinations to residents of Tent City 3. As part of the UW's educational mission and existing work to address homelessness, the Seattle campus hosted the residents Winter Quarter. Tent City 3 provides safe, secure temporary housing to individuals and families.

Dawg Scripts

Produced by the UW School of Pharmacy, with support from the Pharmacy Alumni Association (PAA)

Editor and Writer: Sarah C.B. Guthrie
Contributors: Sean D. Sullivan, Nicole Angus, Caryl Corsi, Douglas Esser, Claire Forster, Gary Harris, Dana Hurley, Ron Klein, Rene Levy, Ryan Oftebro
Designer: Sarah C.B. Guthrie

Photographers: Claire Forster, Sarah C.B. Guthrie, Matt Hagen, Alex Levine, Jeannine McCune

PAA OFFICERS

President: Gary Harris, '72
Past President: Jennifer Glasco, '09

COMMITTEE LEADERS

Alumni Recognition: Scott Herzog, '03
Arizona: David Bailey, '70
Class Representatives: Judi Mar-Burbidge, '82, '00 (1980s), Ben Michaels, '97, '11 (1990s)
Eastern WA: Michael VanLaanen, '11
Events: Jennifer Glasco, '09
Katterman: Adam Brothers, '06
Marketing: Jenny Arnold, '03
Mentorship: Christy Weiland, '07
WSPA: Jeff Rochon, '99

CONTACT PAA

UW School of Pharmacy
Box 357631
Seattle, WA 98195
(206) 616-5371
rxalumni@uw.edu
sop.uw.edu/paa

CONNECT:

W sop.uw.edu

f www.facebook.com/UWSOP

in www.linkedin.com*

t [@UW_Pharmacy](https://twitter.com/UW_Pharmacy)

i [@UW_Pharmacy](https://www.instagram.com/UW_Pharmacy)

*Join our UW School of Pharmacy "Graduate Programs Alumni and Friends" or "Pharmacy Practice Alumni and Friends" LinkedIn group.

On the cover: Student pharmacists Christian Michelet, '20, Derry McDonald, '19, and Kathleen Pierce, '19, provided flu vaccinations to residents of Tent City 3. As part of the UW's educational mission and existing work to address homelessness, the Seattle campus hosted the residents Winter Quarter. Tent City 3 provides safe, secure temporary housing to individuals and families.



From the PAA President

Your membership in the Pharmacy Alumni Association matters.

You might question the impact of an annual membership gift, but when combined with the gifts of hundreds of fellow alumni, your membership

makes a profound difference to current and future pharmacists alike. If you haven't yet joined the PAA, or if your membership has lapsed, I invite you to lend a hand to our efforts.

Your membership gifts allow us to connect and strengthen our alumni network and the profession itself. How do alumni like you make a difference?

- You support reunions, like last year's 30-year and 10-year alumni reunions for the classes of 1986 and 2006, as well as a luncheon for graduates of 50 or more years ago.
- You support learning opportunities like the annual Don B. Katterman Lecture (May 10, 2017), at which the PAA offers CE credit at no additional cost for PAA members.
- You facilitate communication between the School and alumni. PAA membership makes publications like this issue of *Dawg Scripts* possible.
- Your gifts to the PAA Scholarship Fund empower current students. Together, we have supported fifteen students since 2011!

The UW School of Pharmacy may be one of the smaller schools on campus, but we have consistently been the most loyal in giving back to our school, and the impact of those collective gifts is clear.

Help keep the UW School of Pharmacy at the head of the Dawg Pack! **Turn to pages 10-11 to find an envelope that will make it easy to renew your tax-deductible membership or join PAA.** Your membership even counts toward Tyee points! Just fill out the form, include payment and return the postage-paid envelope or scan the QR code below to fill out the membership online—it's that easy to make a difference.

Gary Harris, '72
President, Pharmacy Alumni Association



Join or renew your PAA membership by scanning this QR code or using the envelope between pages 10-11.



From the Dean

I'm pleased to say we keep running into the problem of having too much good news to share in just one issue of *Dawg Scripts*. The stories in this issue show we are engaged in the most important work of our lifetime—stories about leadership, pioneering alumni, student success, faculty serving communities, and the many advances of our research teams. I am pleased to be able to share these stories with you and hope that you are as proud of your school as I am.

We are living in challenging and ever-changing times. In a communication I sent out at the beginning of the new year, I reiterated that we are a purpose-driven, diverse, and vibrant community that cares deeply about science, education, and health care—in service to the health of our patients and communities. I challenged our faculty, staff and students to be guided by our core values and our mission to serve patients and our communities, regardless of the challenges we face. This is our North Star and I am happy to say that together, we continue to make a life-changing impact on our communities. We are working toward an effective vaccine for HIV, training tomorrow's health care leaders and providers in Ghana, creating an affordable alternative to the EpiPen, understanding how we might defeat MRSA, and improving drug safety and delivery.

One of the most exciting aspects of all this work is that many of these initiatives are led by our own students, some now alumni, some still enrolled. As Dean, I want us to engage diverse, top tier students who seek to develop and excel as leaders, collaborators, scientists and providers of patient-centered care.

This fall, the University launched its most ambitious campaign and we embraced the challenge to raise our own standards even higher. The Campaign for UWSOP seeks to increase funding for our faculty and students' training and research. At this year's annual Scholarship Reception, I thanked donors who enabled us to give over \$500,000 in scholarships and fellowships to PharmD and graduate students—a 20 percent increase over the prior year. **Next year, I'd like to see us double our scholarships.**

We cannot do this work without you. I invite you to join us in our Campaign to make a difference for Washington and for the world. Have a look through this issue, follow us on social media, and let us know how our Campaign co-chairs, Assistant Dean Claire Forster, and I can connect to your passion for UWSOP. Thank you on behalf of our entire School community. We are grateful for your continued support and enthusiasm. I hope to see you at an upcoming event or conference this summer!



Sean D. Sullivan, Professor and Dean, UW School of Pharmacy

UPCOMING EVENTS

**Don B. Katterman Memorial Lecture
& Dean's Recognition Reception**
May 10 @ 5:30 p.m.

HUB, UW Campus
Seattle, Washington

**ISPOR Pharmaceutical Outcomes
Research and Policy Program (PORPP)
Alumni Gathering**
May 22 @ 5 p.m.

The Back Bay Social Club
Boston, MA

**WSPA Northwest Pharmacy Convention
UW Reception**
June 3 @ 5 p.m.

Coeur d'Alene Resort
Coeur d'Alene, Idaho

**School of Pharmacy Graduate
Recognition Ceremony**
June 9 @ 3:30 p.m.

Meany Hall
UW Campus, Seattle

**Dean's Club Night at the Mariners—By
invitation only**

June 22 @ 5:30 p.m.
Safeco Field, Seattle, WA

**UWSOP Alumni & Friends Reception in
Portland, Oregon**
June 23 @ 6 p.m.

Noble Rot
Portland, Oregon

Vandana Slatter, '90, appointed to Washington state legislature

In January, at a meeting of the King County Council, UW School of Pharmacy alumna Vandana Slatter, PharmD, MPA (D-Bellevue) was appointed to represent the 48th Legislative District in the Washington House of Representatives. Her appointment to the state legislature is a new turn in her move to a career in public service. Vandana grew up in northern British Columbia, Canada. Her father was a physician

who had emigrated from India and he encouraged her to pursue pharmacy as a career. "We had a pharmacist neighbor, who was able to balance a

successful career and family—she was able to make it all work," she remembers. After earning her BSc in Pharmacy at the University of British Columbia, Vandana completed her residency at Royal Inland Hospital in Kamloops, Canada, and later married Greg Slatter, a pharmaceutical scientist who specialized in drug metabolism. They moved to Seattle where he began a post doc fellowship with (then professor) Dean Emeritus Tom Baillie in UWSOP's Department of Medicinal Chemistry. Vandana decided to enter the two-year, post-baccalaureate

Doctor of Pharmacy Program, which was not offered in Canada at the time. After licensing and some time practicing as a hospital pharmacist, she spent over 20 years working in the pharma/biotech industry for Pharmacia, UCB, Roche/Genentech and Amgen in various roles in drug information, clinical research, R&D strategy, new products marketing, and medical affairs. She was the founder of the ACCP Industry Practice and Research Network (PRN)

"At the UW School of Pharmacy, I learned how to work with and lead a healthcare team for the benefit of the patient. These skills have become equally vital in my role as a public servant and government leader."

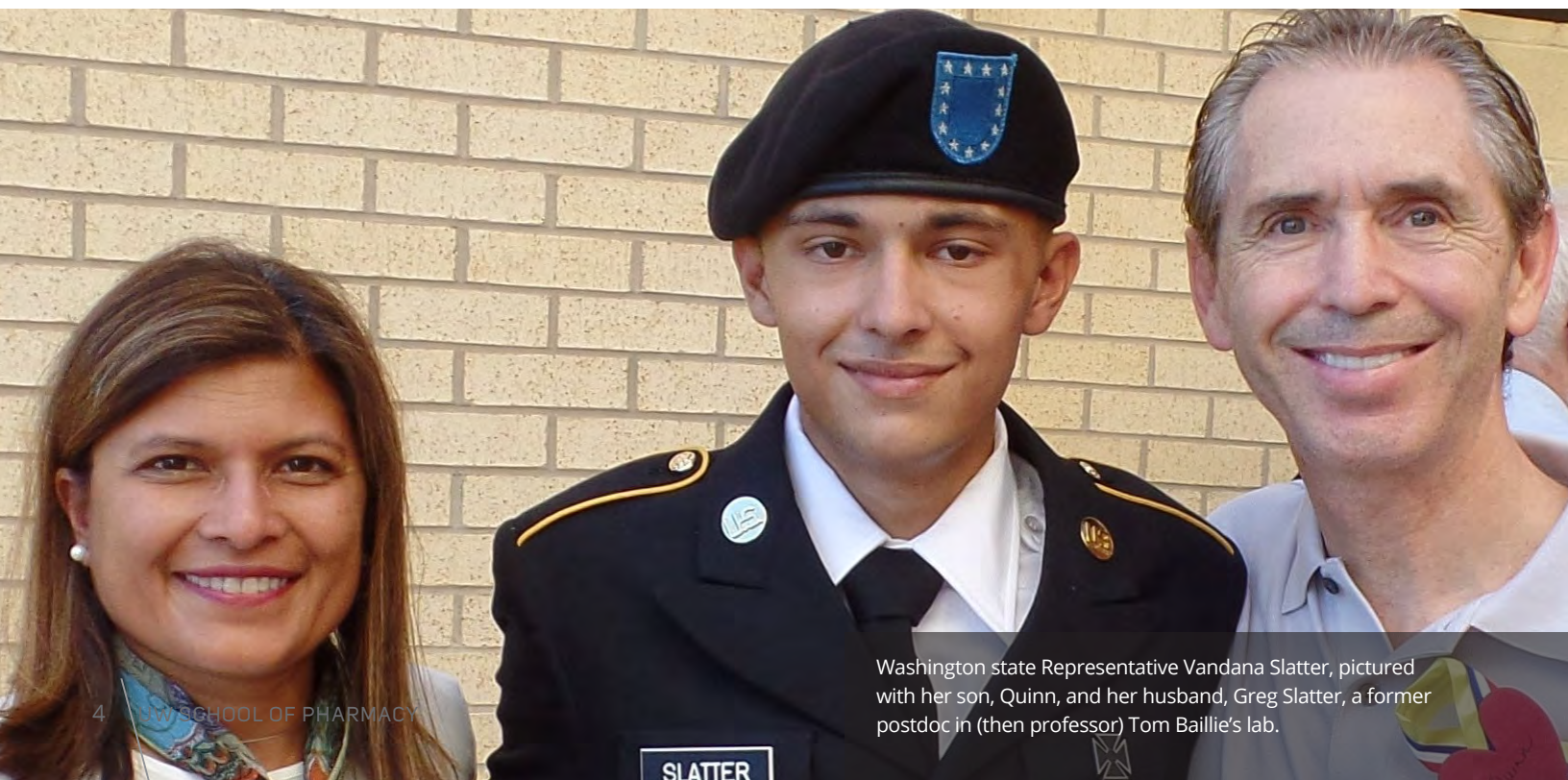
WASHINGTON STATE REPRESENTATIVE VANDANA SLATTER, PHARM.D., '90

in 1998, at a time when more and more career roles in industry were becoming accessible to well-trained clinical pharmacists. Her political aspirations began in the 1990s, when she had her son and was able to take leave and then return to work: "The protections offered by the Family and Medical Leave Act (FMLA) taught me the powerful impact government can have in making people's every day lives better." She completed an executive MPA (2006) at the UW and served on several boards, including a four-year appointment to the Washington

State Board of Pharmacy. "I gained a lot of team-based problem solving skills at UWSOP. I learned there's something magical when a team can come together to problem solve—if we keep our focus on our mission." Her time at UWSOP was more than team skill-building—learning how to share information in a stressful environment helped as well. "Presentations aren't as daunting for me now because of that training. Three hour oral exams

make you think on your feet and learn that it's ok to say, "I don't know.'" In 2013, she decided to run for public office and campaigned for Bellevue City

Council. She lost. "I call it my political MBA—I learned so much about how to campaign," she shared. Although she lost that year, her objectivity and data-based decision-making earned her a broad coalition of support. When she ran again in 2015, she won and served in 2016 as an elected Bellevue city councilmember. With her recent appointment to the Washington state legislature, Vandana continues to demonstrate her leadership skills, serving on three committees: Healthcare & Wellness, Education, and Technology & Economic Development.



Washington state Representative Vandana Slatter, pictured with her son, Quinn, and her husband, Greg Slatter, a former postdoc in (then professor) Tom Baillie's lab.



Christian Michelet, Michael Sporck, and Gilbert Ko are the inaugural class of PharmD-MBA students at the University of Washington.

First UW PharmD-MBA class share benefits of the program

The U.S. health care delivery system brings together a complex matrix of patient care, finance, and policy issues. Having knowledgeable patient advocates who can inform business-related decisions at the table is important—and calls for a unique blend of education in business and health care. Seeing this growing need for business and health care expertise, UWSOP partnered with the UW Bothell School of Business to offer a dual degree PharmD/MBA program. The program is a unique Seattle-Bothell intercampus dual degree with leadership and technology options. “I so strongly believe in the need for the leadership training offered by the PharmD/MBA, that I happily matched the private support we received this year so that each student could receive a scholarship,” affirmed UWSOP Associate Dean Andy Stergachis. The first three students to kick off the program in fall quarter are on their way to earning both PharmD and MBA degrees in just five years. Michael Sporck, Christian Michelet, and Gilbert Ko are all second-year pharmacy students who already have undergraduate degrees and are working part-time in the field. They’re looking to make changes in the profession or take leadership

positions in the pharmaceutical industry. **Michael Sporck** comes from a family of engineers in Silicon Valley and originally started taking classes in bioengineering. The 24-year-old finished with a UW degree in biochemistry and worked a year as a pharmacy technician before applying to pharmacy school. He’s interning with Community Health Plan of Washington in downtown Seattle. Michael says the jobs he wants in the health industry are extremely competitive and difficult to enter for someone with a PharmD degree alone. His ideal job would blend clinical knowledge and management skills, says Michael, who also is president-elect of the UW chapter of the Academy of Managed Care Pharmacy, a professional organization. **Christian Michelet** says his interest in pharmacy started because his mother was a pharmacy technician. The 25-year-old from

Lakewood, Washington, previously earned UW degrees in chemistry and biochemistry. He’s a pharmacy intern at Swedish Medical Center in Issaquah. “I feel like pharmacists have a lot of knowledge but I don’t feel they’re utilized as much as they could be,” Christian says. “Hopefully I can bring that to my future workplace.” **Gilbert Ko** became interested in pharmacy while working at a Bellevue retirement home during high school and while earning a biochemistry degree at the University of Washington. The 23-year-old from Bellevue is now working at the inpatient pharmacy at Virginia Mason Medical Center in downtown Seattle. Gilbert expects a PharmD-MBA to advance a career in the pharmaceutical industry or in hospital administration. “I’m pretty ambitious. I do want to rise up,” Gilbert says. “There are really so many more doors that open.” *Douglas Esser of UW Bothell contributed to this story.*

“One thing that makes us unique is the entrepreneurial spirit that we instill in our students. We make sure they know they can do anything with their degree; they can be innovative. Even if there appear to be barriers now, they can look for ways to knock those barriers down and find ways to help improve health care.”

SEAN D. SULLIVAN, PROFESSOR & DEAN, UW SCHOOL OF PHARMACY

Jash Unadkat was named the Milo Gibaldi Endowed Professor in the Department of Pharmaceutics. Jash joined Pharmaceutics in 1985 and holds an adjunct appointment in the Department of Anesthesiology and research affiliate appointments with the UW Center for AIDS and STD Research, Washington National Primate Research Center and the Center for Human Development and Disability. He studies the transport and metabolism of HIV and other antiviral drugs. His research into drug transport could potentially lead to better ways to treat diseases such as Hepatitis C, AIDS and Alzheimer's. Jash created and leads the UW Research Affiliates Program on Transporters (UWRAPT), a cooperative effort between the UW School of Pharmacy and pharmaceutical companies. He also leads UWPKDAP, a National Institute on Drug Abuse (NIDA) funded program project grant on drug disposition during pregnancy



Professor of Pharmaceutics and Pharmacy **Danny Shen** announced his retirement earlier this year. He will continue to work part time on several key research projects. Danny had previously served



as chair of the Department of Pharmacy. He is a Member in the Clinical Research Division at Fred Hutchinson Cancer Research Center and a Co-Director of the Pharmacokinetics Lab, a shared research resource for UW Health Sciences. Danny held faculty appointments at the University of Kansas Medical Center and State University of New York at Buffalo prior to joining the faculty at the UW in 1984. He is a fellow of the American Association of Pharmaceutical Scientists (AAPS) and the American Association for the Advancement of Science (AAAS). Danny is currently Co-Principal Investigator for the Natural Products Drug Interaction (NaPDI) Center, a \$10M, intercollegiate grant to study potential interactions between select natural products and commonly used medications.

In March 2017, **Jeannine McCune** began a position as a Professor in the Department of Population Sciences at the City of Hope Comprehensive Cancer Center outside of Los Angeles. Jeannine has been a valued colleague in the Department of Pharmacy since 1998 when she joined us as an Assistant Professor. She moved quickly through the ranks and was



promoted to Professor of Pharmacy in 2011. Since 2003, she has jointly co-directed the Fred Hutch/ UW Pharmacokinetics Laboratory with Danny Shen. In 2016, Jeannine was appointed Joint Professor in the Department of Pharmaceutics. We thank Jeannine for her immeasurable contribution to the UWSOP and wish her well in her new position at City of Hope.

Assistant Professor of Pharmacy **Jennifer Danielson** was voted Chair-elect for the Council of Sections Committees for American Association of Colleges of Pharmacy (AACCP).

Anirban Basu contributed to three chapters in *Cost-Effectiveness in Health and Medicine*, one of the most widely-cited and highly regarded books in health economics.

Melissa Barker-Haliski and **H. Steve White**, et al. authored, "Acute treatment with minocycline, but not valproic acid, improves long-term behavioral outcomes in the Theiler's virus model of temporal lobe epilepsy," published in *Epilepsia*.

Acting Assistant Professor of Pharmacy **Carrie Bennette** received a National Institute for Health Care Management (NIHCM) Foundation Research Award for her study, "The Clinical and Economic Impact of Washington State's Oral Anticancer Treatment Access Law."

PORPP graduate student **Blythe Adamson** and Professor Emeritus **Lou Garrison** et al. presented: "The cost-effectiveness of financial incentives for viral suppression in HPTN 065," at the Conference on Retroviruses and Opportunistic Infections.

US Pharmacopeia (USP) Fellow and Medicinal Chemistry post doc **Kelly Hines** presented research on structural characterization of drug compounds by Ion mobility mass spec at the USP meeting.

PORPP Professor **Dave Veenstra** served on the Committee on the Evidence Base for Genetic Testing that produced *An Evidence Framework for Genetic Testing*.

Professor Emerita **Joy Plein**, '51, '56, has been named the recipient of the 2017 UW-UWRA Distinguished Retiree Excellence in Community Service Award! This award is designated to honor a retiree for excellence in service that exemplifies the University's values with special distinction and is chosen based on the individual's contributions in service to the community, including the University, locally, regionally, nationally or internationally.





Pharmaceutics Professor Shiu-Lok Hu and Medicinal Chemistry Associate Professor Kelly Lee collaborate to improve HIV vaccine efficacy.

Hu and Lee combine forces to design novel HIV vaccine

Pharmaceutics Professor Shiu-Lok Hu and Kelly Lee, Associate Professor of Medicinal Chemistry, received funding for research to create a vaccine against HIV. This research builds upon decades of research by these investigators funded by the National Institutes of Health and more recently by the Gates Foundation. HIV is a highly lethal virus that continues to evolve in the body, making it difficult for the infected person to clear the infection. Without effective therapeutic intervention, there are few survivors after contracting HIV. “Unfortunately, HIV has evolved many mechanisms to evade the immune system and ultimately destroying it. Even today, with effective treatments, if you stop taking drugs, the virus comes back.” Thus, a safe and efficacious vaccine capable of preventing HIV infection remains an important goal in the global fight against AIDS. So far, the only vaccine that has shown a modest (30%) efficacy is the one tested on 16,000 volunteers in Thailand (the Thai trial). This vaccine employs the “prime-boost” strategy pioneered by Shiu-Lok in the late 1980s. This strategy uses a genetically engineered smallpox vaccine to prime the immune system, followed by recombinant HIV proteins as a boost. Although the Thai trial has shown

“If you get mumps and recover from it, you develop a lifetime immunity. This has been the paradigm for classical vaccine development: to mimic natural infection without causing the disease. But, to make a HIV vaccine, we may have to look for a new paradigm. HIV leaves few survivors.”

SHIU-LOK HU, PROFESSOR, DEPARTMENT OF PHARMACEUTICS

the feasibility of vaccination against HIV, further improvements are needed to make it an effective preventive measure. In this new grant, Shiu-Lok and Kelly hope to improve the efficacy of the “prime-boost” approach by designing a more effective vaccine. Kelly has studied the influenza virus, which utilizes mechanisms similar to those used by HIV to “dock” onto the host cell, pry it open, transfer the viral genes into the cell, thereby taking it over and causing the infection. The UWSOP team seeks to create a vaccine that could better expose the part of HIV it uses to dock onto the cell, thus making it

easier for the body to mount immune responses to block infection. If successful, these approaches are likely to result in greater efficacy than that achieved in the Thai trial. This project highlights the unique capacity of the UW School of Pharmacy in pharma-

ceutical sciences, as Shiu-Lok and Kelly each bring different expertise in virology, immunology, and structural biochemistry to tackle problems such as HIV vaccine. Their partnership could well lead to a breakthrough to find a safe and efficacious vaccine to help make the world free of AIDS. *The five-year, \$4.5M grant was funded by the National Institute of Allergy and Infectious Diseases, National Institutes of Health (R01AI129673).*



Ghanaian health providers lean in to learn from UWSOP PharmD students about latest blood glucose devices, automatic BP machines, and spirometers. The training is a breakthrough in the approach to Global Brigades trips.

UWSOP students and faculty add innovative training and research to their Global Brigades trip to Ghana

Student pharmacists on Global Brigades ventures spend several intensive days working with local populations to provide some basic health care. In 2014, the student-faculty team met with almost 900 patients, but were somewhat limited in what care they could provide—in some cases just ibuprofen and vitamins were the best they could do for

people who had very limited access to health care in Nicaragua. In 2016, the student-faculty team began a new process of training health care providers on site in Ghana. Global Brigades student chair, Richard Lee, notes, “Rather than acute conditions our shift is toward chronic conditions. This program has been so successful that Global Brigades

has incorporated this into a major program revision for this year. In fact all trips going to Ghana will be following this model and sites in Central America are also incorporating features of this program.” Global Brigades trips have in part been supported by the Dean’s Fund for Excellence and student fundraising for medical supplies and equipment.

PORPP students’ study links lack of coverage to greater health expenses for employers and more unintended pregnancies

At companies whose health insurance plans exclude contraception coverage, female employees experienced 33 more unintended pregnancies per 1,000 women, and more unintended births and terminations. Such plans might also result in higher overall costs for employers. Those were the primary findings of a study led by the UWSOP and Princeton University, published in the journal *Contraception*. It’s well established that access to birth control lowers unintended pregnancies and terminations, and is cost-effective at the societal level. Under the Affordable Care Act (ACA), employers are required

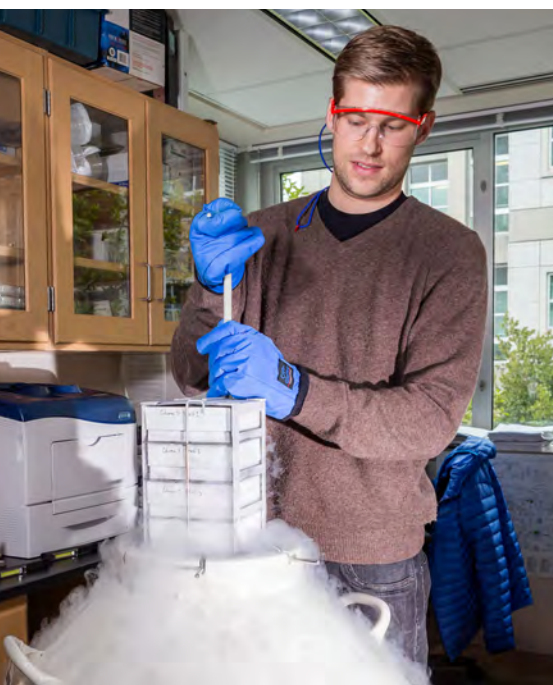
to cover birth control, but several employers have gone to court to opt out of the requirement. PORPP students Will Canestaro and Elisabeth Vodicka were curious about the effects that private health insurers’ birth-control coverage had on plan costs and reproductive-health decisions of women on those plans. The students reached out to UWSOP’s Don Downing and health economist James Trussell, professor emeritus of economics and public affairs at Princeton University. He specializes in reproductive health and demographic methodology. The team used a model to extrapolate outcomes

for a large, nationally representative sample and found a statistically significant difference in unintended pregnancy and terminations. The team’s model creates opportunity for further study, including the return on investment for employers choosing to opt in or out of birth control coverage; the impact that public-plan coverage, such as Medicaid, may have on unintended pregnancies; and the impact to population health in America by modeling how many women are affected by these plans’ benefit decisions. “Ultimately, we want to aid employers in making informed decisions,” Vodicka said.



Medicinal Chemistry's Dennis Goulet receives Scott Grimm Memorial Scholarship—and is named UWSOP's 2017-18 Magnuson Scholar. Long-time friend of Med Chem and the School of Pharmacy, **Scott W. Grimm** was a Corporate Advisory Board member who enthusiastically supported our students and programs. Scott was a leader in drug discovery and development in his 27-year career with AstraZeneca. When he died in 2014, his family and colleagues established a permanent endowed fund in his name to support a high-achieving graduate student in Medicinal Chemistry whose research supports the fight against brain cancer. As we went to press, we learned Dennis was also named UWSOP's 2017-2018 UW Magnuson Scholar, receiving a \$30,000 award on the basis of his outstanding academic performance and potential contributions to research in the health sciences. Professor **Bill Atkins** said, "Dennis joined my lab in 2014 and his accomplishments are nothing short of extraordinary...He is liked and highly respected throughout our department." The two scholarships will support Dennis' work on the safety and efficacy of proteins as therapeutics. He told us, "I am very grateful to the family of Scott Grimm for their generous sponsorship of pharmaceutical research at UW and humbled to be selected for both the Grimm and the Magnuson Scholarships."

PharmD student Richard Lee's team, EpiForAll, took home the \$15,000 Hollomon Family grand prize at the Hollomon Health Innovation Challenge (HIC) hosted by UW Foster School's Buerk Center for Entrepreneurship. The HIC featured 20 student teams seeking to address problems in health, wellness, and healthcare through innovation. This was EpiForAll's second year of competing with their affordable emergency epinephrine auto injector that utilizes existing ampules. "I really need to thank UWSOP Associate Professor **Tom Hazlet**. Without him, I wouldn't be here today since the value I bring to the team is more than just the clinical pharmacy aspects but also rests upon the lessons I learned from his Biomedical Regulatory Affairs Certificate Program and Clinical Trials Certificate Program. These classes provided a strong foundation to help our team plan out our strategy for seeking FDA approval which is part of our next steps."



First author and 4th year graduate student John (Jake) Kraft with the UW's Targeted Long-Acting Combination Antiretroviral Therapy (TLC-ART) team reported that a dose that combines three HIV drugs—intended to overcome drug insufficiency in lymph nodes—lasted over two weeks in the test model, a remarkable breakthrough. Currently, HIV patients take multiple pills daily, which can create challenges for some HIV-positive people. Details of the study were published in the March 2017 issue of *AIDS*, one of the most respected HIV/AIDS journals. **Jake Kraft, Lisa McConnachie, Josefin Koehn, Loren Kinman, Carol Collins, Danny Shen, Ann Collier, and Rodney Ho** lead the research team. The article is entitled, "Long-acting combination anti-HIV drug suspension enhances and sustains higher drug levels in lymph node cells than in blood cells and plasma." TLC-ART has multiple projects with the focused goal of producing injectable drug combinations that will achieve effective drug levels lasting more than seven days. (NIH Grant UM1 AI120176)

WHY I AM A PAA MEMBER

Beverly Schaefer, '70, owns Katterman's Sand Point Pharmacy in Seattle along with partner Steve Cone, '77. She has been a member since PAA's founding in 1981. As the pharmacy's Clinical Community Pharmacist and Advisor for Making Wise Health Choices, Beverly is passionate about community pharmacy.

When I mentor younger pharmacists, I remind them our job is to educate our patients to make better choices for a healthy life. Over the years, I've developed new primary patient care services, including treating people with minor ailments and providing our travel medicine consultations and vaccinations. This is all a part of why I am a member of PAA, along with staying connected and engaged with the UW School of Pharmacy community. I love learning about trends in pharmacy, attending lectures, seminars, and parties, keeping in contact with our faculty and classmates—and getting to see that Joy Plein never ages.

Beverly Schaefer, '70

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

WE > ME



Alice Ball, Class of 1914, solved leprosy therapy riddle

Just over 100 years ago, as World War I raged in Europe, a chemistry professor named Alice Ball was demonstrating the use of a gas mask when something went tragically wrong. The brilliant, young chemist died a few months later at age 24, likely from accidentally inhaling chlorine gas. The riddles she had solved may be different from what our scientists are working on today, but as we look back at the life and work of this extraordinary African-American woman, we see the drive that is a hallmark of the alumni and faculty of the UW School of Pharmacy. Born in Seattle in 1892, Alice grew up both in Washington state and Hawai'i to middle class parents. Her mother and grandfather were well-known photographers who exposed young Alice to the magic of chemistry in developing photos. We can imagine her wide-eyed excitement in the darkroom as her mother dipped plain paper in a bath of chemical developer to reveal the hidden image.

In less than a year, UWSOP alumna Alice was able to isolate the active ingredients in chaulmoogra oil—a discovery that brought relief to people with leprosy until sulfa antibiotics came into use in the 1940s.

A top student at Seattle High School, Alice began her scientific career at the University of Washington in 1910. She earned her bachelor's in pharmaceutical chemistry in 1912 and then earned a second degree in pharmacy in 1914, here at the UW School of Pharmacy. After graduation, she co-authored a paper, "Benzoylations in Ether Solution" in the *Journal of the American Chemical Society*, received a full scholarship, and became the first African-American woman to earn her master's degree at the College of Hawai'i (now University of Hawai'i). Her master's thesis research involved extracting the active ingredients from the *awa* (or *kava*) root. Hearing of her work, Dr. Harry T. Hollmann, U.S. Public Health Officer for Hawai'i, asked her to help solve a mystery. As acting director of the Kalihi leprosy clinic, Hollman was trying to find a treatment for the terrifying disease. At this time, there was no cure and no palatable treatment for leprosy. People afflicted with the disease were quarantined. Over decades in Hawai'i, 8,000+ children and adults were taken from their homes in the middle of the night and brought to a camp on Molokai island. Chaulmoogra oil had shown promise in treating leprosy in India and China, but it was water insoluble. It burned when injected under the skin and its acrid taste made it very difficult to ingest. Hollmann asked Alice if she could extract the active ingredient in chaulmoogra oil, as she did for the *awa* root. In *Headstrong: 52 Women who Changed Science—and the World*, author Rachel Swaby writes that Alice "treated the oil's fatty acids with an alcohol and a catalyst to kick-start



Alice Ball earned two degrees, one in pharmaceutical chemistry and one in pharmacy at the University of Washington from 1910-1914 (pictured here from the 1911-1912 UW Tyee Yearbook).

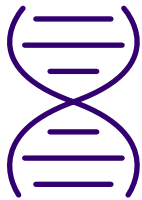
the reaction to create a less viscous chemical compound" (13). Using that process, Alice was able to isolate the ethyl esters from the oil and create an effective therapy. Her breakthrough was so significant that—at just 23 years old—she became the first woman and first African-American offered an instructor position in chemistry at the College. Her method was used to develop therapies to treat leprosy patients until the 1940s. Not long after her premature death, college president Arthur L. Dean—without giving credit to Alice for her work—chose to publish what he called the "Dean Method," for extracting the active ingredient in chaulmoogra oil. In 1922, to right that wrong, Hollmann published an article describing "Ball's Method," thus preserving Alice's leading role in the breakthrough and in pharmaceutical history. However, even with Hollman's recognition, Alice's accomplishments were almost lost in time until Dr. Kathryn Waddell Takara learned about her in the University of Hawai'i's archives in 1977, and Stanley Ali, a retired Federal worker, came across her records while doing research on blacks in Hawai'i. These historians were essential in ensuring her place as a legend among scientists and UWSOP alumni. We honor Alice Ball, who embodies the spirit of discovery that lives on today in the UW School of Pharmacy students, faculty, and staff.

“We are the driving force for innovation that has changed pharmacy across the nation.

Since our School’s founding in 1894, we have been committed not only to education and research, but to serving our community and our world. We led the change for pharmacist-administered vaccines, improved access to emergency contraception, and advocated for better patient counseling standards. Our research and innovation efforts blaze health care trails. With the support of donors and alumni there is *no limit* to what we can achieve.”

SEAN D. SULLIVAN, PROFESSOR & DEAN, UW SCHOOL OF PHARMACY

5 CAMPAIGN PRIORITIES

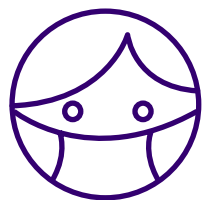
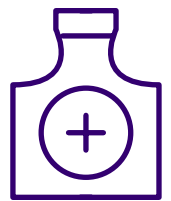


1. PRECISION MEDICINE

We will discover and improve the use of safe and cost-effective treatments which dramatically improve health and reflect the unique genomic characteristics of individual patients.

2. SAFER THERAPIES

We will work on vaccines, biologics, drug interactions and cures to improve public health. We will innovate and discover improved ways for pharmacists to care for patients.



3. PROTECT THE VULNERABLE

We will provide training and research that serves vulnerable populations, such as the elderly, pregnant women, the homeless, and underserved segments of our community, here and around the world.

4. REINVENT PHARMACY

We will develop the national model for how to deliver inter-professional and leadership training that responds to current healthcare needs, while benefiting patients.



5. PREEMINENT STUDENTS

We will bring diverse, top-tier students to our School—women and men who seek to develop and excel as leaders, collaborators, scientists, researchers and providers of patient-centered care.

CAMPAIGN CO-CHAIRS SHARE THEIR PASSION FOR UWSOP

**Gary Harris, '72, President,
Pharmacy Alumni Association**

I believe that a health care professional, like a pharmacist, who is readily accessible to the public, and knowledgeable and honest about disease state management and medication is a true asset to our society. I am also passionate about helping those who are unlikely to be able to afford this quality education on their own to be able to pursue their dreams.



Dana Hurley, '97, '00, '04

The experiences I gained throughout the programs at UWSOP and the long-term relationships with professors have been a tremendous asset in my careers in pharmacy and health economics. I'm interested in novel and innovative programs that are addressing the healthcare needs of patients and research. Those exist in both the "kidney on a chip" project and in research being conducted in PORPP. My passion lies in connecting people to ignite, inspire and support these tremendous research projects and people.



Ron Klein, '76

I want to see the University of Washington continue to be a top tier university. To do this, we need the funds to attract the best students, attract and keep the best professors and build and maintain the best facilities. Earning a pharmacy degree from the University of Washington opened the door and gave me the educational background for a successful career in clinical research. Making college education affordable for everyone who wants to go is what I hope for.



**Rene Levy, Professor Emeritus,
Pharmaceutics**

I am passionate about our graduate programs. For many reasons (faculty, students, unique environment) our programs train fabulous scientists. Over time these graduates have had a prodigious impact on the pharmaceutical industry and have created a distinctive reputation for our University. I hope that through the Campaign we will be able to strengthen our programs by providing a base of graduate student support.



Ryan Oftebro, '03, President, Kelley-Ross Pharmacy

My experience at the UW taught me the value of leadership in the profession, and it opened my eyes to the idea that a community pharmacist could be a clinical pharmacist. I am particularly interested in the development of a new Leadership and Innovation Center. Change is happening quickly. I want to see our profession influencing this change, not just responding to it. I am most passionate about the opportunity to help people discover (or re-discover) a connection to the School of Pharmacy.

JOIN US Contact Claire Forster at 206-616-3217 or clbrown@uw.edu or Nicole Angus at 206-616-5371 or angusnm@uw.edu or online at <http://bit.ly/GiveUWSOP> to explore the ways you can make an impact for Washington, for the world.

Drinks at College Inn leads to Faculty Innovation Award, possible breakthrough in combating MRSA

There is a rich tradition of stories that begin with... “we were sitting in a bar talking, when we got this idea.” From the Marine Corps, to the Ironman Triathlon, and even Quidditch, all have their roots in legendary stories about beginning in a conversation in a bar. We may one day come to tell stories of the breakthrough in antibiotic resistant bacteria that began at U District’s College Inn. Last fall, in a tradition that harkens

back to Dean Sid Nelson, UWSOP’s junior faculty began a regular outing to share ideas, research, and good spirits. “The event is called MEH,” said Brian Werth. “It stands for Monthly Early-career-investigator Happy hour.” “Brian and I were talking at one of these events,” said Libin Xu, “and we suddenly realized there might be an opportunity for us to work together on some novel research into antibiotic resistance. We saw that my expertise in ion mobility-mass spectrometry (IM-MS) analysis of lipids and Brian’s expertise in antibiotic resistance could help us understand the mechanisms behind this resistance because many of the antibiotics target the bacterial cell membrane and cell wall.” Brian and Libin were named the first UWSOP Faculty Innovation Fund Award recipients. The new fund encourages high-risk, innovative research projects. Brian is a specialist in antibiotic resistance and is unusual in that he has a PharmD as well as an acute care residency at Queen’s Medical Center in Hawaii

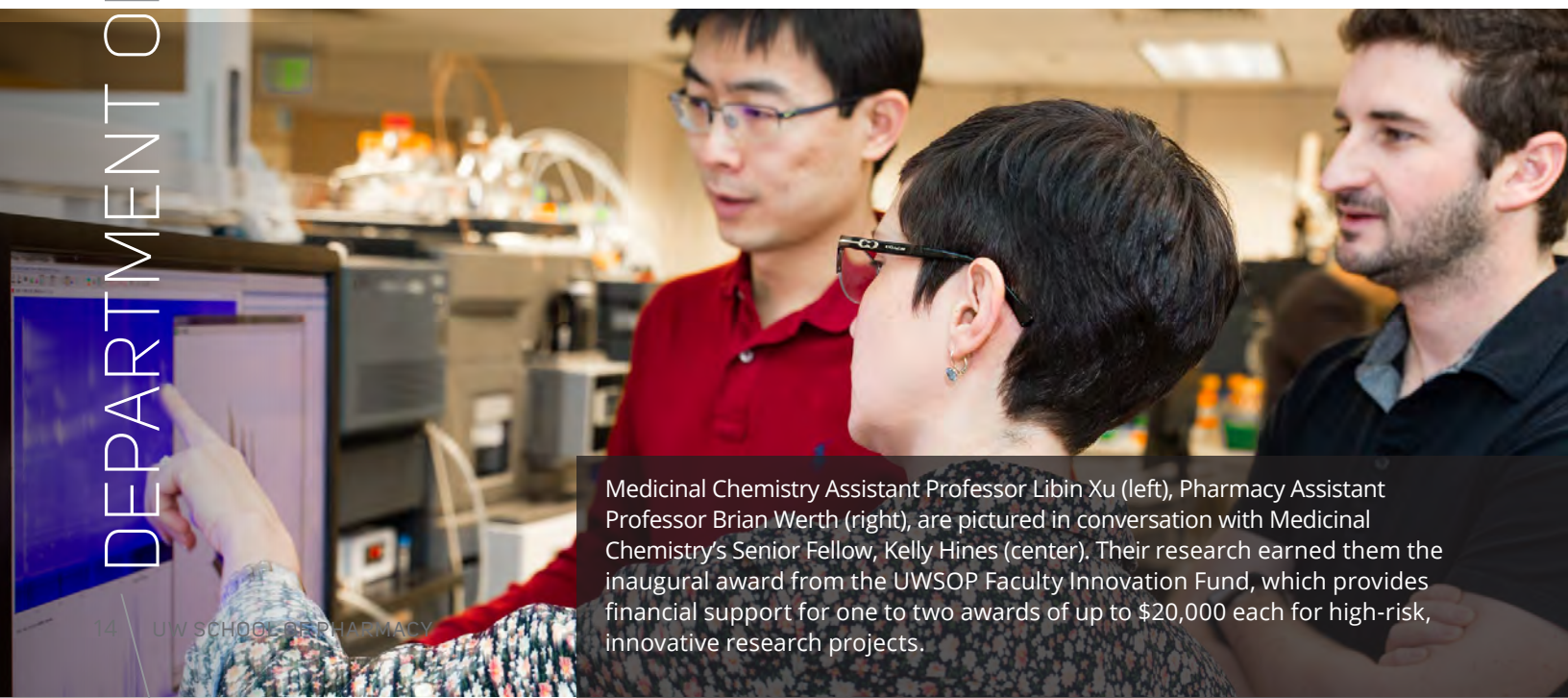
“Antibiotic resistance is a significant and underestimated public health threat. If we don’t have antibiotics as a tool, the impact on the practice of medicine will be profound.”

BRIAN WERTH, ASSISTANT PROFESSOR, PHARMACY

and a two-year infectious disease fellowship at Wayne State University in Detroit. Libin, a specialist in mass spectrometry, lipid peroxidation and lipid metabolism, completed his Ph.D. in Organic

Chemistry at University of Illinois at Chicago and was a Postdoctoral Fellow at Vanderbilt University. “Antibiotics are one of few curative drugs we have,” notes Brian, “and they are the only drug that the more we use them, the less

effective they can become.” That diminished return makes antibiotics a shared public health resource—and the recent increases in antibiotic resistant strains of bacteria such as MRSA a grave concern. Antibiotic resistance affects over two million Americans and results in over 23,000 deaths per year according to U.S. Centers for Disease Control. By looking at bacteria at the molecular level, Brian and Libin are seeing that resistance to different antibiotics leads to characteristic changes in the lipid compositions of the cell membranes of bacteria. The specific changes to the membranes depend on the antibiotic to which the bacteria have been exposed. This breakthrough could lead to novel intervention strategies such as modifying the lipid components of bacteria’s cellular membranes to make them susceptible to antibiotics again, as well as diagnostic tools that could improve clinicians’ abilities to select the best drugs for certain types of bacterial infections.



Medicinal Chemistry Assistant Professor Libin Xu (left), Pharmacy Assistant Professor Brian Werth (right), are pictured in conversation with Medicinal Chemistry’s Senior Fellow, Kelly Hines (center). Their research earned them the inaugural award from the UWSOP Faculty Innovation Fund, which provides financial support for one to two awards of up to \$20,000 each for high-risk, innovative research projects.



John Hoekman, PhD, and Professor Rodney Ho worked together while John was a graduate student in Rodney's lab. From that work, John developed the Precision Olfactory Delivery™ (POD™) nasal delivery platform.

Alumnus John Hoekman's drug delivery device, invented in Rodney Ho's laboratory, receives \$36M

Impel NeuroPharma, Inc., a Seattle-based clinical stage biotechnology company announced a \$36 million Series C round to develop a pipeline of drug-device combination products built upon its Precision Olfactory Delivery™ (POD™) nasal delivery platform. The POD™ drug delivery device is intended to achieve biodistribution, bioavailability, and decreased dose-to-dose variability in patients by delivering the dose deep into the nasal cavity, thereby delivering a more consistent, higher concentration of the drug to the brain. The device could significantly improve treatments for neurological disorders such as migraine, Alzheimer's and Parkinson's disease.

UW Pharmaceutics

Professor Rodney Ho, John Hoekman, and the Ho lab team invented the brain drug delivery concept while John was a graduate student. Now that John has graduated, he leads Impel, which has licensed the concept. Rodney observed, "Through John's tireless efforts, he has made significant progress in bringing this critical technology closer to the market. The shortcoming of a lot of drugs isn't the drug itself. It's getting the correct dose to exactly the right place so it's most effective. Once a drug goes into the body, it's not unusual for 10 percent or less to actually end up where it needs to go. But if too much is delivered, it can be toxic. So the shortest

road to drug safety and effectiveness is to solve that puzzle—in this case, it is to deliver the drug directly to the brain using the POD™ device." John explains, "The nasal cavity is a vastly under-utilized entry point for therapeutics to enter into the circulation. Our POD™ nasal delivery may allow for an improvement in biodistribution and consistency, compared to current delivery methods." Impel NeuroPharma is striving to use the POD™ system to develop improved drug-device combination

products in under served patient populations. "We are especially pleased that our new investors recognized the value in the POD™ technology," said John. "Their support allows us to

move our lead products closer to FDA approval." Aaron Royston of venBIO, one of the investment firms, notes, "The biodistribution data that Impel NeuroPharma has generated with the POD™ delivery platform demonstrates its potential to improve our approach to treating multiple diseases. We're excited to use the platform to bring new treatments to patients." John's affiliation with the UW School of Pharmacy continues as an alumnus. Rodney shared, "We appreciate John's ongoing collaboration and are inspired by his innovative thinking and commitment to make a difference in the lives of millions of people."

"John is the definition of a good citizen to all of us here at UW School of Pharmacy. He continues to teach and help promote the school's research mission."

RODNEY HO, PROFESSOR, DEPARTMENT OF PHARMACEUTICS

John Horn raises concerns about drug safety

UW School of Pharmacy Professor John Horn and UWSOP alumnus Dan Malone were part of an investigative report, "Pharmacies miss more than half of dangerous drug combinations," published in the *Chicago Tribune* on December 15, 2016. The *Tribune* spent months investigating how often staff at retail and independent pharmacies advised

patients about the potential for serious drug interactions. The report found that the interactions were noted to the patients or their physicians in only 48%

of the cases. The *Tribune* investigation involved 255 pharmacies in the Chicago area. Pharmacies were presented with prescriptions for one of five pairs of drugs known to result in serious drug interactions. The prescriptions were presented by shoppers who were trained to record the pharmacy responses. The primary outcome was whether the pharmacy alerted either the patient or the physician of the potential interaction. The test drug pairs included commonly prescribed drugs such as simvastatin and clarithromycin. This combination can result in severe muscle damage and possibly renal failure in some patients. The results from the *Tribune's* reporting have been shared with the pharmacies and all are taking steps to improve the communication of possible drug interactions. While the intent was not designed to identify the cause of the poor pharmacy response, it is generally recognized that excessive alerts for all interactions, regardless of

severity, cause pharmacists, physicians and other providers to have alert fatigue and potentially miss critical warnings. Horn has worked with institutions throughout the U.S. to customize interaction alerts and avoid irrelevant alerting. Continuing education for pharmacists on drug interaction management and placing more priority on patient counseling

"Based on the pairs tested in this investigation, there is no justifiable reason to not warn a patient about the dangers of interactions. I am glad to see that the pharmacies are responding so well to the report's findings and taking steps to improve patient safety."

JOHN HORN, PROFESSOR, DEPARTMENT OF PHARMACY

may also provide for better patient care. One of the challenges comes down to the realities of the business model for most pharmacies. In almost every

state, pharmacists are compensated for dispensing medications, not for the unique medication expertise that they bring to the health care team. With the priority on dispensing medications, independent and chain pharmacies focus on volume to stay financially sound and are reliant on automatic alert systems. A question arises about the *Tribune's* findings. Insurance plans also have systems that deny payment if a patient tries to fill a prescription that could cause a harmful drug interaction. "When that denial happens, a pharmacist will normally call the physician to request a different prescription," notes UWSOP Dean Sean D. Sullivan. "If the *Tribune* investigators paid cash, then this important fail safe could not be activated." Sullivan added that even with that protection, pharmacies still have a vital role in the patient care process, and need to establish processes to confirm drugs are safe to dispense, especially if a patient is not insured.



In one case, the investigation team found pharmacists were filling upward of 600 prescriptions a day with just two pharmacists working 10-hour shifts—one prescription every two minutes. With that pressure of time, pharmacists are not as able to research a patient's health records, contact physicians, and other steps that may improve safety.

William Albert Briggs, '51

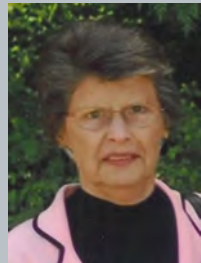
Bill Briggs' life ended peacefully on Wednesday, November 23, 2016, at his home in Kenmore, with his wife Marilyn at his side. He was 89. Born in Tacoma on August 17, 1927, William Albert Briggs graduated from West Seattle High School and then the University of Washington in 1951 with a degree in Pharmacy. Bill met his bride to be at Hart's Pharmacy in Seattle and they were wed in 1952. Bill and Marilyn opened Briggs Pharmacy in 1955 where it was a community presence in the Wallingford neighborhood for over 45 years. Bill lived to serve his community and his family. He was a dedicated member of the North Central Kiwanis for over 45 years. The North Central Kiwanis Memorial Fund fully supports a summer camp experience for special needs children with cerebral palsy, as well as other physical handicaps. This work was Bill's favorite charity and he and Marilyn worked throughout the years in support of this camp. Bill is survived by the love of his life Marilyn, his wife of 63 years, their three children and their spouses, and their six grandchildren all of whom he held close to his heart. From his presence at countless music performances, dance recitals, fishing and sporting events, or in the kitchen cooking or baking bread, Bill was a constant presence in their lives, as they were in his.



family homestead log cabin at the foot of Ovando Mountain near Ovando, Montana, during a blizzard, the youngest of eleven children. Smiley attended the Ovando one-room schoolhouse, often walking two miles through woods or going by horse and sleigh in the winter. He graduated from Missoula County High School and enlisted in the Army in 1946 and was assigned to a post in Whittier, Alaska. He received an Honorable Discharge in 1948 and was awarded the World War II Victory Medal. He returned to Missoula, Montana and with the help of the GI Bill he enrolled at the University of Montana and earned a B.S. 1953 and an M.S. in Pharmacy in 1956. He earned his Ph.D. in Pharmacy at the University of Washington in 1965. He was appointed an Assistant Professor of Pharmacy in 1964 and found his true calling. He taught dispensing in Pharmacy at Drake University from 1966-1969, before moving to teach at the University of Wyoming from 1969-1993. He received numerous outstanding teaching awards and was acknowledged by students many times as their favorite teacher. He was a practicing Pharmacist for almost 40 years. He met the love of his life, Iris Stephens, at the Pay'n'Save drug-store in Missoula, Montana, where he worked as a Pharmacist and Iris cashied. They were married in 1960 and were blessed with four children. He loved politics and treasured being hosted by Senator Edward M. Kennedy for coffee at his home in Washington, DC. Smiley is survived by his wife Iris Eileen Brunett of nearly 56 years whom he married on December 27, 1960; his four children and their spouses, and six grandchildren. Smiley was buried with full military honors in Laramie.

Carmen Jo Holcomb, '60

Carmen Jo Holcomb passed away July 27, 2016. She was born May 11, 1937, in Boise, Idaho. She graduated from the University of Washington School of Pharmacy in 1960. Carmen retired from Legacy Emanuel Medical Center. She is survived by her brother, Art, niece, nephew, and great-nephew, Arthur. A memorial service took place in August 2016 in Portland, Oregon.



Kristin Nicole Kaneshiro, '14

Kristin Nicole Kaneshiro passed away on January 22, 2017, in Seattle WA. She was born in Honolulu. A summa cum laude graduate of the University of Washington in 2010, she achieved her Doctor of Pharmacy degree in 2014, and used her knowledge and compassion to help others every day. She was a Staff Pharmacist at Bartell Drugs in Seattle. Remembered and missed always by her mother Pamela Morrissey Kaneshiro, father Herbert Kaneshiro, sister Kelsey Kaneshiro MD, grandparents Jack Chun and Ruth Kaneshiro, as well as many aunts, uncles and cousins. A private service was held. We send our deepest condolences to her family.



Emery W. Brunett, Sr., '65

Dr. Emery W. Brunett Sr., 88, passed away July 4, 2016, in Laramie, Wyoming, surrounded by family. Fondly known as Smiley or Gus to family and friends, he led a life truly emblematic of the Greatest Generation. He was delivered by his father on December 3, 1927, in the





Roger A. Woolf, '85, was named an American Society of Health-System Pharmacists (ASHP) Fellow for 2017. The ASHP Practitioner Recognition Program recognizes pharmacists who have excelled in pharmacy practice and

distinguished themselves through service and contributions to ASHP. The 2017 Fellows will be honored on Tuesday, June 6, 2017, during the ASHP Summer Meetings in Minneapolis, Minnesota.

Roger A. Woolf will also be recognized at this May's Dean's Recognition Reception as this year's Distinguished Alumni Award: Pharmacy Practice honoree, along with **Cyrus Khojasteh**, '98, who will be honored as this year's Distinguished Alumni Award: Pharmaceutical Sciences &



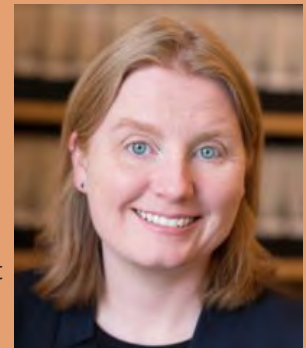
Research. Please join us Wednesday May 10 for the Katterman Lecture and Dean's Recognition Reception on campus at the HUB. To register go to: <http://events.uw.edu/DRR2017>

Jonathan Watanabe, '08, '12, has been selected as one of three outstanding health professionals for the class of 2016 Fellows National Academy of Medicine (NAM). Watanabe earned both a master's and doctoral degree in UW



School of Pharmacy's Pharmaceutical Outcomes Research and Policy Program, after earning his undergraduate degree at the UW and his PharmD at University of Southern California. He was the first recipient of the prestigious UW/Allergan Post-doctoral Fellowship in Health Economics and Outcomes Research. The NAM fellows were chosen based on their professional qualifications, reputations as scholars, professional accomplishments, and relevance of current field expertise to the work of the NAM and the Health and Medicine Division of the National Academies of Sciences, Engineering, and Medicine. There is only one pharmacy fellow nationally.

Three-time UWSOP alumna **Cara McDermott**, '11, '12, '16, was named to the 2017 cohort of New Investigators by AcademyHealth. The AcademyHealth New Investigator Small Grant Program is designed to support the early careers of new health services researchers. Cara's grant will support her research project, "Care Coordination and Low-Value Care at End-of-Life Among Patients with Advanced Cancer." Low-value care, which is care lacking sufficient evidence of benefit or not in accordance with patient goals, often occurs near death for cancer patients. Targeted care coordination, whereby patients are informed of various care options for end-of-life care provision and can plan their care, may allow patients to avoid such low-value care.



Professor & Dean Sean D. Sullivan with UWSOP alumni **Amy Tung**, '15, **Katelyn Keyloun**, '14, '15, **Sarah Baradaran**, '15, and **Justin Yu**, '15, at Allergan last October.



Sara McElroy, '12, family welcomed Lyra Faye on New Years Eve at 9:15 p.m. Lyra weighed 8 lbs., 14 oz. and 19 inches. Everyone is healthy! We hear Griffin is SO excited to be a big brother!

Did you or a family member just welcome a little one? Email Nicole Angus at angusnm@uw.edu for your purple UWSOP onesie gift!

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!



Inaugural Phil and Sandra Nudelman Lecture, UW Seattle campus, November 9, 2016

Phil, '64, and Sandra Nudelman (shown here with Dean Sean D. Sullivan, Thomas E. Menighan, CEO of the American Pharmacists Association (APhA), and Associate Dean Andy Stergachis).



Inaugural Plein Research Symposium, UW Center for Urban Horticulture, February 15, 2017

Plein Center supporter Virginia Leland, '69, and Faculty Emerita Joy Plein, '51, '57, after presentations about advances in Geriatric Pharmacy, and a keynote by Dr. Holly Holmes of University of Texas-Austin.



Scholarship Reception, UW HUB, Seattle February 23, 2017

Long-time UWSOP donors Craig, '72, and Sally Kvam have supported student training in compound pharmacy through their endowment.



UWSOP Hawai'i Alumni & Friends Reception March 11, 2017

Chris Andrews, '17, (front left) and Peggy Odegard, '90, (back left) traveled from the mainland to connect with our alumni at a special reception in Honolulu.



ASCPT Faculty & Alumni Event, Washington, D.C. March 16, 2017

Ben Zheng, '07, Yvonne Lin, '02, former post doc Rudiger Kaspera, Affiliate Associate Professor Paolo Vicini, Jing Yang, '11, former post doc Joe Zolnerciks, Jean Dinh, '14, Erica Woodahl, '04, and Cindy Rewerts gathered together at ASCPT.



UWSOP San Francisco Alumni & Friends Reception March 23, 2017

Nick Au, '09, '14, and Alie Fohner, with Dean Sean D. Sullivan and Medicinal Chemistry Department Chair Kent Kunze.

Pharmacy Alumni Association
Box 357631
Seattle, WA 98195-7631

BE BOUNDLESS / sop.uw.edu

TOP DAWGS!



**UW School of Pharmacy PharmD class of 2016
#1 in initial NAPLEX pass rate in the U.S.**