

PHARMACY ALUMNI ASSOCIATION  
& SCHOOL OF PHARMACY NEWS

# DAWG SCRIPTS

FALL 2017

## UWSOP INNOVATES

In as early as 2018, a rocket carrying cargo that includes 24 microfluidic chips about the size of credit cards will transport an extraordinary University of Washington kidney research project to the International Space Station (page 4).

SCHOOL OF PHARMACY  
UNIVERSITY *of* WASHINGTON



W

# 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, Erin Bailey-Sun, Josh Carlson,  
Jennifer Chang, Claire Forster, Gary Harris,  
Ron Klein, Kent Kunze, Cheri Ryan,

**Designer:** Sarah C.B. Guthrie

**Photographers:** Nicole Angus, Claire  
Forster, Sarah C.B. Guthrie, Matt Hagen,  
Alex Levine, Clare McLean

## PAA OFFICERS

**President:** Gary Harris, '72

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

## COMMITTEE LEADERS

**Alumni Recognition:** Scott Herzog, '03

**Class Representatives:** Judi Mar-Burbridge,  
'82, '00 (1980s), Ben Michaels, '97, '11

(1990s); Michael VanLaanen, '11 (2010s)

**Events:** Jennifer Glasco, '09

**Katterman:** Adam Brothers, '06

**Marketing:** Jenny Arnold, '06

**Mentorship:** Christy Weiland, '07

**Students:** Erica Hecker, '19, Michelle Lan,  
'20

**WSPA:** Jeff Rochon, '99

## CONTACT PAA

UW School of Pharmacy

Box 357631

Seattle, WA 98195

(206) 616-7613

rxalumni@uw.edu

sop.uw.edu/paa

## CONNECT:

**W** [sop.uw.edu](http://sop.uw.edu)

**f** [www.facebook.com/UWSOP](http://www.facebook.com/UWSOP)

**in** [www.linkedin.com](http://www.linkedin.com)\*

**t** @UW\_Pharmacy

**i** @UW\_Pharmacy

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

## On the cover:

In as early as 2018, a rocket carrying cargo  
that includes 24 microfluidic chips about  
the size of credit cards will transport an  
extraordinary University of Washington  
kidney research project to the International  
Space Station (page 4).



## From the PAA President

ALUMNI LIKE YOU CONTINUE TO  
LEAD IN GIVING BACK AND BUILDING  
COMMUNITY. This year, Pharmacy  
alumni remained #1 among all UW

schools in the number of alumni giving back to their home school or college. These many individual gifts—including PAA membership and scholarship gifts—demonstrate our collective commitment to nurturing a strong community of pharmacists and researchers.

To bring our community together this fall, the PAA has planned several fun events around Homecoming in October. We hope you'll consider joining your UWSOP colleagues and friends at one, two, or all of the following gatherings:

- On October 14th, my wife Carrol and I are excited to host the School's very first **UW Husky Football Viewing Party**. Join fellow football fanatics as we cheer our team on to victory against the Arizona Wildcats!
- On October 22nd, you can **join Team #HuskyPharmacist for this year's Alaska Airlines Dawg Dash** on the UW Seattle campus. Run/walk with fellow alumni, friends, and students, and depart with a Brooks tech shirt, medal, and special UWSOP running swag. PAA Members receive \$5 off registration with the discount code e-mailed in the September 6th PAA Member News.
- Swing by our no-host **Homecoming Happy Hour Series** to catch up with Puget Sound alumni and friends in Seattle (October 21st), Tacoma (October 25th), and Bothell (October 26th).

To register for these events, visit <http://tinyurl.com/SOPhome17>. We'd love to see have you join us and encourage you to send any questions to [rxalumni@uw.edu](mailto:rxalumni@uw.edu).

And of course, if you need to **join or renew your PAA membership** or make a PAA scholarship gift, now is a great time to do so online via [tinyurl.com/joinpaa](http://tinyurl.com/joinpaa). Your membership makes our community possible. Thank you for your commitment to the UW School of Pharmacy!

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

**Pharmacy Alumni Association (PAA) members and friends like you will proudly support three student scholarships this academic year—that's a PAA record!**  
To make a gift supporting additional PAA scholarships, go to:

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



## From the Dean

NEVER LET IT BE SAID THAT WE DO NOT AIM FOR THE STARS HERE AT THE UW SCHOOL OF PHARMACY! Our cover story this issue is the extraordinary and almost unimaginable innovation in kidney disease research. In late 2018, a box of 24 microphysiological kidney chips will be sent to the International Space Station for a series of research studies. The findings likely will lead to multiple breakthroughs in how we treat kidney disease and osteoporosis on Earth, reduce animal testing, predict adverse outcomes, and add to the evidence base for how we might send humans to Mars. Read more about this game-changing research led by Ed Kelly, Cathy Yeung, and Ken Thummel working in partnership with UW Medicine and Kidney Research Institute Director Jonathan Himmelfarb.

We remain focused on our core mission, thanks in large part to the outstanding commitment of our alumni and friends. Last Fall, the UW and UWSOP launched the public phase of our ambitious campaign and I am very pleased to share with you that our School's endowment has crossed an important milestone: \$22 million. **I'm especially proud that this milestone was reached thanks to the collective commitment of our devoted alumni and friends--no single major gift got us there--it was the PAA memberships, Dean's and President's Club members, faculty endowments, student scholarships, and estate gifts together that made the difference.**

While we have accomplished a great deal for our Campaign, we are not slowing our efforts toward reaching our campaign goals. We are in competition with our peer schools nationwide for the very best talent, from faculty to students to staff. We may be a bit of an underDawg, but I am confident in our ability to rise to the challenge.

If we haven't seen you for a while, I invite you to find a time to join us at one or more of our upcoming School gatherings, events, and lectures. Your gifts of time and support allow us to go where no one has gone before.

Thank you and go DAWGS!



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

## UPCOMING EVENTS

### PAA UW-Arizona Football Viewing Party

October 14

*The Hideaway Lodge—Home and B&B of Gary & Carrol Harris*

Woodinville, WA

### Phil and Sandra Nudelman Endowed Lecture featuring Steve Davis, President & CEO of PATH

November 9, 6 p.m.

*Lyceum  
Husky Union Building (HUB)*

UW Campus, Seattle

### Dean's Club Fall Harvest Wine Tasting

*(By invitation only)*

November 30

*Details soon!*

Seattle, WA

### Plein Center Research Day

March 2018

*Details soon!*

Seattle, WA

### UWSOP Scholarship Reception

*(By invitation only)*

February 27, 2018, 6 p.m.

*Husky Union Building (HUB)*

Seattle, WA



UWSOP researchers Cathy Yeung and Ed Kelly prepare in advance of the official project kick off that was held in late September at Cape Canaveral in Florida.

## Kidney-on-a-chip will go to the International Space Station

In as early as 2018, a rocket carrying a payload that includes 24 microfluidic chips about the size of credit cards will transport an extraordinary UW kidney research project to the International Space Station. UW School of Pharmacy researchers **Ed Kelly, Cathy Yeung, '05,** and **Ken Thummel, '87,** along with Jonathan Himmelfarb, of UW Medicine and director of the Kidney Research Institute (KRI), in collaboration with the Seattle-based organ-on-a-chip company, Nortis, have been developing the “kidney-on-a chip” as a laboratory model for understanding how this organ is affected by drugs, toxins and environmental exposures. The chips contain a central chamber lined with live kidney cells. This novel space medicine project is an attempt to understand how

microgravity and other factors worsen kidney health. Researchers hope to use these discoveries to design better treatments for proteinuria (the presence of protein in the urine that signals possible kidney problems), osteoporosis (bone loss) and kidney stones on Earth. “By studying the kidney on a chip after a few weeks in space, we expect to learn more about how osteoporosis, kidney stones

and other kidney conditions develop, which may lead to breakthroughs in treatment and prevention,” said Ed Kelly, also a KRI investigator. The first phase of the project will be to launch chips that measure the effect weightlessness has on healthy kidney cells. The second phase will launch about 18 months later and will measure the effect of weightlessness on diseased kidney cells. Astronauts on the space station will monitor and maintain the

**“Weightlessness is an accelerator. In the microgravity environment on the International Space Station, kidney problems are more common and develop in weeks or months, instead of decades—which accelerates our research and ability to find therapies to fight these conditions.”**

**ED KELLY, ASSOCIATE PROFESSOR OF PHARMACEUTICS AND KIDNEY RESEARCH INSTITUTE INVESTIGATOR**

chips and then return them to Earth after several weeks for the UW team to examine. The kidney chips contain a small sample of live human kidney cells to test how drugs will affect those cells. The system offers a safer, more accurate, less invasive means of testing drugs before they are tried in patients. Importantly, it will reduce the need for animal testing in drug discovery research and is the foundation of

research needed to send humans to Mars. “This study has the potential to improve the health of people living on Earth as well as prevent medical complications that astronauts experience from weightlessness,” said Jonathan. The kidney is a critical organ in drug clearance. When healthy, your two kidneys work together to filter about 110 to 140 liters of blood and produce about 1 to 2 liters of urine every day. Dehydration or diseases like diabetes and high blood pressure impair kidney function and result in serious medical conditions including protein in the urine and kidney stones. The kidney also plays a critical role in the body’s ability to use Vitamin D to maintain strong bones; a decline in this function can result in a loss of bone health. A better understanding of the mechanics of basic kidney function could lead to improved treatments for patients fighting kidney conditions. The Kidney on a Chip in Space Project will study effects of microgravity on the structure and function of the proximal and distal tubule microphysiological system. This model is used in laboratory studies to understand how the kidney clears drugs and how medications damage the kidney. In people, the kidney proximal and distal tubules are located in the nephron, which is the basic functional part of the kidney. They are both

convoluted, but have different structures. The new chip project extends previous work on modeling a proximal tubule by adding a distal tubule. The UW School of Pharmacy, UW Medicine and Kidney Research Institute team have partnered with BioServe Space Technologies at the University of

Colorado to work with engineers who specialize in developing scientific testing equipment for space launch. The four-year, \$3 million grant (1 UG3 TR002178-01) was awarded by National Center for Advancing Translational Sciences (NCATS), part of the National Institutes of Health (NIH).

The Center for the Advancement of Science in Space (CASIS), the organization tasked by NASA to manage the International Space Station U.S. National Laboratory, will contribute the space flight, time in station, and Space Station crew costs, for an in-kind total of \$8 million.

## PharmD student leads shift from triage to evidence-based health care provider training in Ghana

David Nguyen, President of the UWSOP Global Brigades team, led a team of students, along with Institute for Innovation in Pharmacy Practice (I2P2) Endowed Clinical Professor **Don Downing**, to return to Ghana and advance the training program begun last year. Historically, Global Brigades programs bring health sciences students to under-resourced countries with the goal of providing a three or four day clinic to help people with acute conditions. In 2015, a team of about twenty students went to Panama to provide care to about 800 people in a matter of days. In three days, with that many patients, there is only so much that can be done: treat minor injuries and ailments, provide ibuprofen and vitamins, check vitals. Fourth year PharmD student David Nguyen was a part of the Panama team and he saw an opportunity to do more than triage. He wanted to train local health professionals to

**“Leading an entire group to another country and creating a new Brigade taught me more leadership skills than any other experience I’ve had. I couldn’t have done any of this without my team members.”**

DAVID NGUYEN, 4TH YEAR PHARM D STUDENT

create a sustainable approach to the trips. Working with Don Downing and a team of faculty preceptors, David led the Global Brigades team in developing a program to teach the clinic’s nurses and physician assistants to recognize the signs and treat hypertension, the number one killer in Ghana. Last year, the team began this innovative approach in two clinics. This year, the team expanded into three clinics. PharmD student Job Pan created hypertension stage one and stage two flow charts following the current Ghanaian protocol and included the three most used medications in Ghana for hypertension in order to empower the nurses to identify and take action

when therapy is suboptimal or lacking. “The most valuable thing that I learned was how to approach healthcare problems in rural communities of a developing country,” said David. “Like us, they face health care barriers like transportation and

economic standing, but it is on a much larger scale in Ghana than here in the U.S.” Another team on-site brought a polaroid camera. “Everyone was excited and went home to put on their best clothing for their photo. I realized that they’ve never had a picture of themselves before. Sometimes it is the simple things—having a photo of your family—that change lives.” David hopes the team’s work enables nurses to screen for hypertension for each adult that visits the clinics; that the nurses will be more comfortable to advocate for their patients’ health; and have trained healthcare workers and other nurses to raise awareness about hypertension.



David Nguyen (front, 5th from the left) and the UWSOP team that trained Ghanaian nurses and physician assistants in recognizing signs of hypertension, the #1 killer in Ghana.

# RECOGNIZING *our donors*

We gratefully acknowledge the many generous alumni, faculty, staff, students, corporations, foundations, and friends that made gifts and pledges to our School and made donations to student events between July 1, 2016 - June 30, 2017. Giving remains strong, with 12% of our alumni giving back to the School, making UWSOP #1 at UW in the percentage of alumni giving back to their School. Your gifts truly make a difference for our students, faculty and programs. Thank you!

## INDIVIDUALS

### \$25,000+

Ryan & Keli Hansen  
Phillip & Sandra Nudelman  
John O'Connell Jr.  
Peggy & David Odegard  
Ryan & Jessica Oftebro  
Elmer (D) & Joy Plein

### \$10,000-\$24,999

David & Anita Bailey  
Thomas & Kathleen Baillie  
Lynn (D) & Geraldine (D) Brady  
Claire & Andrew Forster  
Florence Gibaldi  
Rodney Ho & Lily Hwang-Ho  
Dana Hurley & Matthew Thomlinson  
Edward & Janet Kelly  
Virginia Leland  
Rene & Beloria Levy  
Douglas & Yvonne Mendenhall  
Danny & Barbara Shen  
Shabir & Salma Somani  
Kenneth & Peggy Thummel  
Jennifer Wilson-Norton & Laurence Norton  
Raymond Wilson & Cheryl Wright-Wilson  
Edward & Kathleen Wong  
H. Steve & Kathryn White

### \$5,000-\$9,999

Louis & Frances Garrison Jr.  
Gary & Carrol Harris  
Mark & Pamela Holzemer  
Stephen & Kathy Kushner  
Sean & Catrena Sullivan  
Patricia & Walter Warden

### \$2,000-4,999 (President's Club)

Lara Andjelkovic & Jacob Connell  
Kate & Carl Atienza  
Anirban Basu  
John & Gayle Bittinger  
Herbert Bridge & Edith Hilliard  
Brian Bullock  
Weichao & Sandy Chen  
Christopher & Maureen Endres  
Michael & Margaret Faulkner  
Sallie & Brett Hartnett  
Paul & Chana Hiranaka  
Mark Holodniy & RoseAnn Kushner  
Kathleen Kaa  
S. Cyrus Khojasteh  
Ronald & Cherie Klein  
Craig & Sally Kvam

Soraya Madani & Jon Eisenberg  
Malcolm & Diane McCallum  
Marla & Patrick Osinski  
Scott & Ellen Ramsey  
Beverly & Michael Schaefer  
Andy & JoAnn Stergachis  
Tom & Pamela Szkutak  
Bettie Tomchalk  
Dara Uch  
David & Julie Veenstra  
Chris & Gail Whitley  
Larry & Margaret Wienkers  
Donald & Arda Williams

### \$1,000-\$1,999 (Dean's Club)

Kimberly Adkison  
Leon Alzola  
Gail & Arnold Anderson  
Richard & Teresa Austin  
Jonathan & Christina Campbell  
Carol Chervenak & William Barish  
Barry & Judith Christensen  
Janet & William Corriston  
Bonnie & Walter Davison  
Karan & James Dawson  
Beth Devine  
Leslie Dickmann  
Donald & Donna Dockter  
Donald & Anne Downing  
Jackie Gardner & Gary Elmer  
Thomas Hazlet  
Kirk Henne  
Shiu-Lok Hu  
Kay Humm  
Christene & Anthony James  
Brenda & Jess Kelly  
Paul & Mary Kuehn  
Linda & James Lang  
Sze Lau  
Randall & Lori Legg  
Larry & Ellen Oliver  
Mary Paine  
Gregory & Gloria Pollock  
C. Rene & David Porubek  
James & Patricia Ramseth  
Shelby & Steve Reed  
Allan Rettie & Shannon Stewart  
Natalie Ritchie & Joseph Zolnerciks  
James & Diann Robbers  
Joshua Roth & Meghann Glavin  
Beverly & Glenn Sakuda  
Arvind Thakkar  
Herbert Tsuchiya  
Bradley Wong  
Roger & Marlene Woolf

### \$500-\$999

Preeti Bajaj  
Ronald & Kathleen Beil  
George Benson, Jr.  
Jennie Best  
Jamiela Braxton  
Ted Bruya  
Josh & Amy Carlson  
Kevin Coe  
Karen Craddick  
Michael Cundari  
Stephanie Decker & George Guenther  
Jamie Dunning  
Tamara & Stephen Eide  
Earl & Betty Fager  
Steven & Kim Fijalka  
Cameron Fosterling & Harry Schnepf II  
Kelli Hatico  
Lars Hennum (D)  
Vivian & Jeffrey Hiroo  
John & Maureen Horn  
Daniel & Carolyn Jones  
Andrea Kawakami  
Bojan Lalovic  
Minja & Young Lee  
William Nichols & Patricia Richards  
Miroslava & Ricardo Orozco  
Dominic & Natalie Poon  
Richard Ramsey & Shirley Scott  
Lisa & Richard Reis  
Robert & Martha Satterthwaite  
Brian Seiki  
James & Pamela Seymour  
Vandana & J. Greg Slatter  
Julia Slejko  
Ian Templeton & Allison Cougan  
Paul Tom  
Bruce Wang  
Victor & Ann Warner  
Mary Wingate

*Every effort has been made to represent the names of our donors accurately. We apologize for any errors or omissions. Please send any corrections to rxalumni@uw.edu.*

# CORPORATIONS & FOUNDATIONS

\$50,000+

Allergan, Inc.  
Amgen  
Bayer AG  
CTI BioPharma Corporation  
Eli Lilly and Company  
ERA Living  
Harvard Medical School  
Kaiser Permanente Medical Group  
Kelley-Ross and Associates, Inc.  
Mallinckrodt, Inc.  
Seattle Institute for Biomedical & Clinical Research  
Simcyp Limited  
Southcentral Foundation  
University of Pennsylvania  
Yale University

\$25,000-\$49,999

AbbVie, Inc.  
GAPPS  
The Hearthstone  
Merck & Company, Inc.  
Novo Nordisk A/S  
Pfizer, Inc.  
Roche Holding AG  
Takeda Pharmaceutical Company Limited

\$10,000-\$24,999

Microsoft Corporation  
Pan Foundation  
Tansna Therapeutics, Inc.  
Walgreens

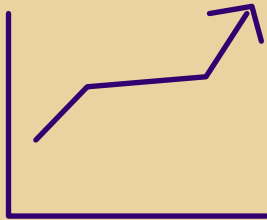
\$2,500-\$9,999

American College of Clinical Pharmacy Research Institute  
The Bartell Drug Company  
Electronic Arts, Inc.  
Eli Lilly and Company  
Fred Meyer, Inc.  
Walter & Hazel Hinman Foundation  
International Society for Pharmacoeconomics and Outcomes Research  
Quality Food Centers (QFC) Inc.  
Rite Aid Headquarters Corporation  
Robert W. Baird & Company, Inc.  
The Seattle Foundation  
Valley Medical Center  
Washington State Pharmacy Foundation  
Electronic Arts, Inc.

\$500-\$2,500

Abbott Laboratories  
AHF Pharmacy  
Albertsons Stores Charitable Foundation, Inc.  
AstraZeneca PLC  
Bank of America Corporation  
Bill & Melinda Gates Foundation  
Bob Johnson's Pharmacy  
The Boeing Company  
Community Foundation of Snohomish County  
CVS Caremark  
Gilead Sciences, Inc.  
InFaith Community Foundation  
National Community Pharmacists Association Foundation  
Network for Good  
Odessa Drug  
Pacific Real Estate LLC  
PhRMA Foundation  
Premera Blue Cross  
Scholarship Foundation of Northshore  
Starbucks Coffee Company  
State of Washington

## ADVANCING PHARMACY FOR WASHINGTON, FOR THE WORLD



**2016**  
CAMPAIGN  
FOR UWSOP  
LAUNCHED

**2020**  
CAMPAIGN  
CONCLUDES

The Campaign for the UW School of Pharmacy is well underway. The foundation for meeting our \$50 million goal for UWSOP has been laid. We invite you to join us in these final stages of our ambitious campaign.



**UWSOP ALUMNI ARE**

**#1 AT  
THE UW**

**FOR GIVING BACK TO  
THEIR SCHOOL/COLLEGE**

**\$500K**

**OUR STRETCH GOAL  
FOR SCHOLARSHIPS  
AWARDED ANNUALLY  
(2X AMOUNT AWARDED IN 2017)**

**\$50M**

**CAMPAIGN FOR UWSOP  
FUND RAISING GOAL**

**\$22M**

**UWSOP ENDOWMENT  
HITS MAJOR MILESTONE**

**UW School of Pharmacy** ranks #9 in the world for pharmacy and pharmaceutical sciences (#3 for universities with a School of Pharmacy and #3 for US public universities), per Academic Ranking of World Universities. The ranking is based on faculty, student, and research staff productivity.

**Ranita Patel**, a pediatric nephrology research fellow in Ed Kelly's Lab, received the John Mahan Best Abstract Award at the International Pediatric Nephrology Fellows meeting in Las Vegas for her study entitled "Utility of a Microphysiological 3D model of the Human Kidney Proximal Tubule for Predictive Toxicity Testing."

Associate Professor of Pharmaceutics **Nikki Klatt**, with graduate student **Ryan Cheu**, and post doc **Alex Zevin**, had research published in *Science* magazine. Their paper titled, "Vaginal bacteria modify HIV tenofovir microbicide efficacy in African women," found that some types of bacteria could reduce the efficacy of the drug.

Kudos to **Terri Sullivan**, '84, **Stan Weber**, **Jen Danielson**, and UWSOP alumni **Carmen Lau**, '14, and **Hana Moogk**, '15, who published, "Analysis of the Student Experience in an Attending Pharmacist Model General Medicine Advanced Pharmacy Practice Experience" in the *American Journal of Pharmaceutical Education* (AJPE).

PORPP Associate Professor **Beth Devine** was selected to serve on the AcademyHealth Methods Council. The Council, comprising 21 members from multiple disciplinary perspectives in health services and policy research, advises the Board and AcademyHealth leadership on the priorities and trends in new methods and trainings for members and the field of Health Services Research.

*Reader's Digest* interviewed Assistant Professor & Kelley-Ross Faculty Fellow **Jenny Bacci** about polypharmacy complications in "11 silent signs your medications are making you sick."

We extend hearty congratulations to our BRAMS faculty member **Eric Hayashi** on his great success in building his laboratory services company LabConnect, a R&D services company, that announced \$24.5M Series A funding round.

Medicinal Chemistry's **Lynne McFarland**, '98, discusses the health effects of probiotics in a CNN story and video, "Health effects of probiotics: Where do we stand?" in August 2017.

Professor & Associate Dean **Andy Stergachis** and a global team of researchers found that artemisinin therapies are as safe as quinine for women in first trimester (published in *PLoS Medicine*).

Professor Emeritus **Danny Shen** received the Outstanding Mentor Award for his dedicated service to our graduate students. The Outstanding Mentor Award recognizes and encourages outstanding mentorship of graduate students by UWSOP faculty members. Danny Shen, PhD, is Professor Emeritus of Pharmaceutics and Pharmacy. Danny joined the School of Pharmacy faculty in 1984 and has amassed an outstanding record of graduate training that includes serving as the principal supervisor of 15 PhD recipients and as a member of the supervisory committee of at least 80 PhD and MS graduates within our School.



"Epilepsy has long been known to be a complex and heterogeneous disorder," notes Harold Kohn. One of the main researchers behind multiple anti-epileptic (AEDs) drugs and significant advances in seizure disorder research is Pharmacy Department Chair **H. Steve White**. To honor his 40 year career and multiple breakthroughs, *Neurochemical Research* had a special issue focused on Steve's work and influence in the field. Guest editor, Henrik Klitgaard, wrote, "Steve is not only unique by his scientific contributions and behavior, he is also one of the very rare scientists that have the good fortune to see their research materialize into new treatment options, improving patient's lives, and generating hope for so many others." Dean **Sean D. Sullivan** said, "What Steve has accomplished over the course of his career is extraordinary. We are proud to see his life's work honored at this level."



## Don Downing receives ACA Award

The American College of Apothecaries presented the 2016-17 Albert E. Rosica, Jr. Memorial Award to UWSOP Institute for Innovation in Pharmacy Practice (I2P2) Clinical Professor Don Downing, '75, at the College's 2017 Fall Pharmacy Conference at the Loews Philadelphia Hotel. The award, established in memory of Albert E. Rosica, Jr., a Past President of ACA, is presented each year to a pharmacy practitioner for his or her contributions to pharmacy education through participation in pharmacy clerkship programs, serving on various college committees, teaching, working with the alumni association, and making other contributions to academic programs. For the past forty years, Don has devoted his career as a professor and practitioner to moving the profession of pharmacy forward. Associate Dean **Peggy Odegard**, '85, '90, commended Don's dedication to pharmacy. "Don exemplifies the meaning of teaching by example and is a major contributor to the professional development of our pharmacy graduates. He embodies a service attitude for his students and peers, kindly nudging each of us to become involved to improve access to services for those who are less fortunate. He reaches out with regular service to communities both locally and throughout the world to help those in need."



## Long is IPPE Preceptor of the Year

The Introductory Pharmacy Practice Experiences (IPPE) Preceptor of the Year is given every year by UW School of Pharmacy to recognize one preceptor who has consistently gone above and beyond expectations in precepting IPPE students. Congratulations to Steve Long, the 2017 Introductory Pharmacy Practice Experiences (IPPE) Preceptor of the Year Award winner! Steve was nominated by our IPPE students for his outstanding contribution to the educational development of future pharmacists. We are indebted to our dedicated and wonderful preceptors like Steve who act as role models and mentors and inspire our students to become patient advocates, innovators and future leaders. "Steve is a great example of a pharmacist who puts his patients first," wrote one student. "The strong relationships he creates with his patients allow them to trust his counsel. Steve is a very approachable preceptor and was always available when I had questions. He was trusting in my abilities, but also was sure that I understood how to do everything that was expected of me. Overall, a very high quality preceptor!"

## Winkler is APPE Preceptor of the Year

Congratulations to Todd Winkler who was named the 2017 Wayne A. Kradjan Excellence in Clinical Teaching Award winner! Over the past 3 years, Todd has precepted 28 students and consistently receives high scores from our students for his teaching abilities and their learning experience. "Todd trusted me and my ability as a future pharmacist to make my own decisions," wrote one student. "When patients stopped by to fill medisets, I got to be in charge. I showed a few patients new to the process how to organize their medisets. These types of interactions built my confidence where before I may have been hesitant to jump into the scenario." Good preceptors provide useful feedback and clear expectations. One student shared: "He made sure to tell me when I did a good job, which gave me so much confidence. It is so easy to give out criticism, but not everyone takes the time to give praise for a job well done." Congratulations. Todd!



## Nath lab team takes aim at Alzheimer's

Alzheimer's disease affects about 5 million Americans, a number projected to roughly triple by 2050. The urgency of this grave population health challenge is with **Abhi Nath** and his team of researchers every day as they seek new options to treat and manage Alzheimer's and related diseases. The key appears to lie with a process called protein

aggregation, which links Alzheimer's, Parkinson's, and Chronic Traumatic Encephalopathy (CTE)—a disease that affects people, such as military veterans and football players, who have suffered concussions or traumatic brain injury.

"At the molecular level, particular proteins in the brain are misbehaving," said Abhi. A major culprit in Alzheimer's disease and CTE is a disordered protein called tau. "Proteins are supposed to fold like origami to function. When you have a misfolded protein, they tend to stick together—in the wrong way. That phenomenon of aggregation is the underlying cause of diseases like Alzheimer's." Understanding how the disease begins and what happens at a molecular level would lead to improved diagnostic tools and therapies, but it's a major challenge because proteins like tau are very flexibly moving targets, making it hard to use traditional tools of structural biology. "Nothing in our current tool belt works well with these targets," said Abhi. Instead, the team are developing new approaches, drawing on a variety of scientific disciplines in order to have the biggest long-term impact. Eri Nakatani-Webster, '13, a KL2 scholar and post doc, is working to

develop sophisticated mathematical models of protein aggregation that will make it easier to understand and predict how a drug or other binding partner will affect the process. Graduate student Hannah Baughman is deeply focused on understanding how disordered proteins interact with the body's own defense mechanisms against protein

**"We can manage symptoms, but we have a long way to go for a therapy for Alzheimer's. It's like playing Tetris with Jello—there are hundreds of thousands of chemicals that could fit tens of thousands of gaps and we are looking for the right match."**

**ABHI NATH, ASSISTANT PROFESSOR OF MEDICINAL CHEMISTRY AND PLEIN CENTER FOR GERIATRIC PHARMACY RESEARCHER**

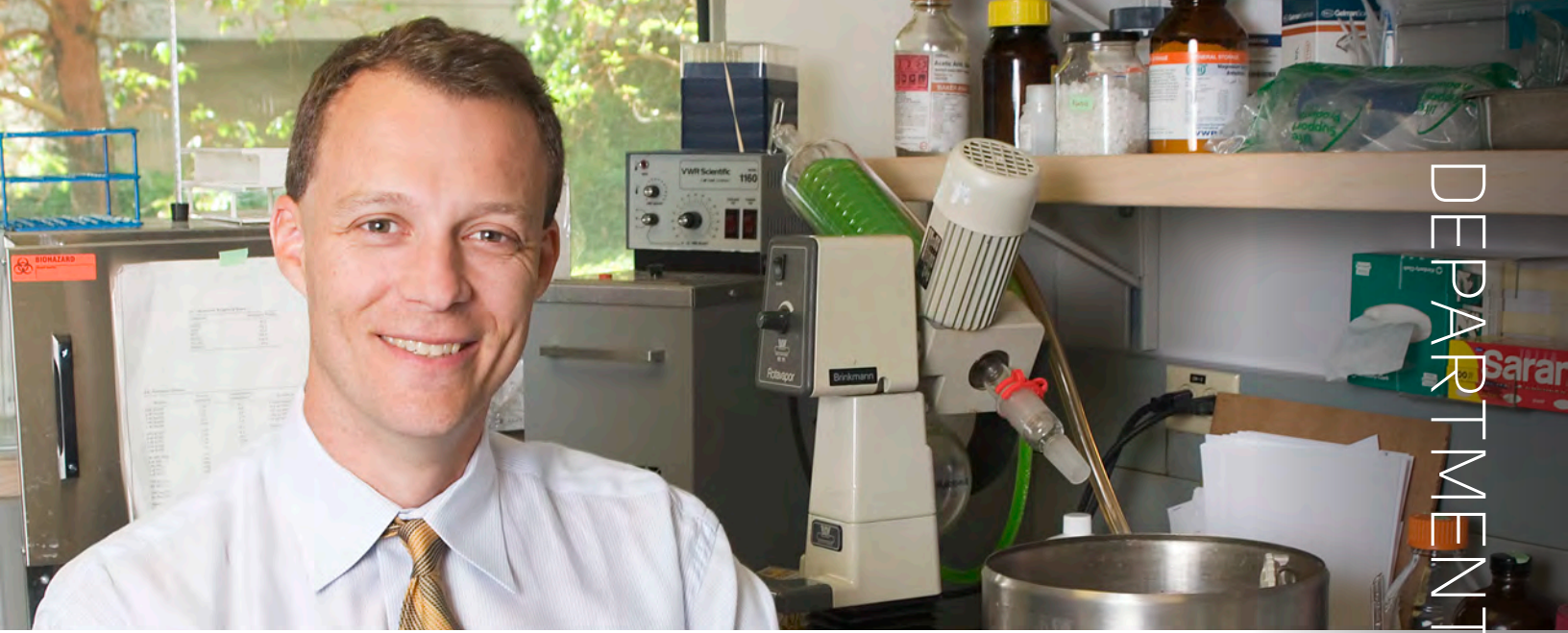
aggregation: molecular chaperones. These molecular machines can recognize when a protein is misfolding and help it refold into its correct structure, which may lead to new ways of helping our bodies protect us from these diseases.

Graduate student

David Baggett's computer models of tau can screen millions of compounds to identify new molecules capable of binding different stages in the aggregation pathway. In addition to accelerating the pace of drug discovery, David's work could improve early diagnosis—a particularly important challenge in diseases like Alzheimer's and CTE, where cognitive symptoms manifest well after the damage has been done at the cellular level and it may be too late to treat the illness. Graduate student Eleanor Vane is taking a counter-intuitive approach by investigating whether aggregation-prone proteins could actually play a beneficial role by controlling bacterial infections and fungal growth. "Here in Medicinal Chemistry, we take what we learn every day about the biophysics of misfolding proteins and connect that to improving human health," shared Abhi. "It is incredibly hopeful and fulfilling work, with great promise."



"Alzheimer's is such a challenging and scary disease. Any difference we can make there would mean so much—a lot of us have been affected and it's only going to get worse as the population gets older," remarks Abhi Nath (pictured right with David Baggett, left).



## Physician and Pharmaceutics alumnus John Amory finds breakthrough treatment for male infertility

Infertility can be a physically, emotionally, and financially painful experience for couples wanting to have biologically-related children. If a couple has been unable to conceive naturally in a 12-month period, they are considered infertile. Next steps are typically expensive and painful tests for women to determine the cause of the problem, before a couple pursues assisted reproductive technology such as IVF and IUI. But all that may change thanks to newly minted UWSOP alumnus and physician John Amory, '17. John has found a major breakthrough in men's fertility, working with **Nina Isoherranen** and members of her lab. Ironically, the breakthrough came from John's research

into a male contraceptive medication. After years of researching how to reduce sperm counts, John hypothesized that perhaps there was a way to increase sperm counts. He decided it was time to research in-depth and enrolled in the

Pharmaceutics master's degree program. "If you are retinoic acid or Vitamin A deficient, male fertility is suppressed," said Nina. "John hypothesized that if he could find a drug to increase intratesticular retinoic acid, it would increase men's sperm counts and thereby the chance of conception." It turns out there is an FDA-approved drug, Accutane, a prescription acne medication, that is a retinoic acid isomer and increases retinoic acid concentrations and men's sperm counts. For his Pharmaceutics thesis research, John obtained an Investigational New Drug (IND) from the FDA to test his theory that Accutane could be used to treat male infertility

**"The fact that we were able to overcome male infertility for six men in our small sample group, using a medication that is already on the market, shows great promise for couples wishing to conceive."**

**DR. JOHN AMORY, M.S. ALUMNUS IN PHARMACEUTICS**

by increasing sperm counts. Early results are very promising. From his pilot group of 19 men there are now five babies: three from spontaneous pregnancies and two from assisted conception (one additional pregnancy did not come to term). John wants to conduct further research to understand better why this drug intervention did not work for about a third of the patients. "There are no obvious reasons why it didn't work in terms of ethnicity, age, weight or other common indicators," he said, "so I am curious if there are other markers that might explain why." His research has been accepted for publication and he plans to pursue a double blind

placebo study to confirm the pilot test findings. John said earning his master's in Pharmaceutics changed how he practices medicine and thinks about research. "I know a lot more about drug interactions than I did before, even as a seasoned physician. I have a greater appreciation

for how hard it is to make a drug and bring it to market. We tend to take medications for granted," he continued, "but there is a saying: 'the miraculous nature of the mundane.' To me, the idea you can take something as mundane as a pill and use it to treat a symptom or cure a disease—that's a miracle." John's breakthrough findings have the promise of alleviating financial, emotional, and physical stress for many couples wanting to grow their families. If the early pilots bear fruit, the tests and treatment for male infertility could drastically reduce the costs and radically improve outcomes for fertility treatment.

## PORPP/ICER collaboration yields breakthrough in drug pricing

In November 2015, *The Washington Post* reported that nearly 3 in 5 American adults take a prescription drug. Drug costs have been increasing over time, especially specialty drugs. A report from the Pew Charitable Trust showed the cost for specialty drugs used to treat autoimmune disease and cancer can be over \$100,000 a year per person.

There are now 300 specialty drugs approved, with 700 in development.

With costs so high for these life-saving drugs, patients and their insurers want to know they

are getting good value for their care. The research partnership between UW School of Pharmacy (UWSOP) and the Institute for Clinical and Economic Review (ICER) leverages UWSOP's expertise in economic modeling of pharmaceutical interventions to support ICER's growing body of work in new drug assessments. The UW team is comprised of faculty **Josh Carlson** (PI), **David Veenstra**, **Anirban Basu**, **Lotte Steuten**; staff scientists Greg Guzauskas and Marita Zimmermann; and a graduate student, Elizabeth Brouwer. The UWSOP's Pharmaceutical Outcomes Research and Policy Program (PORPP) research team develops cost-effectiveness models for soon-to-be or recently FDA approved drugs, using evidence synthesis work performed by ICER, publicly-available data, and data from drug manufacturers. To date the UWSOP team has completed economic evaluations on 6 topics: multiple myeloma, non-small cell lung cancer (NSCLC), plaque psoriasis, multiple sclerosis, atopic dermatitis, and osteoporosis, and are currently working on an evaluation of voretigene neparovvec,

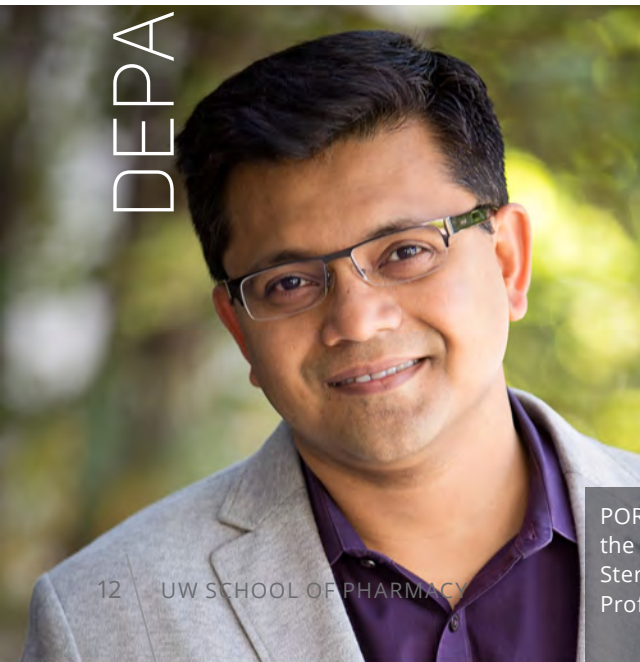
a gene therapy for vision loss associated with biallelic RPE65-mediated retinal disease. Overall they found a number of drugs provided intermediate to high value for money according to ICER's thresholds (dupilimab in atopic dermatitis, drugs used in plaque psoriasis (adalimumab, etanercept, infliximab, ustekinumab, brodalumab, ixekizumab,

secukinumab and apremilast), tyrosin kinase inhibitors (erlotinib, gefitinib, and afatinib) in NSCLC, and alemtuzumab in multiple sclerosis). Other drugs for these con-

**"The UWSOP and ICER partnership has begun to show we can help improve patient care and the U.S. health care system by validating drug prices based on evidence and value."**

**JOSH CARLSON, ASSOCIATE PROFESSOR OF PHARMACY**

ditions were generally considered to provide low value for money. Of note, daratumumab in multiple myeloma was subsequently found to provide good value for money according to ICER's thresholds in a follow-on peer reviewed publication that included data that was not available during the initial review. The partnership has led to concrete results—in at least one case thus far, the team's research was used to inform a manufacturer's pricing considerations. Sanofi/Regeneron worked closely with the ICER team and health insurers to establish a value-based price for their new product, dupilimab, used to treat atopic dermatitis. Experiences like this can improve the health system and solidifies the key role health economists and outcomes researchers can play to bring more value to patients and our health care system. Long term, the use of decision modeling as part the evaluation of new medical products has the potential to inform patient care, improve our health care system and ensure that the cost of medical products is aligned with the value they provide.



PORPP faculty leading breakthrough research into drug pricing in partnership with the Institute for Clinical and Economic Review (ICER) include PORPP Director and Stergachis Family Endowed Chair Anirban Basu, Associate Professor Josh Carlson, and Professor and Associate Director Dave Veenstra.

# STUDENT NEWS



**Lindsay Henderson** chose to pursue a dual PharmD/PhD in Pharmaceutics to combine her interests in patient care and research: "I knew that if I came to UW, I would receive a prestigious education and learn from professors who want to see me succeed." In **Ken Thummel's** lab, she studies variation in warfarin pharmacogenes and its impact on drug disposition in the underrepresented Alaska Native and American Indian populations. She also serves as the Junior Communications Officer for ASPET's Drug Metabolism & Disposition Division where her duties include attending Executive Committee meetings and preparing articles for ASPET's quarterly news magazine, *The Pharmacologist*.



**Theresa Aliwarga**, a Medicinal Chemistry graduate student and researcher in **Rheem Totah's** lab, was invited to do a podium presentation of her research on CYP2J2-mediated epoxyeicosatrienoic acids (EETs) as potential markers for cardiovascular disease at this summer's Gordon Research Conference in Drug Metabolism. "I was able to show that a higher level of EETs is associated with lower risk of sudden cardiac arrest," she said. "Cardiovascular disease remains the leading cause of mortality globally," she stated. "If monitoring EET levels could be used to detect anomalies in the heart, it could prevent a lot of damage associated with cardiovascular disease."



Third year PharmD student **Sean Linn** led the initiative for the 2017 Interprofessional Health Fair in Red Square. "I have a passion to serve and UWSOP gives me the training and confidence needed to do this successfully," Sean shared. The event brought together 31 student and external health organizations and reached over 1,700 attendees. Working with first year PharmD and Outreach Liaison **Hanna Kleiboeker**, the two led the organizing and planning. "It was literally all grass roots, cold calls to the University, professors, organizations, and sponsors. I was proud of the willingness of all organizations and volunteers to serve our community."



UWSOP's student team **Iris To, Nina Kim, Derek Louie, and Andrew Nguyen** (third year PharmD students) came in second at the national Academy of Managed Care Pharmacy (AMCP) Pharmacy & Therapeutics Competition. Competition is keen with 60 teams participating nationwide. Teams must review drugs for their hypothetical patients and create a dossier that looks at clinical trials, safety, and how the drug fits into therapy. Students research safety and perform an economic analysis for the patient's benefit. UWSOP has had a finalist team most years over the past 12 years. Congratulations to Iris, Nina, Derek, and Andrew!



Pictured left: Elizabeth (Bette) (Stadler) Wallace and UWSOP alumnus Bryan Wallace, '39, in their pharmacy, Bryan's Drug. Pictured right: The Wallaces' niece and family (left to right: Kevin Stadler, Maggie Ryan, and Cheri Ryan) with UWSOP Campaign Co-chair Dana Hurley, '97, '00, '04, and Dean Sean D. Sullivan.



## Wallace family presents historic gift to UWSOP

"We always knew our family was going to make a gift to the University of Washington School of Pharmacy," said Cheri Ryan. "My Aunt Bette and Uncle Bryan always talked about this gift. It was so important to both of them to give back to his school." Bryan and Bette Wallace's gift is one of the largest in the history of the UW School of Pharmacy and will bolster the School of Pharmacy and support student pharmacists. "It's hard to overstate the powerful impact the generous gift from the Wallaces will have on our students," said UWOSP Dean Sean D. Sullivan. "One of my top priorities has been to attract and retain students who epitomize the intellect, innovation, and heart for which the UW School of Pharmacy has always been known." Bryan Walker Wallace was born on February 10, 1916, ten miles south of Cornell, Washington. He graduated from Cornell High School in 1934, moving to Seattle to attend the University of Washington. He graduated with a degree in Bachelor of Science in Pharmacy on June 10, 1939, and became board certified by the State of Washington within days.

Bryan's pharmaceutical career began with the Walgreen Drug Company, working his first three years in Everett, Washington, followed by stints in Sacramento and Los Altos, California; Klamath Falls, Oregon; Redwood City, and again Los Altos, California. His wife, Elizabeth (Bette) Ruth (Stadler), was born on April 23, 1924 in Taylor Creek, Montana. Her fam-

**"I speak for everyone when I say how touched we are at this extremely generous \$2 million gift from Bryan and Bette Wallace. Their transformational gift will have a profound effect on the School of Pharmacy for generations to come."**

**SEAN D. SULLIVAN, DEAN OF UW SCHOOL OF PHARMACY**

ily moved to Alderwood Manor, Washington in 1928. She graduated from Edmonds High School in 1942. Between 1942 and 1949 she worked as a civilian for the United States Army in Seattle, Alaska, and Tokyo, Japan. Shortly after her return to the States she met Bryan and they were married on June 24, 1950, in San Francisco, California. In 1953, he worked for Bartell Drug in Seattle before moving to Mountain View, California in 1954 where he

and Bette opened their own drug store, Bryan's Drug. Bette worked in the drug store with Bryan. In 1956, they purchased an additional store in Morgan Hill, California. They lived most their married life in Mountain View, California. The Morgan Hill store was sold after a couple of years but the Mountain View store was open until 1974. Their patients were transferred to

Los Altos Pharmacy where Bryan continued to work part-time for several years until his retirement. After almost a fifty-year career as a pharmacist, Bryan passed away on December 28, 1989, in Mountain View, California. Just prior to Bryan's passing Bette began working as a travel agent. She owned

and managed several travel agencies that allowed her to travel the world until her retirement in the late 1990s. Bette passed away on December 4, 2016, at her home in Mountain View, California. Cheri said, "My Aunt never forgot the impact the School had on my uncle and she wanted to honor his wishes to support the School." We are very grateful to Bryan, Bette, and their family for their generosity and deep commitment to the UWSOP.

# UWSOP Dean's Club leads the way for UWSOP

At this summer's Dean's Club event, Ron Klein, '76, founding Dean's Club member and Campaign Co-chair, shared the impact members have on UWSOP.

"I am honored to have been selected by Dean Sullivan to serve as one of the Campaign Co-chairs for the UWSOP. I wanted to say a few words to thank all of you for your membership in the Dean's Club and to underscore the important work that we do. Twenty-six years ago, I joined a small but dedicated circle of fellow Pharmacy alumni to create the Dean's Club. We wanted to preserve and further that excellence! Since then, our circle of supporters has grown, and together we have accomplished a great deal by offering a high level of support to the School. We have increased scholarship and fellowship funding, supported innovative faculty efforts and much more. These achievements are truly a collective effort, and I am proud and grateful to celebrate them. As you may know, the UWSOP is currently engaged in an ambitious fund raising campaign. I feel that Dean's Club



Founding Dean's Club member and Campaign for UWSOP Co-Chair, Ron Klein '76, tells members and guests about the positive changes that have benefited the school as a result of Club members.

members are an important part of this campaign. Your thoughtful gifts will make a difference in moving the School forward. We have the opportunity through this campaign to grow our numbers and our impact for students and the profession of Pharmacy. Speaking of gifts, did you know that you can double your contribution to the SOP, if your employer has a Matching Gift program? My former employer has generously matched all of my gifts to

UW and to the UWSOP for 35 years. You may have the same opportunity! Please check with your employer about Matching Gifts and if you have a significant other, please check with their employer as well. I would like to thank all of you for your tremendous support of the SOP. Moving forward, I hope you will continue to join and encourage others to join this very special group of peers in support of the school of which we can all be proud. With boundless gratitude, thank you and I hope to see you again soon at future Dean's Club or School events." *Dean's Club members mark your calendars for the **Dean's Club Fall Harvest Wine Tasting** on Nov. 30! Becoming part of the Dean's Club is simple—contact Nicole Angus at (206) 616-5371 or [angusnm@uw.edu](mailto:angusnm@uw.edu) to join!*

**"The UWSOP was one of the first schools on campus to start a Dean's Club. We recognized that the School had a significant role in shaping our lives and our community."**

**RON KLEIN, '76, CAMPAIGN CO-CHAIR, FOUNDING DEAN'S CLUB MEMBER**



## PORPP Student fund named after Penny Evans

Pharmaceutical Outcomes Research and Policy Program Director **Anirban Basu** announced the establishment of The Penny Evans UW International Society for Pharmacoeconomics and Outcomes Research (ISPOR) Student Chapter Support Fund. This fund, named in honor of our highly-esteemed, award-winning program administrator, Penny Evans, will support student activities for our ISPOR chapter. Penny retired in June 2017, but her influence and excellence remain forever imprinted on our program—and are now encapsulated in this fund. The students and alumni of the PORPP program know first hand how important Penny has been to the growth and excellence of this globally-renowned program. "As we enter a new chapter in our evolution as a program," says Anirban, "the Penny Evans ISPOR Student Chapter Support Fund will allow us to lead the way in fostering the exceptional talent and innovation of our students by supporting their professional development." Incoming chapter president Nathaniel Hendrix shared, "Thanks to this fund, our chapter is able to become engaged with the wider health economics outcomes research community."

## 7 THINGS YOU DIDN'T KNOW ABOUT CYRUS KHOJASTEH

1. My pharmaceutical sciences idol in the academy is UWSOP Sid Nelson Endowed Professor **Bill Atkins**, and Associate Professor **Nina Isoherranen** for their creativity. In the industry, I admire Marcel Hop, a deep thinker and an inspiring leader.
2. If I had unlimited funding, I would work to discover detection methods for catching cancer in earlier stages.
3. During my first year rotation, **Wendel Nelson** showed me how to perform hydrogenation reactions in Bagley Hall. His first words to me were: "When you are in the lab, assume something is going to go wrong, so make sure you tell others what you are going to do." I thought this is a very wise idea.
4. I have several family members working in health care: my wife, Zarrin Ferdowsi, is an alumna of UW School of Dentistry and my sister is in health sciences at Johns Hopkins. My son Sohrob will start UW this Fall. My nephew, Bobak Ferdowsi, is also a UW alumnus. In 2012, he was the flight director at the Jet Propulsion Lab (JPL) involved in NASA's Mars rover Curiosity. He became known as the "Mohawk Guy" and went viral on the internet.
5. I love watching football...both kinds. In fact, my most memorable trip was to Brazil for the World Cup.
6. I like my coffee with cream.
7. I have two favorite movies: *A Town Like Alice* and *Cinema Paradiso*. For fun, I love to read. My favorite book is *One Hundred Years of Solitude* by Gabriel Garcia Marquez.



Scott Herzog and Gary Harris of PAA present the Distinguished Alumni Award to Cyrus Khojasteh

## Cyrus Khojasteh and Roger Woolf receive Distinguished Alumni Awards

**CYRUS KHOJASTEH, '98**, chose to study Medicinal Chemistry at UWSOP after serendipitously attending a lecture by then Professor, now Dean Emeritus, **Tom Baillie** on acetaminophen mechanism of hepatotoxicity, drug induced liver injury, in the early 1990s. That lecture began a career in pharmaceutical science inspired by an interest in discovering innovative

and safe medicine, a marriage of pharmacology and chemistry. Cyrus is an internationally recognized expert in drug metabolism and pharmacokinetics. His work in drug metabolism allows him to think about the chemistry of life and how a positive intervention is needed against a disease state. "Our bodies are designed to recognize and metabolize newly made chemicals not seen before," he said. "By knowing one of the barriers (the drug metabolizing enzymes), how do we design and optimize molecules that are metabolically stable and minimize formation of reactive metabolites, which potentially can lead to toxicity." Cyrus

fondly remembers his PhD advisor and mentor former Dean **Sid Nelson**: "He taught me how to be a thoughtful researcher and nurture talents." Sid used to hold group meetings for students on Friday afternoons. "It was at those meetings that I learned how to get to the point and be focused on key questions," recalls Cyrus. And of course, after those group meet-

ings, Sid would invite everyone to the College Inn. Cyrus remembers, "Some of the most complicated

chemical reactions would be solved at the Pub but some reactions still remained a mystery the next day!" After graduating with his doctoral degree, Cyrus joined Pfizer and a couple of years later joined Genentech as the first drug metabolism expert. There, he is on both the scientific track (Principal Scientist) and the managerial track (Associate Director). He said when he learned of the Distinguished Alumni Award, he was "humbled by the recognition and thought of all those who contributed."

**"My advice to students is to explore and learn from the exceptional professors. When you graduate, stay connected to our school."**

**CYRUS KHOJASTEH, UW SCHOOL OF PHARMACY ALUMNUS**

## LEADERS IN HEALTH CARE



**ROGER WOOLF, '85**, is passionate about the leadership role pharmacists can have in the U.S. health care system. Growing up, many of his family members were in healthcare professions, including pharmacy. "My uncle was a pharmacist in Yakima," he reflected. "Talking with him about his work helped me to see the potential impact pharmacists could have when they can be patient-focused." In his position at Virginia Mason Medical Center, Roger provides leadership for a broad

scope of pharmaceutical services within the Center's integrated health care system. But he doesn't stop there. He works diligently to teach

and mentor student pharmacists to become leaders in health care and has been very committed to training UWSOP APPE/IPPE students and interns. "I always encourage students to get involved in leadership opportunities while in school. If we are to continue to advance the practice, we need people who can lead with passion, and not be afraid to try new

and innovative ways for pharmacists to impact patient care." He has maintained his connection with the UWSOP since completing his PharmD degree in 1985. "From the moment I was accepted to the UWSOP, I knew I was part of something special," he said. "The faculty challenged us to be innovative and push a progressive practice. It was at UW that I really started my passion for advancing the practice." He has collaborated with UW faculty and WSPA leadership for years to educate Washington state legislators on the benefits of having pharmacists as paid providers. "There were so many barriers to getting pharmacists credentialed. Working with

**"I am very appreciative of the training I received at the UW and am a strong advocate for the quality of education for which the School of Pharmacy is well known. To be personally recognized in this way is a real honor."**

**ROGER WOOLF, UW SCHOOL OF PHARMACY ALUMNUS**

**Don Downing**, Jeff Rochon, and many others, we were able to show the benefits to patients that come from having pharmacists as providers." Now the team travels the U.S. sharing with providers and legislators how Washington led the way in advancing patient care by establishing pharmacists as full members of the health care team.

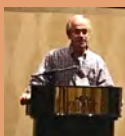
Scott Herzog and Gary Harris of PAA present the Distinguished Alumni Award to Roger Woolf



## 7 THINGS YOU DIDN'T KNOW ABOUT ROGER WOOLF

1. I have many pharmacy idols whom I strive to emulate. My strategy has always been to pull the best traits and take every advantage I can to be coached and mentored. There is always something new to learn and share with others.
2. People who show their commitment to the patient—especially when they can balance everything else and still make the best decision for the patient—are those I admire most.
3. I encourage students who intern with me to take advantage of any leadership opportunities that come their way, reminding them it will pay great dividends when they graduate.
4. I really like to travel and have been fortunate to spend time in both Europe and Japan. Each trip provides a new cultural experience and a different perspective on how we live our lives.
5. I make a point to visit pharmacies when I travel abroad. It gives me considerable insight into our own practice model and how fortunate we are. In one country, I needed a topical antibiotic, but the pharmacist could not help me without a script from a physician. In another country, the pharmacist could not dispense a cough suppressant without a script. It was surprising.
6. My favorite coffee is a custom drink called the Jolly Roger—a tall latte with Madagascar vanilla.
7. Being part of the UW School of Pharmacy and our highly-respected quality educational program is a big deal!

Congratulations to alumnus **Randy Elde**, '72, '11, who won the Washington State Diabetes Educator of the Year Award!



**Kai Yeung**, '11, took top prize in 2016 Pan Foundation Challenge, "Beyond Charitable Assistance: Sustainable Strategies for Providing Access to Critical Medications," a collaboration between the PAN Foundation and *The American Journal of Managed Care*. You can read Kai's full paper, "Impact of a Value-Based Formulary in Three Chronic Disease Cohorts," published by *The American Journal of Managed Care*.

Congratulations to our first ever UWSOP Graduate Award recipients! **Jenny Sager**, PhD, '16, won the award for Outstanding Dissertation for her dissertation, "Characterizing bupropion metabolism, pharmacokinetics and drug-drug interaction liability." The UWSOP Outstanding Dissertation Award celebrates a graduate student who has



conducted outstanding research at the doctoral (PhD) level. Her PhD advisor, Associate Professor of Pharmaceutics **Nina Isoherranen**, said "having mentored many outstanding graduate students, Jenny is one of the very best in her dedication, creativity, commitment to science and analytical ability." Jenny is now a scientist with Vertex Pharmaceuticals, Boston, MA. Current students **Elijah Weber**, Pharmaceutics, **Mark Bounthavong**, PORPP, and **Ryan Seguin**, Medicinal Chemistry, won awards for Graduate Student Leadership.

**Faye (Zufei) Zhang**, '17, now at Merck, has published "Development of a Novel Maternal-Fetal Physiologically Based Pharmacokinetic Model I: Insights into Factors that Determine Fetal Drug Exposure through Simulations and Sensitivity Analyses" in *Drug Metabolism and Disposition*.

*Journal of the American Pharmacists Association (JAPhA)* published a special issue entitled "Opioids, Naloxone, and Beyond: The Intersection of Medication Safety, Public Health, and Pharmacy," which included work by several UWSOP faculty, students, and alumni. Faculty members **Josh Akers** and **Ryan Hansen**, '03, with alumnus **Ryan Oftebro**, '03, published, "Implementing take-home naloxone in an urban community pharmacy."

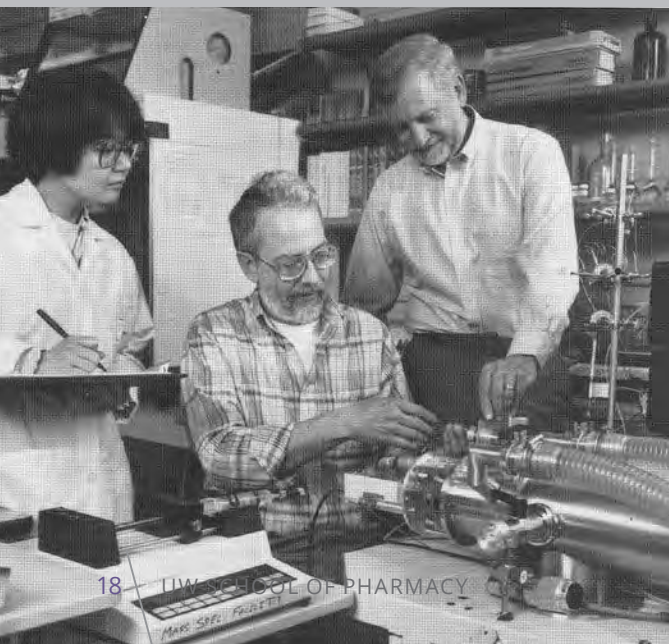
## Remembering Bill Howald, former director of UWSOP Mass Spec

**William "Bill" Howald** passed away August 14, 2017 in Salem, Oregon at the age of 76 after a brief illness. After retirement, Bill and his wife Carole moved to Oregon to be closer to family. Bill joined the School of Pharmacy, Department of Medicinal Chemistry as a Research

Technologist working in the Mass Spectrometry Facility. He became the Manager of the Facility and Lecturer in Medicinal Chemistry in 1983 and retired in 2008 after building a world class center. During his tenure the Mass Spectrometry Center provided cutting edge mass spectrometers

and other tools to support the diverse and evolving research programs in proteomics, drug metabolism and biochemical toxicology in the School of Pharmacy as well as the in the larger UW research community. He played an essential role in the research productivity of the school working closely with **Bill Trager**, **Tom Baillie**, **Sid Nelson**, **Allan Rettie**, **Rene Levy**, **Ken Thummel** and countless others. Perhaps equally significant to the mountains of his

research accomplishments was the extensive hands-on training that Bill provided to the many generations of graduate students and post-doctoral fellows that have moved through our training programs. These scientists, now spread through the world, provide a long and lasting testimony to Bill's legacy. Mass spectrometers are expensive, powerful, and unfortunately highly temperamental instruments. Medicinal Chemistry department chair **Kent Kunze** said, "Training new students required the endless patience and a good sense of humor for which Bill was famous. Bill was a consummate scientist and wonderful colleague and friend to all." *The family has asked that gifts in remembrance of Bill's life and work be made to the William Howald Mass Spectrometry Support Fund at the UW School of Pharmacy at <http://bit.ly/BHowald>.*



Bill Howald (pictured center) in the Mass Spec lab with then graduate student Shimako Oishi and former Dean Sid Nelson.



**Katterman Memorial Lecture and Dean's Recognition Reception, May 10, 2017**

It was standing room only at the most popular Dean's Recognition Reception in UWSOP history! (Facing L to R: Bev Schaefer, '70, and Gary Harris, '72)



**Dean's Club Night at the Seattle Mariners Baseball Game, June 22, 2017**

Dean's Club members enjoyed a special night at the Mariners Baseball game. (L to R: Dick Ramsey, '55, Gary Harris, Lori Legg, and Randy Legg, '02)



**Portland Alumni and Friends Reception at Noble Rot, Portland, Oregon, June 23, 2017**

A wonderful evening brought together alumni and friends in Portland, Oregon, to share in great wines and even better conversation (L to R: Alisha Finke, '11, Nick Finke, Danielle Massie, '09, [front]and Carly Rodriguez, '11).



**Washington State Pharmacy Foundation Scholarship Golf Scramble, August 27, 2017**

UW School of Pharmacy showed their Purple Pride at the scholarship fund raising event (L to R: Jennifer Danielson, Armen Khachatourian, '11, Sean D. Sullivan, Jacques Bouchy)



## 2017 NUDELMAN ENDOWED LECTURE

The Phil and Sandra Nudelman Endowed Lecture series showcases the leadership, management, communication, and entrepreneurship that have been characteristic of Phil's career as a leader in pharmacy and management.

### **STEVE DAVIS, CEO AND PRESIDENT OF PATH**

This year's Nudelman Endowed Lecture will be given by Steve Davis, CEO and President of PATH. Mr. Davis combines extensive experience as a technology business leader, global health advocate, and social innovator to accelerate great ideas and bring lifesaving solutions to scale. He currently is a member of the Council on Foreign Relations, serves on the board of InterAction, Challenge Seattle and sits on several advisory groups, including as a trustee of the World Economic Forum's Global Health Challenge, on the stakeholder advisory panel for the global insurance and asset management firm AXA, and on the advisory board for Medtronics Labs.

THURSDAY, NOVEMBER 9, 2017, 6 PM

LYCEUM, HUSKY UNION BUILDING (HUB), UW-SEATTLE

FOLLOWED BY RECEPTION WITH APPETIZERS