

PHARMACY ALUMNI ASSOCIATION  
& SCHOOL OF PHARMACY NEWS

# DAWG SCRIPTS

SPRING 2015



## BE THE FIRST

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Pharmaceutics Ph.D. student Cate Lockhart, PharmD, '13, at work in Ed Kelly's lab. Learn more about the research they are doing to find a treatment for BCD (see the story on page 13).

SCHOOL OF PHARMACY  
UNIVERSITY of WASHINGTON

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# Dawg Scripts

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

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**Past President:** Jennifer Glasco, '09

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**Class Representatives:** Judi Mar-Burbidge, '82, '00 (1980s), Ben Michaels, '97, '11 (1990s)  
**Eastern WA:** Michael Ayres, '11  
**Events:** Jennifer Glasco, '09  
**Katterman:** Adam Brothers, '06  
**Marketing:** Jenny Arnold, '03  
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**WSPA:** Jeff Rochon, '99

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## On the cover:

Pharmaceutics Ph.D. student Cate Lockhart, PharmD '13, at work in Ed Kelly's lab. See the story on page 13 to learn more about the research they are doing to find a treatment for BCD. Photo credit: Alex Levine Photography



## From the PAA President

I WOULD LIKE TO BEGIN my first letter with a heartfelt thank you to Jennifer Glasco for her years of service as PAA President. Jennifer led the PAA for sev-

eral years. I look forward to working with her in her new roles as Past President and the new events committee chair.

PAA is our on-going connection to the School we love so much. As the new PAA President, my vision is simple. I want to:

1. Increase our membership;
2. Strengthen our finances; and
3. Have fun.

A vital and engaged membership is key to our success. Over the coming year, I will be working with the PAA board to develop and implement ideas to expand our outreach and demonstrate our commitment to SOP alumni.

Strong finances are the backbone of any organization. Jennifer, and Jenny Arnold before her, brought our finances into the positive. There is much that we do: supporting the publication of *Dawg Scripts*, sponsoring events like the annual Katterman lecture and the recent New Drugs New Laws reception, and, most importantly, helping current students with scholarships. I would like to grow our resources so that we can increase the impact we have on the community and students at the school.

Finally, I want us to have fun. I've been on a lot of volunteer boards and it's always a treat to have fun together. I'd like PAA to be the place you come back to – the group you can't wait to see at conferences – mainly because you know you will have fun. If you aren't already a member, I encourage you to join today by visiting the PAA website at [sop.washington.edu/PAA](http://sop.washington.edu/PAA). And please be in touch. I can be reached at [rxalumni@uw.edu](mailto:rxalumni@uw.edu).

Gary Harris, '72, President, Pharmacy Alumni Association

The Pharmacy Alumni Association (PAA) Gift Fund supports the UW PAA Scholarship, the PAA Professional Excellence Award, and other PAA programs. To make a gift, go to

[sop.washington.edu/PAAFund](http://sop.washington.edu/PAAFund)



## From the Dean

**“Progress is impossible without change.”**

GEORGE BERNARD SHAW

THE LAST FEW YEARS will be recognized as a period of unprecedented change in the U.S. health care system. Patients are paying more of the costs of care out-of-pocket, providers are being directed into integrated delivery and bundled payment models that promise better outcomes at lower costs, and more Americans have access to health care services thanks in part to the Affordable Care Act. These changes will challenge the pharmacy profession to become an integral part of delivery systems that coordinate health care services and link financing to cost-effective, accountable and outcomes-based care provided by teams of health professionals practicing at the top of their license. The UW School of Pharmacy is actively working with our internal and external partners to prepare students to enter this new practice environment as change agents, fully embracing their interdisciplinary role.

In science discovery and policy, we have witnessed the rapid introduction of innovative, but very high cost therapies that cure disease, not just treat or alleviate symptoms. To support our practitioner and payer colleagues, our faculty and graduate students are developing innovative policy models that inform the financing of high cost therapies – presently an enormous affordability challenge to the payers of health care. Faculty and graduate students also are developing vaccines and improved treatments for HIV (pages 6-7 and 9-10), finding effective gene therapies for Bietti’s Crystalline Disorder (page 13), analyzing pharmacist interventions in cancer treatments (page 11), and more.

*(Continued on page 4)*

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We hope you will join us for our annual Don B. Katterman Memorial Lecture on Friday, May 8 at 5:30 p.m. in Mary Gates Hall on the UW Seattle campus. This year’s topical and timely lecture features Dr. Janet Englund and Dr. Ed Marcuse from Seattle Children’s, “Influenza Vaccination and the Hesitant Patient.” The Dean’s Recognition Reception follows at 6:30 p.m. We will recognize two alumni for their outstanding work and leadership. Register at:

<https://bit.ly/katt2015>

## UPCOMING EVENTS

**Don B. Katterman Memorial Lecture  
& Dean’s Recognition Reception**  
**May 8 ~ 5:30 p.m.**  
*Mary Gates Hall, UW Campus*  
**Seattle, Washington**

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**WSPA Northwest Pharmacy  
Convention**  
**UW Alumni Reception**  
**May 30 ~ 5:30 p.m.**  
*Coeur d’Alene Resort*  
**Coeur d’Alene, Idaho**

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**Annual Pharmaceutical Outcomes  
Research and Policy Program  
(PORPP) Gathering, ISPOR  
Conference**  
**May 18 ~ 5 p.m.**  
*McGillin’s Olde Ale House*  
**Philadelphia, Pennsylvania**

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**School of Pharmacy Graduate  
Recognition Ceremony**  
**June 12 ~ 3:30 p.m.**  
*Meany Hall*  
**UW Campus, Seattle**

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**School of Pharmacy Professional  
Networking Day**  
**October 9 ~ 3:30 p.m.**  
*Husky Union Building (HUB)  
North Ballroom*  
**UW Campus, Seattle**

## Five-Year Strategic Plan

These extraordinary changes in pharmacy practice, health care delivery, biomedical and applied research call for a thorough review of our School's vision and programs. To assure that the School is prepared to respond, Professor Mary Hebert and a team of faculty, staff, students, and alumni are leading a strategic planning process that will shape, sharpen, and strengthen the School's education and research programs. Many of you have taken time to share your thoughts on the present position and future direction of the School. I'd like to thank each of you for your time.

The Strategic Planning Executive Committee, in partnership with a larger Advisory Committee of faculty, students, staff, pharmacy practitioners, preceptors, industry leaders, and alumni, have done a remarkable job pulling together feedback from hundreds of stakeholders to develop a clear and actionable plan for the future. The Strategic Plan will serve as a guide for the School—where to grow, what to fund, and how we want to evolve. Look for updates on our home page at [sop.washington.edu](http://sop.washington.edu).

## Proven Impact

Nationally, and historically, the UW School of Pharmacy has led the way in creating practice and research innovations. The collaborative practice agreements that allow pharmacists to deliver vaccinations and initiate emergency contraception are two UW-led practice innovations that make health care more accessible and affordable, particularly in rural areas and with underserved populations. Our alumni, faculty, staff and students continue their pioneering work across Washington state. Some

“The Strategic Plan will serve as a guide for the School—where to grow, what to fund, and how we want to evolve. Look for updates on our home page at [sop.washington.edu](http://sop.washington.edu).”

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

recent examples are highlighted on pages 6, 10, and 15.

## Leadership Changes

In addition to achieving full accreditation, 2014 marked new opportunities in senior leadership at the School of Pharmacy. Dr. Peggy Odegard has been appointed as Associate Dean for Professional Programs. In this new role, Peggy will provide leadership and coordination for the PharmD Program. Peggy has been a leader in Pharmacy and at the UW as she was the first female department chair at the School (see page 5). She will continue to rise to the challenge of shaping our PharmD Program in this time of significant change. Dr. Lingtak-Neander Chan will step in as Interim Chair of the Department of Pharmacy, replacing Dr. Odegard. Lingtak will serve in this role until a replacement is identified through a national search.

In the role of Associate Dean for Research, Graduate Education and New Initiatives, we welcome Professor Andy Stergachis back to the School of Pharmacy. Andy's professional accomplishments are many and distinguished in both the Pharmacy and Public Health communities. He has been affiliated with the UW for more than 30 years and has served as Chair of two Departments (Pharmacy and Pathobiology) and as Director of the Global Medicines Program in the Department of Global Health. In his new role, Dr. Stergachis will support and grow the research enterprise and graduate education training programs and provide leadership for new school-wide initiatives.

## Our Faculty

Our faculty are world-renowned for their research excellence. Survey after survey has identified the Medicinal Chemistry, Pharmacy, and

Pharmaceutics faculty as among the top 10 programs worldwide, even #3 in one report, for scholarship and research productivity. Faculty productivity is a key measure in many rankings, and we anticipate that we will see our visibility grow in the coming years. To continue our excellence in scholarship and teaching, we have recruited outstanding new faculty (page 12).

## Graduate Students

Our graduate students collaborate closely with faculty and stand out as leaders in their own right. For example, the Department of Pharmaceutics inaugural Ji-Ping Wang Endowed Fellow Faye Zhang was selected as a top finalist for her poster at the Divisions for Drug Metabolism and Toxicology event at the 2015 ASPET Annual Meeting. Learn more about Faye and Ji-Ping in the story on page 20. Three of our graduate students in Pharmaceutics, Savannah Kerr, Brian Chapron, and Cate Lockhart, were selected as Translational Health Sciences (ITHA) TL1 Scholars, beginning summer 2016. The American Foundation of Pharmaceutical Excellence selected Robert Pelletier, a grad student in Med Chem, for the AFPE Pre-Doctoral Award in Pharmaceutical Science.

## PharmD Students

Our 2014 graduating PharmD class had a 100% first-time pass rate on the state licensure examination—the same rate as the prior three graduating classes. The trend in student excellence continues with the incoming class (2019) of 100 PharmD

students: the average GPA is 3.5 and over 90 percent arrive with a four-year degree. I met many of these students during their on-campus interviews. I can tell you first hand that these students are as talented, capable, and motivated as any I have seen in the past 24 years at the UW. They come from varied and diverse backgrounds with interests and experiences that will help shape the future of health care and science.

### Creating a Leading-Edge Student Experience

Improving the overall student experience at the University of Washington is a top priority of Interim President Ana Mari Cauce. The School of Pharmacy has fully embraced her initiative. Director of Student Services, Andrew Brusletten, a team of alumni, graduate and PharmD students are developing plans to create a world-class student experience within the School of Pharmacy. The group is at work developing initiatives that address many aspects of student life (including School of Pharmacy merchandise – see page 18).

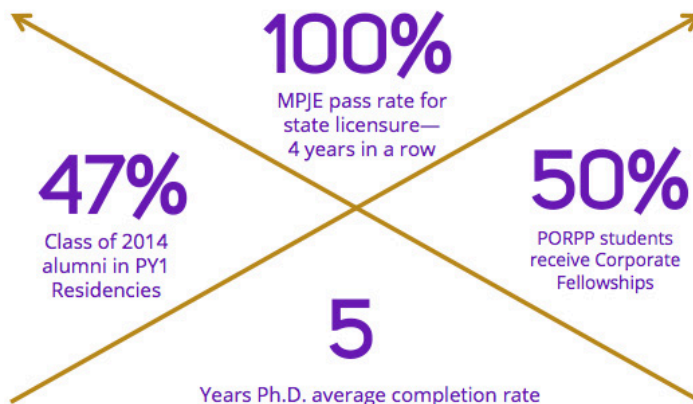
In my first six months as Dean, I have come to appreciate the quality, scope and depth of work in which we, as a professional and scientific community, are engaged. See for yourself in these pages of *Dawg Scripts* and then connect with us on Facebook, Twitter and LinkedIn to follow your School. We want to hear from you, so send feedback, notes, and updates to Director of Communications, Sarah Guthrie, at [gu3@uw.edu](mailto:gu3@uw.edu).

Sincerely,



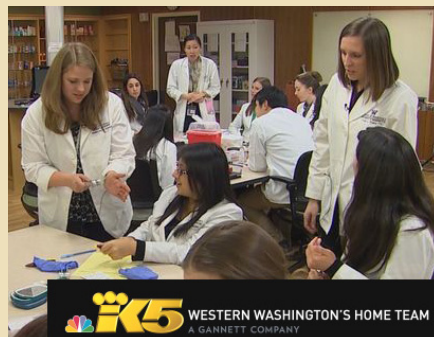
Sean D. Sullivan, Professor and Dean,  
UW School of Pharmacy

Our Graduate and PharmD students lead the pack!



### Women in Pharmacy Break Through Glass Ceiling

In January, KING5 News reported that for the first time there are more women than men licensed as pharmacists in the state of Washington. “Our School and our profession have been pioneers at many things, but it can



be easy to forget our innovative history during the normal course of our daily routines,” noted Dean Sullivan. The KING5 story highlights female pharmacist pioneers, such as faculty member Joy Plein and Associate Dean Peggy Odegard, as well as friend and colleague Holly Whitcomb-Henry. You can still watch the video on the KING5 site at: <http://kng5.tv/1NKcR1e>



Elyse Tung and her husband, Tim Wisner, on Table Mountain overlooking Cape Town, South Africa.

## “Why Couldn’t We Make It Easier For Them?”

### A *Dawg Scripts* Q&A with Alumna Elyse Tung

PIONEERING PHARMACIST ELYSE TUNG, PharmD, BCACP, was awarded the 2014 Washington State Pharmacy Association Innovative Pharmacy Practice Award and the 2014 Upsher-Smith National Alliance of State Pharmacy Association’s Excellence in Innovation Award for her innovative pharmacy practices that improve patient care and outcomes.

Elyse graduated from the University of Washington in 2002 with a B.S. in Neurobiology and with a PharmD in 2008. She currently works at Kelley-Ross Pharmacy with their Clinical Pharmacy Institute. She has initiated and developed new ways of practicing pharmacy including her most recent project, a Community Pharmacist Managed HIV Pre-exposure Prophylaxis (PrEP) service, which is the first of its kind in the state of Washington. *Dawg Scripts* sat down with Elyse to learn more about her work and practice.

**Dawg Scripts:** What interested you about working in pharmacy?

**Elyse Tung:** I began my career as a Research Scientist at UW Bioengineering. We were working to see if we could use osteopontin, a novel protein to prevent calcification in heart valves. I knew I wanted a career in health sciences, but

**“Pharmacies are one of the most accessible forms of health care for people aged 20-40. If this program is successful, it could be a model for other pharmacies.”**

ELYSE TUNG, SCHOOL OF PHARMACY ALUMNA

wasn’t sure which specialty. I looked at EVERYTHING – getting my doctorate, becoming a physician, dentist, optometrist, physical therapist, and pharmacist. Pharmacy afforded the best balance of creative problem-solving, science, and, most importantly, patient care.

**DS:** How did you choose UW School of Pharmacy?

**ET:** I applied all over the place, but I am a Husky tried and true. The UW program was the most flexible and I thought Washington state was the most progressive for pharmacy, even more so than California.

**DS:** Why did progressive pharmacy practice appeal to you?

**ET:** Collaborative practice agreements allow pharmacists to operate in an expanded role. I work with the medical director who oversees and grants prescriptive authority so that I can prescribe medications and vaccines. That flexibility opened new avenues for business and new niches in the practice, allowing me to focus on patient care. These agreements have been a big part of my career in establishing the travel clinic and HIV PrEP program.

**DS:** Tell us more about the travel clinic and PrEP program.

**ET:** The travel clinic is geared towards organizations with lots of international travel, including the Bill & Melinda Gates Foundation, PATH,

and Vulcan. I go on site to meet with patients and provide all the medications, vaccines, and documents they need to do their work.

**DS:** How did that program begin?

**ET:** I had a patient say he was too busy to come by for a traditional travel clinic appointment. I brought it up to Ryan [Oftebro] and asked him why we couldn't make it easier for them. A short time later, I was offering the clinics on site at Gates. It spread like wildfire as it saves their staff time and multiple trips to their physician and pharmacy.

**DS:** How did the PrEP program begin?

**ET:** It was a similar, "Why couldn't we make it easier for them?" moment. I was at a conference in May 2014, and the idea came to me after listening in on some of the data during an HIV Global Health talk. We are the first pharmacy in Washington state – and maybe the first pharmacy in the nation – to offer HIV PrEP (Pre-Exposure Prophylaxis with Truvada) which is over 90% effective at preventing HIV transmission in high-risk populations when taken every day. Working with our medical director, we developed the protocol to do everything here on site. Pharmacies are one of the most accessible forms of health care for people aged 20-40. If this program is successful, it could be a model for other pharmacies.

**DS:** How did it feel to be recognized for your innovation in pharmacy practice?

**ET:** I was very surprised and honored. It was not something I was expecting at all. My goal has never been to win an award but to be very productive, offer the best patient care, and develop new ways to practice pharmacy.

**DS:** What advice would you give to current students?

**ET:** Think outside the box. Be as professional as you can in every situation; it's a small world. And if you have an idea or a new approach, don't be afraid to chase it.

## 10 THINGS YOU DIDN'T KNOW ABOUT ELYSE TUNG

- 1.** I have many pharmacy idols. My bosses – the leadership team at Kelley-Ross, Ryan Oftebro, Brian Beach, and Ryan Hansen – are models of leadership in the field of pharmacy. And [UW Pharmacy Associate Dean] Peggy Odegard is so accomplished, professional, and polished.
- 2.** If I had unlimited grant funding, I would get PrEP into every pharmacy, showing how pharmacists can make a difference in the fight against HIV.
- 3.** My coffee is an Americano with one cream and one sugar.
- 4.** My favorite campus spot is the quad in the spring and my favorite place to study was Suzzallo. My husband and I were high school sweethearts and we went to the UW as undergraduates together. Our routine was meeting after class and walking to Suzzallo to study and then walking to the Ave for dinner together.
- 5.** I love to knit and am still working on a multi-year sweater project for my husband.
- 6.** Favorite book of the moment: *Cutting for Stone*, an amazing story of two twin brothers in Ethiopia. I felt connected to the story through my work with the Foundation and my medical background.
- 7.** I do a lot of running and training for marathons and half Ironman triathlons. I started with a sprint distance triathlon and then progressed. Training connects me with my friends. We train together and travel to races, including California, Canada, and all over Washington.
- 8.** I hate swimming.
- 9.** Traveling is one of my favorite things to do. I have been to Thailand, Indonesia, China, Japan, Hong Kong, South Africa, Zambia, Zimbabwe. Next up are New Zealand, Australia, Central America, and more of Asia and Africa. A highlight was a safari trip to the Kruger National Park in South Africa and Gili Meno, a tiny little island in Indonesia. There was no electricity, no motor vehicles – the whole island was about the size of Green Lake. For three days we felt like Gilligan's Island castaways.
- 10.** My favorite fruit was one I had in Indonesia, Salak, known as the snake fruit. I ate it five times a day; it was sweet and crunchy but had a soft texture. Very unique!

## Lee Lab Decoding Mysteries of HIV and Influenza

IN A BASEMENT LABORATORY deep within the Magnuson Health Sciences Building, a group of scientists works to decode the mysteries of two deadly viruses: influenza and HIV. Led by UW Medicinal Chemistry Assistant Professor Kelly Lee,

they examine the structure and function of the viral fusion proteins that live on the outside of these “enveloped viruses” (viruses with membranes). We know how the protein structures look before they carry out their function, but little is known about the structural changes that take place during, and are responsible for driving, protein-mediated membrane fusion. The Lee Lab seeks to illuminate these processes in hopes of developing more effective vaccines that will work with the body’s immune system to recognize and neutralize the disease-causing viruses.

Lee came to Med Chem in 2009, straight from a postdoctoral position in biophysical and structural virology at the Scripps Institute in San Diego. His initial primary focus was on the influenza virus—understanding its processes by using cryo-electron tomography (similar to a CAT scan) to get a 3-D image of the viruses undergoing membrane fusion.

These days, Lee Lab grad student Natalie Garcia is using hydrogen/deuterium-exchange mass spectrometry to monitor a glycoprotein’s structure and

dynamics as it becomes activated. *Structure* will publish her paper on the power of using methods that allow proteins to be studied in solution, where they are free to change conformations and carry out their functions.

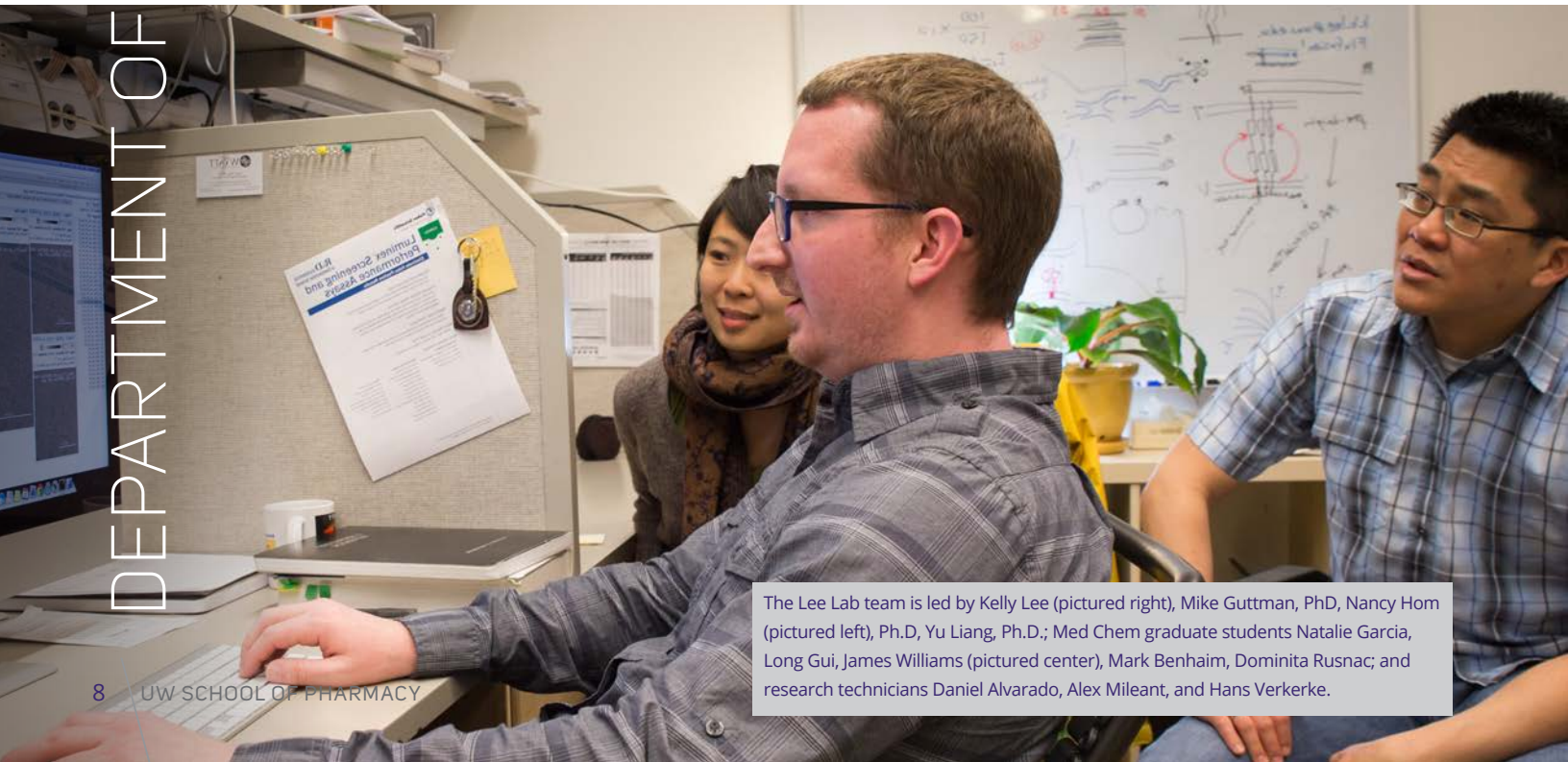
**“HIV is notorious for being highly variable and mutating rapidly. A vaccine will need to provide coverage of a broad spectrum of strains.”**

**KELLY LEE, ASSISTANT PROFESSOR, PHARMACEUTICS**

With a 5-year grant from the NIH and support from the Center for AIDS Research, and in collaboration with Pharmaceutics Professor Shiu-Lok Hu, under a grant from the

Bill and Melinda Gates Foundation, Lee is applying his earlier methods to study HIV’s envelope (“Env”) fusion protein. “Env is challenging to characterize because it’s highly decorated with glycans and relatively unstable.” Using the deuterium-exchange approach, Lee Lab and Med Chem alumnus, Tad Davenport, showed that differences in the structural order of Env can be detected between the HIV strains. Those differences affect biological activity (such as the binding of receptors and antibodies).

Recently, the Lab began a project with Dr. Julie Overbaugh at Fred Hutch, to determine what makes certain HIV strains more likely to be transmitted. Lee notes, “It’s likely this relates to the specific characteristics of the transmitted virus’s envelope protein structure and stability. We hope to shed light on what makes these transmitted found viruses unique using our biophysical techniques.”



The Lee Lab team is led by Kelly Lee (pictured right), Mike Guttman, PhD, Nancy Hom (pictured left), Ph.D, Yu Liang, Ph.D.; Med Chem graduate students Natalie Garcia, Long Gui, James Williams (pictured center), Mark Benhaim, Dominita Rusnac; and research technicians Daniel Alvarado, Alex Mileant, and Hans Verkerke.



# Current Research Projects at the School of Pharmacy

OUR FACULTY ARE WORLD-RENOWNED for their research breakthroughs and productivity. At the end of last year, survey after survey bore out evidence as UW School of Pharmacy was ranked tops in the world on multiple lists, including U.S. News & World Report (#7), Shanghai Jiao Tong University (#3), and Taiwan University (#8). Beginning in this issue, we have added this section to *Dawg Scripts* to highlight our faculty's research, along with features that go more in-depth throughout the issue.

## DEPARTMENT OF MEDICINAL CHEMISTRY

**William Atkins**

Structure, function, and mechanism of cytochrome P450s, glutathione transferases, and P-glycoprotein.

Biophysical characterization of therapeutic antibodies and antibody-drug conjugates.

**Kent Kunze**

The long-term goal of this project is to better understand and predict inhibitory drug-drug interactions that are caused by circulating drug metabolites, rather than the drugs themselves.

**Abhi Nath**

Rationally developing small-molecule ligands to modulate pathological aggregation of tau protein.

**Allan Rettie**

Characterization of the network of integrated metabolic events that underlie vitamin K-dependent cellular processes.

Molecular mechanisms for P450 and transporter-dependent drug-drug interactions.

Pre-doctoral training grant in the Pharmacological Sciences.

Functional analysis of novel polymorphisms affecting vitamin K-dependent coagulation.

**Rheem Totah**

Role of CYP2J2 in Xenobiotic Induced QT-prolongation

## DEPARTMENT OF PHARMACEUTICS

**Shiu-Lok Hu**

Targeted modification of host and proviral DNA to treat latent HIV infection.

Oral immunization against HIV/AIDS with prime-boost strategies.

**Rodney Ho**

Bioresponsive Combination Microbicide Delivery System for HIV and HSV.

**Nina Isoherranen**

Inhibition of Retinoic Acid Metabolism for the Treatment of Parkinson's Disease.

**Yvonne Lin**

Exogenous and Endogenous Biomarkers of CYP2D6 Variability in Pediatrics.

**Bhagwat Prasad**

PBPK prediction of ontogeny mediated alteration in hepatic drug elimination.

**Joanne Wang**

Assessing the Role of Human Transporters of Emerging Clinical Importance in the Disposition of Emixustat and Metabolites.

## DRIVEN TO DISCOVER

## DEPARTMENT OF PHARMACY

**Aastha Bansal**

Developing statistical methods for evaluating prognostic biomarkers and applying them to prioritization of lung transplants in cystic fibrosis patients.

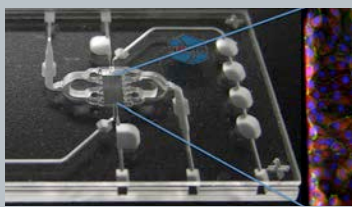
**Josh Carlson**

Developing an approach to prioritize research within the SWOG cancer clinical trials cooperative group using an emerging methodology, 'Value Of Information' (VOI) analysis that may be useful in allocating limited research funds across a wide number of study proposals.

**Jeannine McCune**

Optimizing Busulfan: Efficacy, Toxicity, and Pharmacometabolomics seeks to identify patient-specific factors related to how a patient's body breaks down intravenous busulfan.

Pharmacogenetics in children with high-risk neuroblastoma seeks to improve overall survival in children with newly diagnosed high-risk neuroblastoma by personalizing cancer treatment and/or cyclophosphamide (CY) doses by pharmacogenetics.



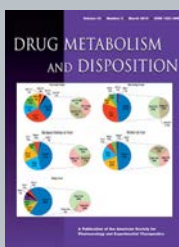
A renal proximal tubule—essential structures in the kidney—forms from cells injected into the microfluidic device. As visualized by confocal microscopy, the tubules are composed of the appropriate kidney epithelial cell type (red) with tight junctions between each cell (green); nuclei are stained blue. Photo credit: Jonathan Himmelfarb and Edward Kelly

The U.S. Environmental Protection Agency will provide \$6 million in seed funding for a Predictive Toxicology Center at the University of Washington, enabling researchers to develop more accurate in vitro models – organ-mimicking cell cultures – to test chemicals for their potential risk to humans and to help accelerate the evaluation of large numbers of chemicals. Department of Pharmaceutics Associate Professor **Edward Kelly** will manage the project on the kidney cell culture. “These systems are being used in our lab studies to test drugs with known adverse effects on the kidneys, including antibiotics, chemotherapies, and immunosuppressants,” he said. Kelly is involved in another research collaboration at the UW to get kidney, liver, and intestine models to work together.



Pharmaceutics Assistant Professor **Nichole Klatt** is one of five scientists selected to receive the prestigious 2015 Avant-Garde Award for HIV/AIDS Research from the National Institute on Drug Abuse (NIDA), part of the National Institutes of Health. Klatt

proposes development of HIV cure strategies by using non-psychoactive cannabinoids as potential therapeutic agents. “Cannabis (marijuana) has been shown previously to have anti-inflammatory effects and positive benefits to the gastrointestinal tract. With the recent legalization of cannabis in select states, a comprehensive understanding of how cannabis affects HIV infection is imperative,” Klatt commented.



In June, Pharmaceutics Professor **Jashvant Unadkat** will receive the Editor’s Choice Award for authoring one of the top three clinical investigation manuscripts published in the *Journal of Nuclear Medicine*, “Activity of P-Glycoprotein, a  $\beta$ -Amyloid

Transporter at the Blood-Brain Barrier, Is Compromised in Patients with Mild Alzheimer Disease.” *Drug Metabolism and Disposition* also featured his findings from “Interspecies variability

in expression of hepatobiliary transporters across human, dog, monkey, and rat as determined by quantitative proteomics,” on its March 2015 cover.

Pharmaceutics Acting Assistant Professor **Bhagwat Prasad** was awarded a \$1.6M NIH grant to develop a novel physiologically based pharmacokinetic modeling approach to predict safe and efficacious dosing regimens for children. Dosing regimens based on empirical scaling of the adult dose do not account for the differences in the drug disposition.

Congratulations to **Kelly Lee** on his promotion to Associate Professor of Medicinal Chemistry! His appointment is effective July 1, 2015.

Working closely with **Kelly Lee** lab Research Associate Dr. **Mike Guttman**, Med Chem’s Mass Spectrometry Facility has successfully installed a new Waters Synapt G2 HDX Tandem



Quadrupole Mass Spectrometer. This versatile, state of the art instrument will greatly advance Kelly’s research efforts in viral protein dynamics using hydrogen-deuterium exchange technologies.

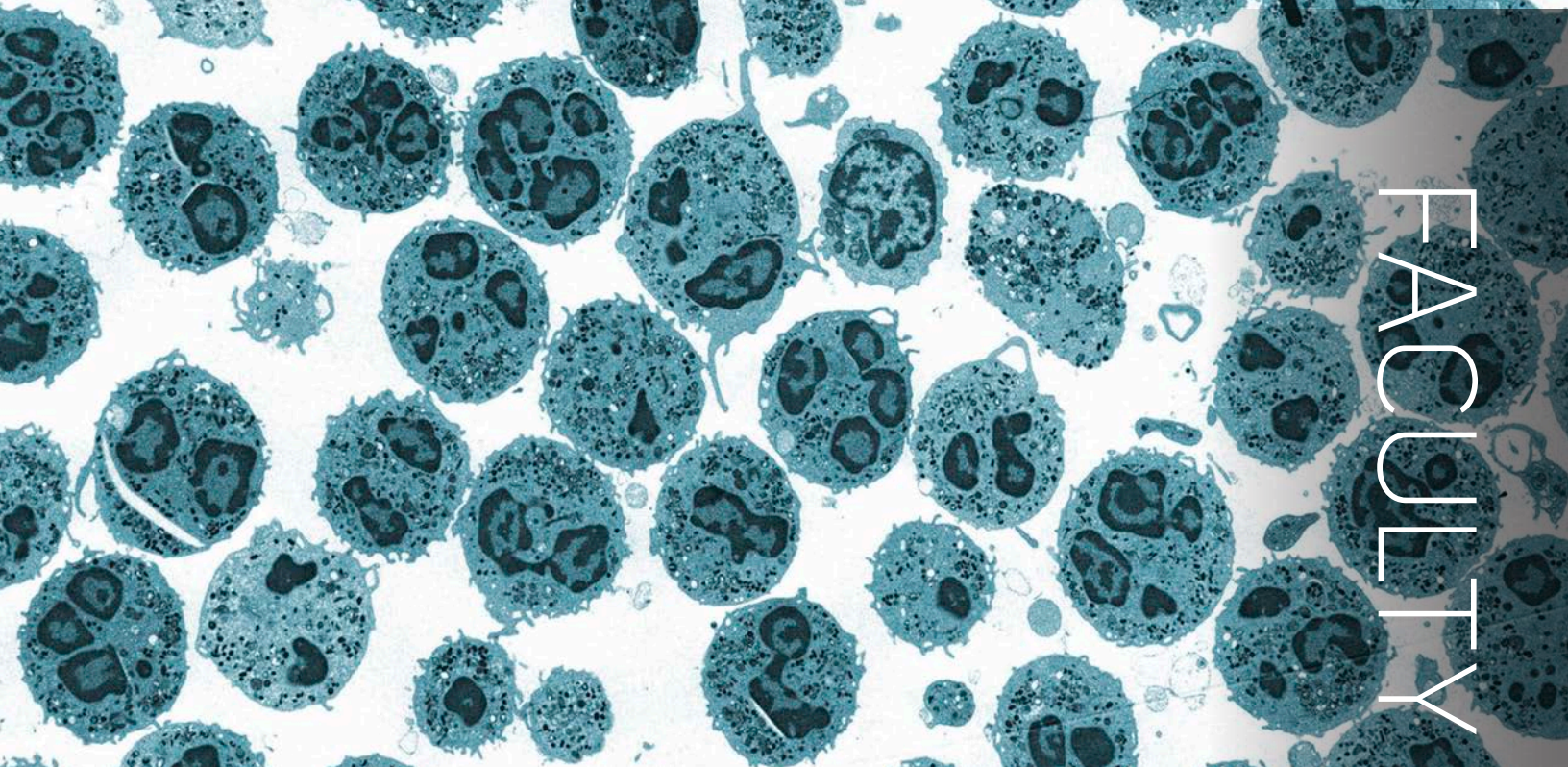
The National Advisory Council for Human Genome Research (NACHGR) Genomics & Society Working Group (GSWG) selected **Dave Veenstra** to be a member. The group provides advice on planning for ‘Genomics and Society’ activities at the National Human Genome Research Institute (NHGRI).

**Beth Devine’s** paper, titled “Usability evaluation of pharmacogenomics clinical decision support aids and clinical knowledge resources in a computerized provider order entry system: a mixed methods approach,” was one of 105 featured at the American Medical Informatics Association (AMIA) Year in Review at its annual international meeting.

The American Pharmacists Association (APhA) awarded their Research Achievement Award in the Pharmaceutical Sciences to Professor and Dean **Sean D. Sullivan** at its annual meeting in March.



Two of our the School’s top-performing staff members, **Jeanine Kanov** in Medicinal Chemistry, and **Penny Evans** in PORPP, were nominated for the very prestigious UW Distinguished Staff Award. Great job!



Electron Microscopy of Human Neutrophils Credit: ThinkStock

## UW PORPP and Fred Hutch Researchers Receive \$7.75M PCORI Award to Study Cancer Treatment

A RESEARCH TEAM, led by Scott Ramsey, director of the Hutchinson Institute for Cancer Outcomes Research (HICOR), that includes UW Department of Pharmacy's Pharmaceutical Outcomes Research and Policy Program (PORPP) faculty members Sean Sullivan, Jeannine McCune, Aastha Bansal, and Gary Lyman, who also serves as a co-director at HICOR, has been approved for a \$7.75 million, four-year funding award by the Patient-Centered Outcomes Research Institute, or PCORI, an independent, nonprofit organization based in Washington, D.C. The award will be used to conduct a pragmatic clinical trial evaluating the use of colony stimulating factor (CSF) to reduce the risk of serious infection in patients undergoing chemotherapy for breast, colorectal or lung cancer. The study, titled "A Pragmatic Trial to Improve Colony Stimulating Factor Use in Cancer," could lead to improved quality of life for individuals with breast,

lung, and colorectal cancer. It is also one of the first studies selected for funding through PCORI's Pragmatic Clinical Studies Initiative, an effort to produce results that are broadly applicable to a greater variety of patients and care situations and can be more quickly taken up in routine clinical

practice. This work will not only have an impact on the profession of pharmacy, it will provide substantive benefit to cancer patients. This trial will evaluate if the use of CSFs can be improved by using a clinical guideline-informed approach implemented by pharmacists. This

work seeks to conduct a large-scale pragmatic trial to compare outcomes of the CSFs. Pragmatic clinical studies test a treatment's effectiveness in "real-life" practice situations, which potentially makes their findings more generally applicable.

**"This project was selected...not only for its scientific merit and commitment to engaging patients and other health care stakeholders in a major study conducted in real-world settings, but also for its potential to answer an important question about the use of CSF."**

**JOE SELBY, M.D., M.P.H., PCORI EXECUTIVE DIRECTOR**

## QUESTION THE ANSWER

## New Faculty and New Roles Mark the Start of 2015



Libin Xu, Assistant Professor, Department of Medicinal Chemistry

Assistant Professor **Libin Xu** earned his Ph.D. in Organic Chemistry at University of Illinois at Chicago, but during his postdoctoral training at Vanderbilt University, expanded his research to chemistry and biology of lipid peroxidation underlying human diseases and mass spectrometry-based lipidomics. The Xu lab studies the consequences of unusual lipid metabolism and oxidation processes on the nervous system and aims to develop interventions that could ameliorate or reverse the adverse effects of the disrupted lipid homeostasis and oxidized lipids. Dr. Xu is the recipient of the NIH Pathway to Independence Award from NICHD in 2012 and the Young Investigator Award from the Society for Free Radical Biology and Medicine in 2011.

Assistant Professor **Zachary A. Marcum** began in January 2015. In 2014, Zach completed his Ph.D. program in Clinical & Translational Science at the University of Pittsburgh's Institute for Clinical Research Education. He holds an M.S. from University of Pittsburgh and a PharmD (*cum laude*) from Butler University in Indianapolis, IN. He was a pharmacy practice resident at R.L. Roudebush VA Medical Center in Indianapolis and a Postdoctoral Fellow in geriatric pharmacotherapy research at University of Pittsburgh. He conducts clinical research to measure and improve medication adherence and drug-related problems for older adults. His professorship is made possible through support from David Bailey, MS, '70, and his wife Anita, who created a fellowship to carry on the pioneering work of Joy and Elmer Plein.



Zachary Marcum, Assistant Professor, Department of Pharmacy

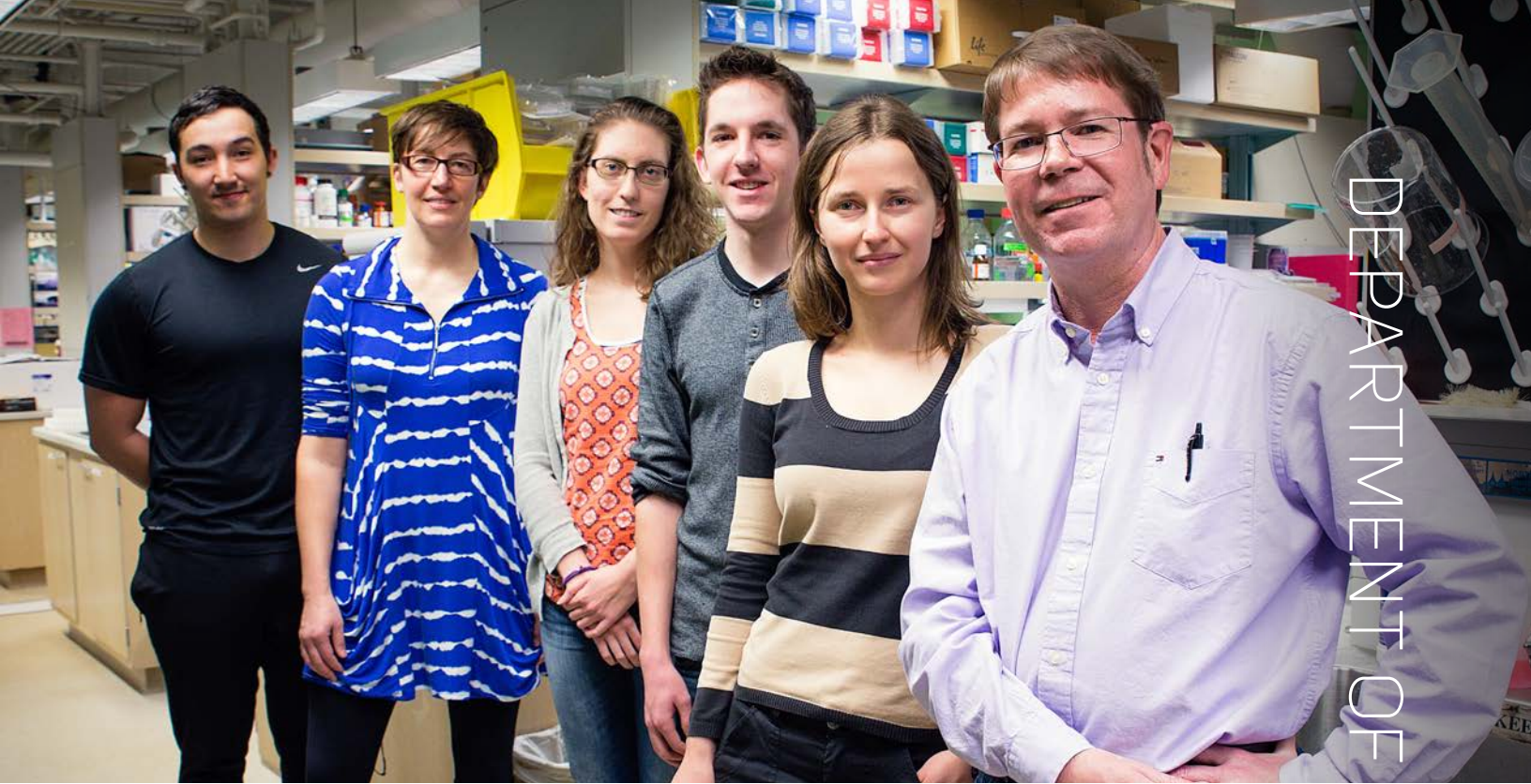
**Rachel Firebaugh** is a Clinical Instructor who started in January 2015. In this role she serves as a Co-Course Master for the PY1 Skills Series and also works as a Consultant for UW Pharmacy Cares. Beyond her work at UW, she is a per diem clinical pharmacist in the Prescription Renewal Program at the PolyClinic and an on-call staff pharmacist for Bartell Drugs.

**Jennie Do** is a Clinical Instructor who joined the Department of Pharmacy in January 2015. She earned her PharmD from the UW, after completing several years as a pre-pharmacy undergraduate. She is a Washington state licensed Pharmacist, Board Certified Pharmacotherapy Specialist, and holds her Washington State Pharmacist Preceptor License. She completed her residency at Highline Medical Center.

In addition to the new faculty at the UW School of Pharmacy, we have several internal promotions and new roles that began early in 2015. **Peggy Odegard** has changed roles from Department of Pharmacy Chair to Associate Dean for Professional Programs to lead the PharmD education and experiential programs. **Andy Stergachis** returns to the School of Pharmacy in the role of Associate Dean for Research, Graduate Education and New Initiatives. **Lingtak-Neander Chan** has been appointed as Interim Chair for the Department of Pharmacy. Clinical Assistant Professor **Rachel Allen** now also serves as Director of the Bracken Pharmacy Learning Center. **Bhagwat Prasad** has been made Acting Assistant Professor in the Department of Pharmaceutics.



From left to right: Peggy Odegard, Andy Stergachis, Lingtak Chan, Rachel Allen, Bhagwat Prasad



Meet the Team in Ed Kelly's lab. From left to right: Elijah Weber, Cate Lockhart, Jenna Voellinger, Kevin Lidberg, Alenka Jaklic, and Ed Kelly.

## Research on the Edge: Ed Kelly and His Collaborators Investigate a Rare Eye Disease, BCD

FOR THE AVERAGE PERSON, the idea of spending decades working towards a goal you might not reach is daunting. But not for Ed Kelly. He is crystal clear on the power his research has to make a profound difference.

Science is typically a game of microscopic incremental advances over decades. "But then you have breakthroughs, such as 1985 Nobel prize winners Goldstein and Brown, who showed that rare disease research can lead to therapies that impact many, i.e. statins for controlling cholesterol," notes Kelly. "More recently, 2012 Nobel Prize winner Shinya Yamanaka developed induced pluripotent stem cells from which we can grow all manner of cells." These induced human stem cells can reduce the need for animal testing.

These gene science pioneers are top of mind for Ed for a reason. He and a multi-state team of colleagues are working towards a genetic therapy for Bietti's Crystalline Dystrophy (BCD). This autosomal recessive disease causes crystalline deposits to form in the back of the eye. These deposits cause gradual degeneration of the photoreceptor cells (rods and cones) and cause other abnormalities in the retina, resulting in mid-life blindness.

So how does a professor of Pharmaceutics become a rare eye disease researcher? About a decade ago, Ed and Medicinal Chemistry professor Allan

Rettie were researching the cytochrome P450s (CYP), the main enzymes of drug metabolism, when they learned that researchers at the National Eye Institute identified mutations in the gene encoding the CYP4V2 protein that cause BCD. They thought, "why not?" and investigated.

Ed specializes in creating genetically modified mice from embryonic stem cells. Over sixteen months, the team was able to create mice with the BCD genetic abnormality, to be used for studying the disease and for testing therapies. "We call them our collaborators," Ed said respectfully.

The team is also collaborating with Jennifer Chao in Ophthalmology to develop induced pluripotent stem cells from people with BCD, and with labs in California to test potential therapies. "Only one in 70,000 people have the disease and no one is doing basic research on BCD except our lab," Ed said. That low incidence rate means it's harder to get funding. The team instead has a crowd-funding strategy and is cobbling together what they can from multiple sources.

They are making progress. People with BCD and their family members have reached out to him to understand and support his work. "What began as a curiosity, a 'what if?' has become a passion," Ed shared. "I really want to find a treatment for this disease. It's personal now."

## Higher dementia risk linked to heavy use of common drugs; Study findings go global

WALL STREET JOURNAL. THE LONDON TIMES. HARVARD HEALTH BLOG. MEN'S HEALTH. AARP BULLETIN. Millions of readers world-wide have read or heard about Dr. Shelly Gray et. al.'s research findings showing a persistent link between dementia and some medications in a collaborative University of Washington/Group Health study published in *JAMA Internal Medicine* January 2015.

The large study titled, "Cumulative Use of Strong Anticholinergic Medications and Incident Dementia," links a significantly increased risk for developing dementia, including Alzheimer's disease, to taking commonly used medications with anticholinergic effects at higher doses or for a longer time. Many older people take these medications, which include nonprescription diphenhydramine (Benadryl).

The study used more rigorous methods, longer follow-up (more than seven years), and better assessment of medication use via pharmacy records (including substantial nonprescription use) to confirm this previously reported link.

It is the first study to show a dose response: linking increased risk for developing dementia to higher use of anticholinergic medications. It is also the first to suggest that dementia risk linked to

anticholinergic medications may persist—and may not be reversible—even years after people stop taking these drugs.

"Older adults should be aware that many medications—including some available without a prescription, such as over-the-counter sleep aids—have strong anticholinergic effects. And they should tell their health care providers about all their over-the-counter use," said Shelly Gray, PharmD, MS, the first author of the report, which tracks nearly 3,500 Group Health seniors participating in the long-running Adult Changes in Thought (ACT), a joint Group Health–University of Washington (UW) study funded by the National Institute on Aging.

The most commonly used medications in the study were tricyclic antidepressants like doxepin (Sinequan), first-generation antihistamines like chlorpheniramine (Chlor-Trimeton), and antimuscarinics for bladder control like oxybutynin (Ditropan).

"But of course, no one should stop taking any therapy without consulting their health care provider," said Dr. Gray, who is a professor, the vice chair of curriculum and instruction, and director of the geriatric pharmacy program at the UW School of Pharmacy. Read the full story on the School of Pharmacy website at [sop.pharmacy.edu](http://sop.pharmacy.edu).

**"Health care providers should regularly review their older patients' drug regimens including OTC medications to look for chances to use fewer anticholinergics at lower doses."**

**SHELLY GRAY, PROFESSOR, VICE CHAIR, AND DIRECTOR OF THE GERIATRIC PHARMACY PROGRAM, DEPARTMENT OF PHARMACY**





PQAC Students pictured left to right: Lianne Fijalka, Amanda Popek, Heather Tilley, Sandy Chung, David Chen, Thao Nguyen, Yuta O, Chris Andrews, Kaley Tolar, and Bing Huang

Our students have been busy in Olympia, working to share their knowledge. In March, Law and Ethics students presented their projects about improving access to and counseling on appropriate use of naloxone and proposed revisions to the law to facilitate medication disposal to the Washington State Pharmacy Quality Assurance Commission. Along with I2P2 endowed professor Don Downing and Washington State Pharmacy Association (WSPA) members, a 70+ person contingent of UW Pharmacy students spent a day in March educating state legislators about the value to patient outcomes pharmacists would add as paid providers. The Washington state Governor recently signed the proclamation declaring March 8-14 to be Patient Medication Safety Awareness Week. The proclamation was submitted by the Washington Patient Safety Coalition with contributions from UW Pharmacy students **Stephanie Heeney, Sheila Shapouri, Nick Larned, Brian Nguyen, Mercy Hoang-Nguyen, Nina Gazonas, and Leighton Mar.**



Congratulations to **James Lin**, recently awarded the National Community Pharmacists Association (NCPA) Outstanding Student Member of the Year. James is a strong advocate for the important role independent pharmacies play in communities,

as showcased in his team's business plan for Fairhaven Pharmacy that placed in the top ten nationally at last year's NCPA conference.

**Jenny Chan** and **Shirley So** received first place in the ASHP Clinical Skills Competition.

**Amy Ly's** article about pharmacy student activities that promote achievement of The Center for the Advancement of Pharmacy Education (CAPE) outcomes was featured on the APhA website.

**Eva Linh** received a Martin Luther King, Jr. Tribute Community Service Award for volunteering and community service. Eva's commitment to serving communities has driven her to work towards reducing health disparities, improving patient advocacy, and improving health care access in underserved areas.



At the Annual International Meeting of the American Medical Informatics Association (AMIA), **Elisabeth Vodicka's** paper, "Online access to doctors' notes: patient concerns about privacy," was one of 105 featured in the general session. In addition, the paper was published in the *Journal of Medical Internet Research*.

The American Society of Nephrology (ASN) selected Pharmaceutics Ph.D. student **Alenka Jaklic's** "Development of a Bioengineered Human Kidney Microphysiological System for Assessment of Drug Transport and Toxicity" for a podium presentation.

Med Chem grad student **Lucas Monkkonen** will defend his thesis, "Pushing the Limits of Structural Mass Spectrometry to Characterize the Viral Packaging Motor." Lucas aimed to establish new mass spectrometry methods to understand protein-protein interactions and protein dynamics.

This year's PORPP prize winners are Ph.D. student and T-32 scholar **Mark Bounthavong** ("A cost-utility analysis of biologics for Moderate-to-Severe Crohn's disease: evidence synthesis using Bayesian network meta-analysis") and Allergan Fellow **Vanessa Shih** ("Estimating the cost-effectiveness of left atrial appendage closure with the Watchman device versus dose-adjusted warfarin for stroke prevention in atrial fibrillation").

**Cameron Garner** and his wife welcomed their little girl Braylee Lyn Garner into the world at the symmetrical moment of 2:22 on 2/22. Congratulations!



PORPP Ph.D. student, **Kai Yeung**, and his wife, Patricia, welcomed baby Asher on March 16!

March 16 also welcomed baby Charlie, son of PORPP Ph.D. student, **Cara McDermott**, and her husband, Scott Gardner.



# WHY I AM A PAA MEMBER

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As a member of the Pharmacy Alumni Association at UW, I remain connected to the faculty and alumni who motivate and inspire me in my daily work.

The UW School of Pharmacy is a hotbed of innovation, as each issue of *Dawg Scripts* reminds me. Through my PAA membership, giving, and mentoring, I am an active part of maintaining the high standards of our alma mater.

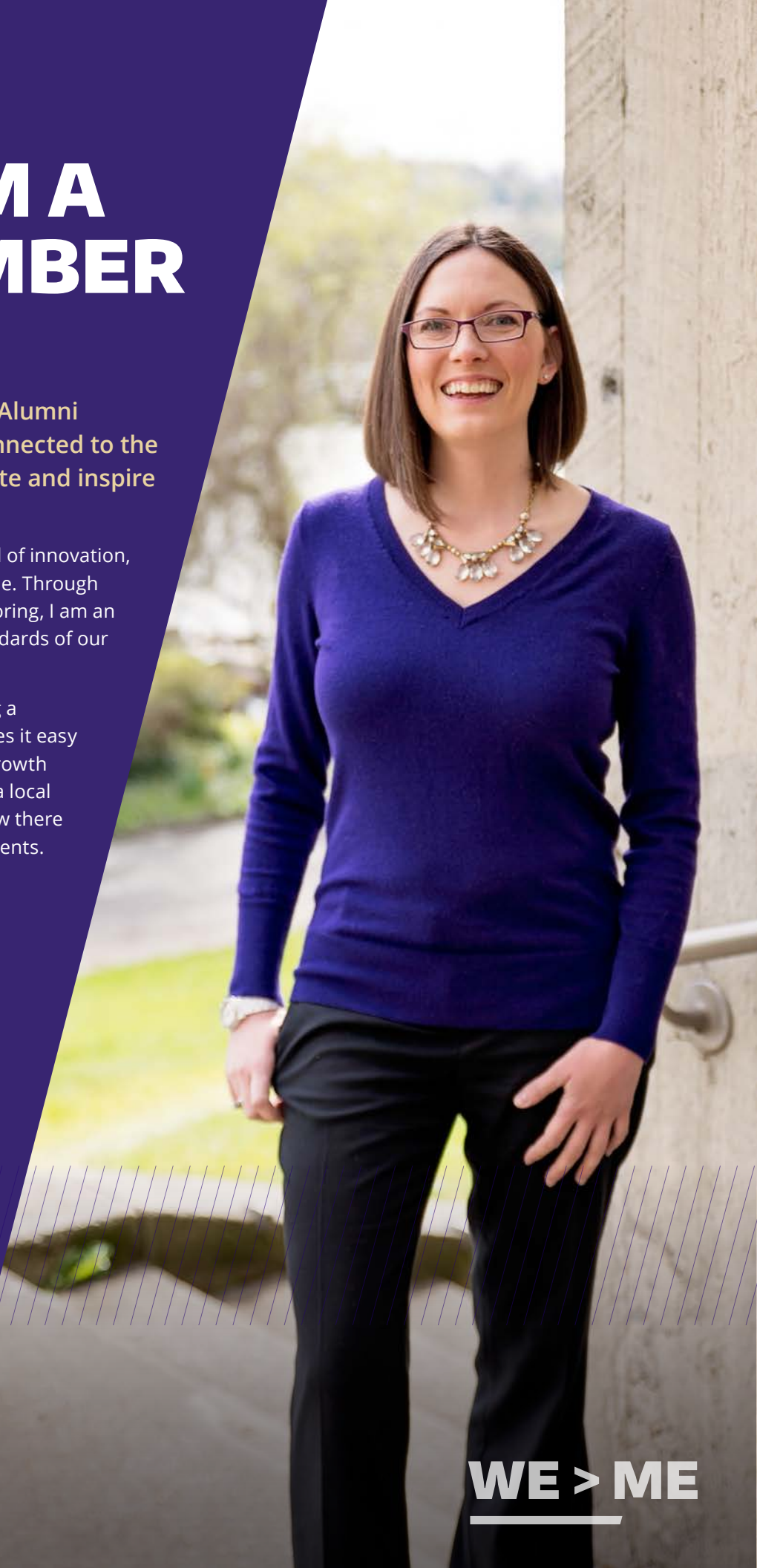
Having a PAA membership is like having a professional insurance policy, as it makes it easy to find opportunities for professional growth and collaboration. And whether I go to a local meeting or a national conference, I know there is a network of fellow Huskies at PAA events.

But most of all, it's fun.

Bow down to Washington!

**Jenny Arnold, '06**

To join PAA, go to:  
[sop.washington.edu/PAAmember](http://sop.washington.edu/PAAmember)



**WE > ME**

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**Stanley Davis, '42**

We recently learned that Dr. Stanley (Stan) K. Davis, beloved husband and father, passed away on May 29, 2013 at age 92 and that his wife, Phyl, passed away on September 20, 2013 at age 91. They met at

a dancing class at the UW; Phyl was matched with Stan because he was the right height. They married in 1943. Stan graduated from the University of Washington with a B.S. in pharmacy in 1942 and later a medical degree at the University of Oregon Medical School, with a specialty in Education in Pathology. He was director of the pathology department at for 20 years each at Salem General Hospital and Albany General Hospital. They raised two sons, Keith, who preceded them in death, and Terry, who lives in Albany.



**John Hebert, '53**

UW School of Pharmacy alumnus and clinical faculty John Hebert, father of UW Clinical Associate Professor, John Hebert, '78, and UW Pharmacy Professor Mary Hebert, passed away on February 6, 2015. John,

a graduate of the UW School of Pharmacy Class of 1953, brought tremendous influence to many Pharmacy students, including his children John and Mary, who currently serve on the faculty at UW. He grew up in Sedro Woolley, where he "walked several miles to school each day...with no shoes on...up hill...both ways...in 5 feet of snow...while picking strawberries along the way, so his family wouldn't starve, or at least that's what he told us," shared his family. He earned degrees in Biology and Pharmacy from Gonzaga and UW, respectively. He served in the U.S. Army in the 1950s. After completing his degrees and serving his country, John began his career as a pharmacist and entrepreneur. He founded Manhattan Drug in Normandy Park in 1958, building and running a successful business until his retirement in 2004. Manhattan Drug served not only as the quintessential drug store but also as a community gathering place. Even if they didn't need anything from the pharmacy, friends and neighbors alike would drop by the store to visit with John. He was a kind man, who always gave more in this life than he took. He could regularly be found volunteering at community events, including countless swim meets where he would serve as timer and judge. He served on the faculty of the UW School of Pharmacy for many years, teaching

pharmacy practice to generations of new pharmacists. He was preceded in death by his wife of 43 years, Joan Elizabeth. He is survived by his 10 children John (Kathy), Elizabeth (Paul), Kathleen (Mike), Peter (Colette), Joe (Beth), Mary (Gus), Jim (Rhonda), Grace (Greg), Jeanne (Brian) & Karl (Kathryn), 19 grandchildren, and 5 great-grandchildren.



**John V. Krippaehne, '51**

We learned recently that UWSOP alumnus, John V. Krippaehne, DMD, passed away on Feb. 25, 2013. John was born September 17, 1928. In June 1951, he graduated with a B.S. in Pharmacy and received his navy commission.

He served for many years, including an attachment to the U.S.S. Valley Forge during the Korean War, after which he attended the University of Oregon dental school. John shared a special bond with his siblings and family, and is missed by many. John was preceded in death by his first wife, MariAnn, in 1975. He is survived by his second wife, Frannie; brother, Fred; sons, John (Laura), Jim (Polly) and grandchildren.



**Ruth Stone, '42**

Ruth Johnson Stone passed away Sunday, February 1, 2015 in Des Moines, WA, at the age of 94. Ruth graduated from the University of Washington with B.S. in Pharmacy in 1942. Born on September 9, 1920

she was raised on a farm south of Port Orchard, WA. She was the only daughter of immigrants from Sweden and learned English from friends and in a one-room schoolhouse. In 1942, she graduated from UW and married John Stone. For over 60 years they lived in the Shorewood area where they raised their three children. After her children were grown, she returned to work at Pay n' Save and later at Standing and Riverton Hospitals. As she neared retirement, Gov. Booth Gardner recognized her as one of the early women in Pharmacy. She is survived by children Jim, Elin (Al Showalter) and Craig (Amy), grandchildren, and her great-grandchild.

**Geraldine (Walcott) Brady**

As we went to press, we learned of the passing of Geraldine Brady, widow of Professor and former Associate Dean, Lynn Brady, '60. Geri passed away on March 25, 2015. We send our condolences to the Brady family.

*Erratum: With regret, we note the misspelling of the last name of alumna Donna (Palmer) Miles, '67, in the In Memoriam section of the Fall 2014 issue. We send our apologies and condolences to her family, friends, and colleagues.*



**Klarissa Hardy**, a former Medicinal Chemistry post-doctoral fellow, was awarded a \$660,000 NIH grant to fight breast cancer. Hardy worked with Dean Sidney Nelson to study the effects of the anti-cancer drug lapatinib on the liver. "I learned a lot from Dr. Nelson, from his previous work and experience in this area." Hardy is currently a researcher and Assistant Professor of pharmaceutical sciences in Lipscomb University's College of Pharmacy. She made history by receiving the first NIH grant for Lipscomb, and the largest research grant in the university's history! Congratulations Dr. Hardy!



We send hearty congratulations to Med Chem alumnus **Michael L. Adams, '14**, who was named Acting Vice President of Health Programs at Campbell

University. Michael, who had recently been named the Dean of the College of Pharmacy and Health Sciences, will succeed Ronald Maddox, who retired from his post as Vice President in December. In addition to his responsibilities as Dean, he will oversee the development and management of all of Campbell's programs in the health sciences field, with the exception of the Jerry M. Wallace School of Osteopathic Medicine.

**Anthony Shaver, '14**, co-wrote a poster with Professor John Horn that was accepted for presentation at the American College of Clinical Pharmacy (ACCP) 2014 Virtual Poster Symposium. His paper was also a finalist in the Best Student and Resident Research-in-Progress Poster competition. The poster titled "Comparison of Warfarin and Acetaminophen Drug-Drug Interaction Warnings between Prescription and OTC Drug Labels in Acetaminophen Containing Products" focuses on the interaction between acetaminophen and warfarin.

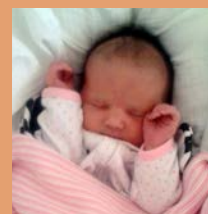
Pharmaceutics alumna, **Claudette R. Bethune, '99**, et. al., authored a study published in the January 2015 *New England Journal of Medicine*, "Factor XI Antisense Oligonucleotide for Prevention of Venous Thrombosis." She told us her work with antisense drugs in the study design with help from PK/PD modeling from the Phase I study worked well in a Phase II clinical proof of concept study.

**Daniel Good, '88**, was named Regional Executive Director of Pharmacy Services for Mercy Health Ministries in Springfield, MO. Congratulations!

Health Mart announced that the Birch Family Pharmacy, founded by **Sheldon Birch, '03**, will be one of ten pharmacies nationwide to receive the Health Mart Community Healthcare Excellence Award. Each year, Health Mart, a national network of more than 3,200 independently owned pharmacies, recognizes pharmacies for services that add to patient health care and community wellness.



Alumna **Sara McElroy, '12**, welcomed the adorable, dinosaur-loving Baby Griffin recently. Congratulations to the McElroys!



**Lara Andjelkovic, '05**, shared with us that the (so far) mellow and wonderful baby girl Nina arrived on February 23. Welcome little Nina!

## SHOW YOUR HUSKY RX PRIDE!

T-shirts, sweatshirts, zip-front hoodies, glass waterbottles, and lanyards with the UW School of Pharmacy logo are now available for pre-order!

Pre-order by June 30.  
Orders ship late July.  
<http://tinyurl.com/q3vhkps>



**Has your class hit a graduation milestone this year?** If you would like to create an alumni gathering to celebrate, please contact Claire Forster at [clbrown@uw.edu](mailto:clbrown@uw.edu).

**Don't be shy — tell us what you've accomplished!** Your successes inspire and add value to all of us. Send updates to Sarah at [gu3@uw.edu](mailto:gu3@uw.edu) and include photos if you have them!



Homecoming, Washington Park Arboretum, October 24, 2014

ABOVE LEFT: L to R: Anita Marshall, '74, Steven Kushner, '74, Wanda Wong, '74. ABOVE RIGHT: Newly-installed PAA President Gary Harris, '72, leads the room in the fight song, Bow Down to Washington.



American College of Apothecaries Awards Banquet, Ft. Lauderdale, FL, February 27, 2015

L to R: Ryan Oftebro, '03, Sheldon Birch, '03, Ryan Hansen, '03, Betsy Faulkner, Brian Beach, '00, Scott Herzog, '03, and Roland Lopez, '09.



School of Pharmacy Scholarship Reception, UW Seattle, February 25, 2015

L to R: PORPP students Solomon Lubinga and Marita Mann are two of the ten "Reducing Barriers for the Ambitious" scholarship recipients this year. The fund provides financial support to deserving students and pays forward support the donor received as a student.



Keynote speaker PharmD student Linda Blake, Ph.D., pictured with Dean Sullivan, shared that her scholarship gives her opportunities to travel and attend conferences, essential for her professional development as a pharmacist.

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Box 357631  
Seattle, WA 98195-7631

**BE BOUNDLESS** / [sop.washington.edu](http://sop.washington.edu)

## Zhang Named as Inaugural Ji-Ping Wang Endowed Fellow

THE INAUGURAL JI-PING WANG FELLOW is Faye Zhang in the Department of Pharmaceutics. Faye Zhang (pictured left) received her B.S. in Pharmaceutics from China Pharmaceutical University and M.S. in Biostatistics from University of Massachusetts, Amherst. She entered the UW Pharmaceutics Ph.D. program in 2010 and joined Dr. Jashvant D. Unadkat's lab for her thesis research. Faye's research focuses on understanding the gestational age-dependent changes in drug disposition in pregnant women and their fetuses. She was the 2013 FDA Center for Drug Evaluation and Research ORISE Fellowship recipient.

The Endowment's namesake, Ji-Ping Wang, '87, '92, passed away almost two decades ago in 1997 at the age of 48. At the time, she was a Ph.D.



Ji-Ping Fellow Faye Zhang with donor Si Luo

candidate working in Unadkat's lab. Her husband, Si (Alex) Luo (pictured right), said the time she was working in the lab was "the happiest she had ever been," and that Ji-Ping was so excited to work towards her Ph.D. at the UW.

Ji-Ping and Alex came to the U.S. and worked odd jobs to support

her through school. She earned her B.S. from the UW School of Pharmacy in 1987. She went on to receive her M.S. in Pharmaceutics in 1992, working under Jash's direction. Her master's thesis was titled "Renal Tubular Secretion of Ticarcillin in Cystic Fibrosis." After earning her master's, she worked for a number of years as a pharmacist, but missed research. She decided to come back to the UW and pursue her Ph.D., and return to her roots as a Research Scientist in Jash's lab.

"I remember Ji-Ping fondly, as an excellent student who, without question, would have successfully completed her Ph.D. and become a wonderful research scientist in the field," Unadkat said. It is fitting that Faye Zhang and future researchers will carry Ji-Ping's spirit of excellence and passion for research into the profession.