Dear Friends and Colleagues:

Spring has finally arrived (we hope) in Washington state, and our attention naturally turns to... commencement!

Graduation, together with the various events at the end of the spring semester that allow us to commemorate and celebrate individual and collective success, is considered by many of us to be the very best time of the year. I am certain that my faculty colleagues join me in offering congratulations to each of the professional and graduate students who will be receiving their degrees later this week.

I am especially proud of those students who have met life’s challenges, or overcome obstacles set in their path, and nevertheless have completed a rigorous program of study. It is easy to lose sight of the fact that our students, who generally are mature learners, have lives outside of the classroom, laboratory, or clinic, and must successfully balance their studies with work and family obligations. Navigating those complexities is a significant accomplishment, and one in which our students are rightfully proud.

I also want to take a moment and thank those faculty and staff colleagues who have challenged our students to discover how good they can be while simultaneously providing support and encouragement to them. The WSU College of Pharmacy and Pharmaceutical Sciences is fortunate to have talented and committed faculty, and a staff that is second to none. I hope that each member of our academic community has an appropriate sense of satisfaction in the accomplishments of the students entrusted to our care. I know that our students appreciate the guidance and support they have received.

Wishing you all a happy commencement season and the ability to recharge over the summer.

Best wishes,

Gary M. Pollack
Dean, College of Pharmacy
Washington State University
UPCOMING EVENTS

MAY 3
Commencement
The FOX
Spokane, Wash.

MAY 11
Celebrating Generosity
Columbia Tower Club
Seattle, Wash.

JUNE 2
CougaRx & Fred Meyer
Alumni-Student Mentor Program Reception

JUNE 12
TIPed Institute
June 12–14
Spokane, Wash.

COLLEGE NEWS

Access to care key for NACDS Foundation Faculty Scholar Alum
NACDS article by Lisa Boylan
Kimberly McKeirnan remembers that even as a child growing up in a small town in Washington she was frustrated when someone got sick because they would have to drive to the next largest town to be able to access care.

Read more >>

Three student pharmacists accept Presidential Leadership Award
Third year pharmacy students Ashley Ta and Duy Ho along with second year student Stefaniya Tubbs were recognized at the LEAD Presidential Leadership award ceremony on April 17.

The ceremony is held every year and honors student leaders across WSU campuses who demonstrate exceptional leadership and service.

Third year student Ashley Ta spent this last year as president of the American Society of Consultant Pharmacists (ASCP) on the Spokane campus, a group that is primarily focused on geriatric patient care and puts on events throughout the community advocating for better senior care.

“I’m really passionate about geriatric patients and senior care pharmacy in general,” Ta said. “I think that there’s a lot of advocacy that needs to be done there.”

Wanting to help patients with Alzheimer’s, Ta leads research on fidget blankets, multi-textured blankets designed to help those patients who have calm sensory issues. Her team gathered 50 students to make 25 blankets to be distributed for free among multiple memory care centers.

“A lot of these centers try to attain those blankets but they’re really expensive so they actually only have one big sharable blanket,” said Ta. “What I wanted to do was have each patient have their own.”

More college events >>
Next year the ASCP will be led by Amber Duldulao who Ta thanked for her support this past year and is excited to see take on the leadership role.

The second student recognized was third year Spokane student Duy Ho.

Ho served as president of Student National Pharmaceutical Association (SNAPHA) on the Spokane campus. His group was focused on not only promoting Pharmacy as a profession but also serving and giving voice to underserved populations in their community.

“We really try to build this relationship within our organization like a Pharmily, we call it SNAPHAM,” said Ho.

Ho’s group worked with the Second Harvest group in Spokane and their “Mobile Market” program to help promote nutritional lifestyles and provide food and allergy kits to the community.

Ho wanted to thank his family for their support and keeping him going through the years, as well as his team in Spokane.

“A lot of it really comes down to the team members, and it felt really weird that I was up there by myself getting the recognition, I really want the spotlight to be on them too,” said Ho.

Finally, second year Stefaniija Tubbs was recognized for establishing the first RSO on the Yakima campus and the Yakima Student Pharmacist Association (YSPA) of which she was acting president last year.

“Coming from the Pullman campus I missed it, I missed that Coug Pharmily and I missed having that community,” said Tubbs.

The community-focused club quickly encompassed all of the 30-plus students on the campus and recently held its first election for new leadership.

“The club has changed, drastically, it’s nothing like it was before which is exactly what we wanted,” Tubbs said. “It is whatever the kids who are currently running it and currently involved in it want.”

Stefaniija also wanted to thank Dr. Christina Buchman and the new president of the YSPA Zohal Sarwary for their support and encouragement.

All three students will be moving on from their previous positions with Ta and Ho beginning their fourth year rotations and Tubbs beginning an internship at Virginia Mason Memorial.

Part 2: WSU leads in expanding scientific knowledge of natural products

In case you missed Part 1: Mary Paine is a pharmaceutical sciences researcher and associate professor at the Washington State University College of Pharmacy. She leads the Center of Excellence for Natural Product-Drug Interaction Research (NaPDI Center) in Spokane.

“Patients often seek herbal and other natural products as a ‘natural,’ and therefore perceived as ‘safe,’ means to alleviate illnesses or supplement prescribed therapeutic regimens,” Paine said. “Co-consuming natural products with conventional medications—either prescription or over-the-counter—can lead to adverse interactions.”
Funded by the National Institutes of Health National Center for Complimentary and Integrative Health, the mission of the NaPDI Center is to contribute to the scientific knowledge available to researchers, and ultimately to health care providers and patients, about the potential risks of mixing herbs (or other natural products) with drugs.

Read all of Part 1 here: PART 1 – expanding scientific knowledge

The NaPDI Center

Part 2 (of 3)

The challenges of studying natural products are diverse. Inconsistencies within the natural products themselves, including seasonal changes leading to variable ingredient composition, inconsistency in manufacturing, and the complexities of multiple bioactive ingredients in a single natural product, are just the beginning of the potential variables. On the scientific side, there is not a harmonized method on how to properly assess these complex interactions. For those interested in conducting this kind of research, there’s a lack of information on even where to start. That’s why the NaPDI Center started as a think tank.

Once the NaPDI Center was established, the group tackled identifying a list of natural products as potential “precipitants” of clinically significant interactions with commonly used drugs. This list needed to be narrowed and prioritized to identify the first few natural products to study. For each of the candidate natural products, the center identified existing gaps in the scientific literature with respect to interaction targets, which include drug metabolizing enzymes, transporters, and receptors within cells; and human subject studies assessing how natural products alter the absorption, distribution, metabolism and/or excretion of drugs. You can predict these interactions through in vitro studies and mathematical models, or observe them through clinical studies.

The final list of natural products to study includes green tea, goldenseal, cannabis, and licorice.

The center’s researchers want to establish a way to create consistency and reliability in the quality of information that the scientific community will be producing in this area. The end goal is developing a set of recommended approaches to determine whether the interactions between natural products and drugs within the body have real, measurable effects and documenting what they are.

The center is organized into four research cores: administrative, analytical, informatics, and pharmacology. The center also includes internal steering and executive committees, and an external advisory panel.

• The administrative core manages center operations, internal and external communications, regulatory compliance, and finance.

• The pharmacology core conducts research, collecting data through human in vitro studies, mathematical modeling and simulation, and clinical studies.
• The analytical core sources and characterizes each natural product for both in vitro and clinical studies. Activities include profiling the chemistry of various commercial preparations of each natural product and mapping out optimal processes such as how to identify the best commercial products for study.

• The informatics core is developing an online data repository and website where researchers can access scientific data generated by the analytical and pharmacology cores and recommended approaches.

The center is developing a set of recommended approaches for researchers to follow, which is important for the quality and consistency of future studies done in the area of natural products. The NaPDI Center has published results in the *Journal of Pharmaceutical and Biomedical Analysis* and the *Journal of Natural Products*, and now in the journal *Drug Metabolism and Disposition* on work completed so far, with several more articles currently in progress.

Collaborating partners that make up the NaPDI center include:

**Washington State University**

Dr. Mary Paine, College of Pharmacy and Pharmaceutical Sciences

Paine serves as principal investigator and leads the administrative and pharmacology cores. In addition, she serves on the center steering committee, executive committee and analytical core.

Dr. John Clarke, College of Pharmacy and Pharmaceutical Sciences

Clarke serves on the pharmacology core.

Dr. K. Michael Gibson, College of Pharmacy and Pharmaceutical Sciences

Gibson serves on the executive committee and administrative core.

Dr. Bruce Pinkleton, Edward R. Murrow College of Communication

Pinkleton serves on the informatics core.

Rebecca Cooney, Edward R. Murrow College of Communication

Cooney serves on the informatics core.

Deena Hadi, College of Pharmacy and Pharmaceutical Sciences

Hadi serves as the program manager of the center and on the administrative core.

**University of Washington**

Dr. Danny Shen, School of Pharmacy

Shen serves on the administrative core.

Dr. Ken Thummel, School of Pharmacy

Thummel serves on the center steering committee, executive committee and analytical core.

Dr. Allan Rettie, School of Pharmacy

Rettie serves on the pharmacology core.

Dr. Jashvant Unadkat
Dr. Jashvant Unadkat, School of Pharmacy
Unadkat serves on the pharmacology core.

University of North Carolina Greensboro
Dr. Nicholas Oberlies, Department of Chemistry and Biochemistry
Oberlies serves on the center steering committee and leads the analytical core.

Dr. Nadja Cech, Department of Chemistry and Biochemistry
Cech serves on the center steering committee and analytical core.

University of Pittsburgh
Dr. Richard Boyce, School of Medicine, Department of Biomedical Informatics
Boyce serves on the center steering committee and leads the informatics core.

City of Hope
City of Hope is one of 49 comprehensive cancer care centers designated by the National Cancer Institute located in Duarte, California.

Dr. Jeannine McCune, Department of Population Sciences
McCune serves on the center steering committee, executive committee, and administrative core.

National Center for Complementary and Integrative Health
This center is the National Institutes of Health lead center for scientific research on the diverse medical and health care systems, practices, and products that are not generally considered part of conventional medicine.

Dr. D. Craig Hopp, Division of Extramural Research
Hopp serves as the center’s program officer and on the center steering committee.

External advisory panel
Russ Altman, MD, PhD, Stanford University
Shiew-Mei Huang, PhD, U.S. Food & Drug Administration
Ah-Ng Tony Kong, PhD, Rutgers University
Amy Roe, PhD, DABT, Procter & Gamble

By providing resources that will allow scientific work surrounding natural product-drug interactions to be consistent and replicable, the NaPDI Center is starting to expand our knowledge in this area. According to Paine, this could ultimately increase the safety of natural products, which is important for people across the nation who are just trying to do what they can to live their best, healthy life.
Dear Alums, Colleagues and Friends of Pharmacy,

Commencement is right around the corner! As we complete our last preparations to send off our newest graduates to lead the pharmacy profession into the future, I find myself reflecting on all this class has accomplished to complete their studies and prepare for their careers in the world of health care. A lot has gone into developing this group of truly outstanding health care professionals, from both the student and teaching perspectives. Faculty, preceptors, alumni mentors, peer study groups, as well as student drive and determination, have all contributed to the success stories who will cross the stage at commencement in just a few short days.

The Class of 2018 is a reflection of our commitment to recruiting for the best! In fact, classes like this do not just appear out of the air, arriving miraculously in Yakima and Spokane. It takes a team, and each of you is part of that team. Thanks to each of you for:

- Entrusting us to educate your family’s next generation of pharmacists! There are so many of you, but, just in the last week I have interacted with:
  - Megan Sherman, class of 2020, whose mom is Michelle Koch Sherman, class of 1987.
  - Khalil Basmeth, class of 2016; Tarik Basmeth, class of 2022; and their proud dad Nasser Basmeth, class of 1993.
  - If you do not find your family legacy in pharmacy listed here. Please send us a note to gocougs@pharmacy.wsu.edu

- Mentoring young people who have expressed an interest in pharmacy to connect with us so that we can describe what makes our program unique.
  - A Washington example: I stopped by Jeff Harrell’s, class of 2001, Ilwaco Pharmacy several years ago. He wanted me to meet Zach Wilson, one of his brightest young employees. After a great conversation, we were trying to figure out a way for Zach to visit the Spokane campus. Zach will graduate in 2019.
  - A California example: Patrick Tabon, class of 2012; Mary Wen Porter, class of 2008; and Cassie Law Tabon, class of 2012, are masters at recruitment! They work with their southern California WSU pharmacy colleagues and Kelly Sylvester to host social events, create awareness about our program, and actively connect Southern California students to WSU. These four individuals have personally been responsible for many of our excellent So-Cal student pharmacists. Their messaging is, “get out of California for at least awhile, experience the Northwest, and learn to practice in a state where you are able to truly care for patients. You will be well-prepared to come back to California if that is what you choose.” Cecelia alone is responsible for sending two to three students to WSU per year, and some years that number is higher!

- Highlighting the accomplishments of our current students and raising awareness about the quality of our program. How can I put this any other way? Our students are awesome!
A great example of this comes from Monica Graybeal, class of 2008, with Unify Community Health. Monica is co-managing patients with hepatitis C by videoconferencing with a hepatologist as part of a collaboration that also includes mental health, primary care and pharmacy: “I thought you might like to see one of our students, Katie Hancock, class of 2018, CRUSHING IT at ECHO this morning at Unify Community Health. She presented three hepatitis C cases and one hepatitis B case. She is fantastic and we are so proud of her!” View photo »

Other examples of the creativity of our students is in how they communicate to their peers. It is worth clicking on these links to see how Mark Nguyen, class of 2019, and Sean Lattanzi, class of 2020, connect with incoming student pharmacists.

Removing the Stigma Behind Mental Health NCHS IST & WSU APhA-ASP »
Kappa Psi Beta Pi Chapter Report »
Rho Chi informational video »

This is what our mission and vision at the college is all about. The accomplishments of our Cougar pharmacists and doctorates make the WSU College of Pharmacy and Pharmaceutical Sciences a leader in advancing, promoting and protecting human health. I look forward to watching our graduates at commencement this week, and also into the future as they continue to achieve great things.

With Cougar Pride,

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

ALUMNI NEWS

RHO CHI INITIATION
During April students on the Spokane and Yakima campus were initiated into the Professional Pharmacy Fraternity, Rho Chi. View the event photos here:
Spokane  |  Yakima

TRIBUTE TO EXCELLENCE
We hosted Tribute to Excellence events on both campuses to announce and recognize recipients of the college’s student and faculty awards. View the event photos here:
Spokane  |  Yakima

CELEBRATION OF LIFE
The R. Keith Campbell Celebration of Life was held on April 21 in Spokane. Friends, colleagues, mentees, and fellow Cougs all gathered to celebrate the amazing life and legacy of Keith!
View photos »
ALUMNI UPDATES

- **John Oftebro**, class of 1965, and his younger brother Jim, class of 1968 in education, went to the Masters Tournament with the WSU alumni association. [View photos »]

- **Bert Porter**, class of 1950, celebrated his 90th birthday on April 25 with family and friends at a church in Spokane Valley. After blowing out the candles, a friend asked Bert what he wished for. He replied, “10 more years!” We hope so too, Bert! Happy Birthday and thanks for all you do for the WSU College of Pharmacy. [View photo »]

Want to be listed in our alumni updates? Send us your career information or let us know what you’ve been up to! gocougs@pharmacy.wsu.edu

FACULTY SCHOLARSHIP

Publications

- Pharmaceutical Sciences Associate Professor **Mary Paine**, Pharmaceutical Sciences Postdoctoral Research Associate **Dandan Tian** and six co-authors published, “Identification of intestinal UDP-glucuronosyltransferase inhibitors in green tea (Camellia sinensis) using a biochemometric approach: application to raloxifene as a test drug via in vitro to in vivo extrapolation,” in the peer-reviewed scientific journal Drug Metabolism and Disposition. [View abstract »]

- Pharmaceutical Sciences Assistant Professor **Travis T. Denton** and fourteen co-authors published, “Rewiring of glutamine metabolism is a bioenergetic adaptation of human cells with mitochondrial DNA mutations,” in the journal Cell Metabolism. [View abstract »]

- R. Keith Campbell Distinguished Professor in Diabetes Care and Pharmacotherapy Chair **John R. White, Jr.**, published, “Initiating titratable fixed-ratio combinations of basal insulin analogs and glucagon-like peptide-1 receptor agonists: what you need to know,” in the American Diabetes Association journal Clinical Diabetes in February 2018. [View abstract »]

- Pharmacotherapy Clinical Assistant Professor **Cheyenne Newsome** and three co-authors published, “Breadth of statistical training among pharmacy residency programs across the United States,” in the peer-reviewed journal Hospital Pharmacy in April 2018. [View abstract »]

- Pharmacotherapy Clinical Assistant Professor **Anne Kim**, Pharmacotherapy Clinical Professor **Terri Levien** and Pharmacotherapy Professor and Associate Dean for External Professional and Continuing

Presentations

• Pharmacotherapy Research Associate Jennifer Czapinski and Pharmacotherapy Clinical Assistant Professor Julie Akers presented, “Patient access to care through pharmacist-provided services for minor illnesses and conditions,” at the American Pharmacists Association (APhA) Annual Meeting in Nashville, Tenn.

• Julie Akers and three co-authors presented, “Pharmacists’ role in chronic disease management from physicians’ perspective,” at the APhA Annual Meeting in Nashville, Tenn.

• Julie Akers and three co-authors presented, “Assessing readiness of community pharmacists to perform and document medically billed clinical services,” at the APhA Annual Meeting in Nashville, Tenn.


Awards

• Pharmaceutical Sciences Clinical Assistant Professor Jeannie Padowski was voted 2017-18 Teacher of the Year by College of Pharmacy first-year student pharmacists.

• Pharmacotherapy Clinical Assistant Professor (Yakima) Christina Buchman was voted 2017-18 Teacher of the Year by College of Pharmacy second-year student pharmacists.

• Julie Akers and Pharmacotherapy Clinical Assistant Professor (Yakima) Dana Bowers were voted the 2017-18 Teachers of the Year by College of Pharmacy third-year student pharmacists.

• Pharmacotherapy Clinical Associate Professor Megan Willson and Pharmacotherapy Clinical Assistant Professor (Yakima) Megan Giruzzi were voted the 2017-18 Faculty Preceptors of the Year by College of Pharmacy fourth-year student pharmacists.

• Pharmaceutical Sciences Associate Professor Sayed S. Daoud was voted 2017-18 Teacher of the Year for the College of Pharmacy graduate program.

• Pharmacotherapy Academic Fellow Micah Miller was selected as the 2017-18 Trainee of the Year for the College of Pharmacy.

• Pharmacotherapy Academic Fellow Nicole Perea received the MEDEX Winter Quarter 2018 Golden Apple Award and was voted the favorite guest lecturer by 2017-2018 didactic class. She will be presented the award during the 2019 graduation ceremony.
STUDENT ACHIEVEMENT

Doctor of Philosophy (Ph.D) students

- Shannon Kozlovich, pharmaceutical sciences (Lazarus lab) received a Chancellor’s Award for her advancement of leadership and engagement at the WSU Health Sciences campus in Spokane.

- Laken Kruger, pharmaceutical sciences (Denton lab) presented, “Synthesis of biologically relevant a-ketophosphonates and implementation of drosophila melanogaster models for the study of neurodegenerative diseases,” as part of the WSU College of Pharmacy Graduate Research Seminar Series on April 6, 2018, in Spokane, Wash.

- Jinita Modasia, pharmaceutical sciences (Gaddameedhi lab) presented, “Elucidating the role of ER stress in cisplatin toxicity using biochemical and pharmacological approaches,” as part of the WSU College of Pharmacy Graduate Research Seminar Series on April 20, 2018, in Spokane, Wash.

- Pravita Balijepalli, pharmaceutical sciences (Wu lab) presented, “Investigating the roles of ProNGF/NGF and its receptors in neuroendocrine prostate cancer,” as part of the WSU College of Pharmacy Graduate Research Seminar Series on April 27, 2018, in Spokane, Wash.

- Solomon Agere, pharmaceutical sciences (Ahmed lab) was selected to speak at the 2018 Commencement Ceremony on Thursday, May 3.

- Madalyn Brown, pharmaceutical sciences (Gibson lab) was selected as the 2017-18 Teaching Assistant of the Year for the College of Pharmacy.

Doctor of Pharmacy (Pharm.D.) students

- Tory Knebel received a $2500 scholarship from Pharmacist Mutual. This program acknowledges students interested in serving in an independent or small chain, community pharmacy, or in an underserved geographic area.

- Thomas Maslo and Kathryn Rand received Chancellor’s Awards for their advancement of leadership and engagement at the WSU Health Sciences campus in Spokane.

- Kara Partridge was selected as the WSU College of Pharmacy Student of the Year for the class of 2021 in Yakima.

- Chantel Robinson was selected as the WSU College of Pharmacy Student of the Year for the class of 2020 in Yakima.

- Ahmed Bassyouni was selected as the WSU College of Pharmacy Student of the Year for the class of 2019 in Yakima.

- Katie Couch was selected as the WSU College of Pharmacy Student of the Year for the class of 2021 in Spokane.

- Megan Baker was selected as the WSU College of Pharmacy Student of the Year for the class of 2020 in Spokane.
• **Thomas Maslo** was selected as the WSU College of Pharmacy Student of the Year for the class of 2019 in Spokane.

• **Karl Nacalaban** was selected by his peers to speak at the 2018 Commencement Ceremony on Thursday, May 3.

• Our American Pharmacists Association Academy of Student Pharmacists (APhA-ASP) organization and North Central High School Institute of Science and Technology was selected by the American Association of Colleges of Pharmacy (AACP) as the second-place winner of the Pharm4Me Innovation Challenge.

**JOBS**

• Clinical Assistant Professor: Kootenai Health

• Clinical Assistant Professor: Pharmacotherapy, Providence St. Peter Hospital Olympia

• Clinical Assistant Professor: Pharmacotherapy, Virginia Mason Memorial Hospital

• Clinical Assistant Professor: Pharmacotherapy, WSU Spokane

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**College of Pharmacy and Pharmaceutical Sciences**

**Washington State University**

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