



From  
College of Pharmacy Dean  
Gary Pollack, Ph.D.

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Dear Friends and Colleagues:

The most frequently-heard question on and around campuses everywhere these days is “Where did the summer go?” (or something to that effect). Our summer was spent largely finalizing the college’s self-study, which was submitted to ACPE a couple of weeks ago. It’s nice to have the document complete, and we are looking forward to ACPE’s site visit in Spokane and Yakima at the end of September.

We also spent the summer engaging our latest class entering the Washington State University Doctor of Pharmacy degree program, and formally welcomed 132 new students into the community of health professions with our White Coat ceremony on August 22. Our alumnus Leon Alzola, director of pharmacy and merchandise manager of Fred Meyer Pharmacy, provided the keynote speech. Leon’s comments focused on the concepts of leadership and service, two characteristics that we look for, and attempt to reinforce, in our students. He also commented on mentorship as one of the secrets to success saying: “You can’t do it alone, find a mentor. The College of Pharmacy has a mentoring program, so take full advantage of it! Mentors may be a big presence in your life or a small part of your decisions, but they are there to help guide you.”

The ceremony and the reception that followed was a wonderful opportunity for faculty, staff, and student leaders to interact with our new students and many of their families. We are looking forward to working with this fine group of young professionals over the next four years.

We also welcomed seven new students into our Doctor of Philosophy degree program this summer, with graduate student orientation following on the heels of our Summer Research Poster Session. This event was an opportunity for participants in our SURF (Summer Undergraduate Research Forum) program and selected graduate students to present their work and interact with their colleagues and faculty. Growth of our graduate program and faculty-led research continues to be a focal point for our college, and we are fortunate to have

attracted a very strong group of new graduate students.

With best wishes for a successful start to a new academic year,

Best wishes,



Gary M. Pollack

Dean, Washington State University College of Pharmacy

## Dr. Gregory Poon

### *Pharmacy researcher attracted by act of discovery*



Dr. Gregory Poon

It was in pharmacy school in Toronto, Canada, that Gregory Poon realized he had an affinity for laboratory research.

“It was interesting to discover that something was the way it was because I found it to be so, not because someone told me or I read it,” Poon said. He liked that.

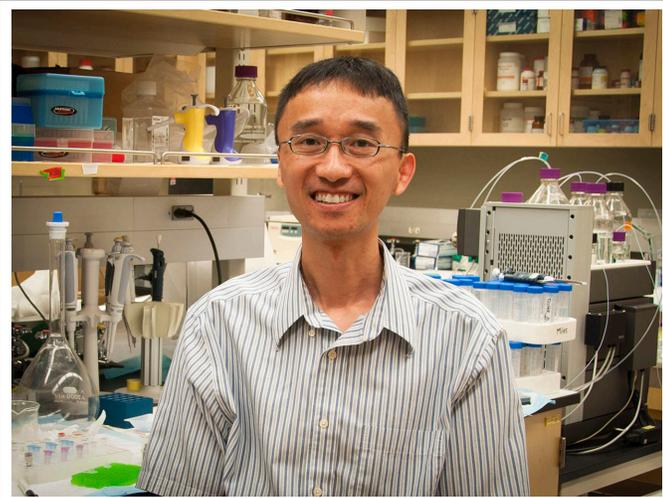
How he ended up in pharmacy school started with an interest in science. Pharmacy was an appealing field of study because of its diverse curriculum. “In pharmacy you take courses in biology, physiology, chemistry, pharmacology, some social sciences, and even business,” Poon said. “So it’s interesting that way, experiencing the ethos of these diverse disciplines but at the same time how they come together for the common purpose of

improving health.”

After completing a bachelor’s degree in pharmacy, Poon supported himself through graduate school by working as a pharmacist in different settings, most of them hospital-related. He graduated with a Ph.D. from the University of Toronto, and then continued working as a pharmacist during a postdoctoral fellowship at the Ontario Cancer Institute, Division of Cancer Genomics and Proteomics.

Poon has been on faculty at the WSU College of Pharmacy since 2008 and has developed a research program around a specific group of proteins – known as transcription factors – that regulate the expression of genes in a highly coordinated and intricate manner, making them attractive but challenging targets for therapeutic drugs.

He also teaches pharmaceuticals and the integrated pharmacology series in the Doctor of Pharmacy program,



Dr. Gregory Poon in his research lab

graduate courses in drug-receptor interactions and biophysical methods, and an undergraduate course in DNA biotechnology at the WSU Honors College.

Poon just received two new federal grants for his research:

- The National Science Foundation has awarded him \$510,364 for the next three years, and because a major focus for the NSF is attracting students into science, technology, engineering and math – or the STEM fields – he will be attempting to do that.

The NSF grant is for basic science research into the behavior of a common family of transcription factors known as ETS proteins. “We know broadly how they work, but many essential aspects have remained obscure and there’s a lot we don’t know,” Poon said. “We need to learn much more about how they behave physically in order to rationally design drugs for them. Otherwise, you are just throwing spaghetti at a wall and hoping something sticks, which is neither very efficient nor intellectually satisfying.”

- The National Institutes of Health has awarded him \$431,958 for the next three years to study a transcription factor known as PU.1 that is involved in several blood cancers. His laboratory has recently discovered novel properties of PU.1, and this grant will support additional research that may allow new drugs to be designed to control it.

While the NSF has a strong interest in promoting basic science and increasing STEM participation, the NIH is primarily about improving human health, Poon said, explaining the difference between the two funding agencies and what his primary focus must be for each grant.

Despite being one of the largest functional family of proteins encoded by the human genome, only five percent of all transcription factors currently have drugs that specifically affect them, Poon said. But these drugs already represent the second largest group of market-approved medicines. “As we learn more about their physical behavior,” he said, “transcription factors are poised to become new avenues for treating swathes of existing diseases as well as stem cell research.”

# Dr. Shobhan Gaddameedhi

## *Pharmacy research fights skin cancer with Zs*



Everyone knows the importance of a good night's sleep, but many don't realize that as many as 10 percent of your genes are regulated by the circadian clock.

Shobhan Gaddameedhi, Ph.D., is a new assistant professor in the experimental and systems pharmacology department at the WSU College of Pharmacy who studies how the sleep cycle plays a role in maintaining genomic stability in skin. He will continue his research at WSU, which seeks to discover if maintaining a healthy sleep schedule will help prevent the development of melanoma, the deadliest form of skin cancer.

The circadian clock is the molecular time-keeping system that maintains daily rhythms in physiological and biochemical processes of an organism.

According to Gaddameedhi, the role of the circadian clock in regulating these daily cycles in organs such as the liver, fat and muscle, is well known. Less is known for skin, which primarily performs protective functions against harmful environmental factors such as ultraviolet radiation (UVR) from sunlight.

Gaddameedhi will begin translational and pre-clinical studies that will look into the role of circadian rhythm in cellular sensitivity to radiation treatment and anti-cancer therapeutics with a focus on melanin pigmentation and skin cancer.

"He is employing cell culture and animal models to examine the possibility that human circadian rhythms influence the efficacy of cancer pharmacotherapeutics (drug regimens engineered to target cancer, like chemotherapy), and he has demonstrated that drug administration during certain cycles of circadian rhythms leads to improved efficacy," said K. Michael Gibson, who is Gaddameedhi's department chair.

"The translational significance of these studies is broad," said Gibson.

"Having outstanding faculty members in the areas of pharmacodynamics and pharmacokinetics at the WSU College of Pharmacy and availability of the Sleep and Performance Research Center in Spokane is a great opportunity to translate basic findings of the circadian clock and chemotherapy into the clinical level," said Gaddameedhi.

Gaddameedhi spent the last six years in the biochemistry and biophysics department at the University of North Carolina School of Medicine at Chapel Hill. He received a Bachelor of Science in biology and chemistry from Osmania University, and a Master of Science in plant sciences from the University of Hyderabad, both in India. He then completed a Ph.D. in pharmaceutical sciences from North Dakota State University.

Gaddameedhi's appointment at WSU began September 1, and he has already hired a postdoctoral fellow to help him get his research lab up and running. He is interested in mentoring young scientists at high school,

undergraduate and graduate levels. More details on his research work can be found on his faculty bio page: <http://www.pharmacy.wsu.edu/facultystaff/bios/gaddameedhi.s.html>

“Dr. Gaddameedhi is a talented new investigator whose research holds promise to revolutionize our approach to cancer therapeutics. The College of Pharmacy is very fortunate to have recruited him to WSU in Spokane,” said Gibson.

## Linda Garrelts MacLean

*WSU associate dean to serve on national pharmacy board*



Linda Garrelts MacLean

The American Pharmacists Association (APhA) recently announced that Linda Garrelts MacLean has been elected to serve a three-year term on their board of trustees. MacLean will begin her term at the 162nd APhA annual meeting in San Diego in March 2015.

MacLean is the associate dean for advancement and a clinical professor at the Washington State University College of Pharmacy where she teaches pharmacy management, entrepreneurial pharmacy, and practical politics and pharmacy. She has particular interest in new and evolving practice models for community pharmacy and community pharmacy residency programs.

The APhA represents more than 62,000 practicing pharmacists, pharmacy technicians and others interested in advancing the profession, according to their website. The APhA Board of Trustees is responsible for broad direction setting of the association. The APhA is headquartered in Washington D.C.

MacLean is a past president of the Washington State Pharmacy Association (WSPA) and current member of the Community Pharmacy Foundation Board of Directors. She has provided numerous continuing education sessions on topics such as immunizations, diabetes and community practice and has been involved as coach and mentor for 12 student pharmacist teams for the National Community Pharmacists Association (NCPA) Pruitt-Schutte Student Business Plan Competition, including two first place teams. She was named as one of the nation’s “Fifty Most Influential Pharmacists” in 1999 and was recognized by NCPA as the National Preceptor of the Year and the Faculty Liaison of the Year. In 2009, she received the Students’ Choice Award for Excellence in Teaching from WSU, and in 2011, she received the WSPA Distinguished Leadership Award.

Read the entire press release from the APhA here:

<https://www.pharmacist.com/apha-announces-results-2014-board-elections>

# Other College News

## FACULTY SCHOLARSHIP

### Publications

- Pharmaceutical Sciences Associate Research Professor **Gang Chen**, Boeing Distinguished Professor and Pharmaceutical Sciences Chair **Philip Lazarus**, Experimental and Systems Pharmacology Associate Professor **Mary Paine**, and three co-authors published, “Identification of diet-derived constituents as potent inhibitors of intestinal glucuronidation,” in the journal Drug Metabolism and Disposition by the American Society for Pharmacology and Experimental Therapeutics. [read more](#)
- Pharmaceutical Sciences Associate Professor **Grant Trobridge** and three co-authors published the article “High-throughput genomic mapping of vector integration sites in gene therapy studies” in the journal Methods in Molecular Biology, (2014; 1185:321-44). [read more](#)
- Pharmaceutical Sciences Dorothy Otto Kennedy Distinguished Professor **Gary Meadows** and other WSU researchers were featured in the Fall 2014 issue of the Washington State Magazine article titled, “Let food be thy medicine,” by Eric Sorensen. [read more](#)
- Pharmacotherapy Adjunct Research Professor **Carol Wysham** and Pharmacotherapy Professor and Chair **John R. White, Jr.** were highlighted authors for August by the American Diabetes Association in their monthly Editor’s Focus: Featured Content for Professional Members.
- Experimental and Systems Pharmacology Research Associate **Garrett Ainslie** published as lead author with co-author **Mary Paine**, “Assessment of a candidate marker constituent predictive of a dietary substance-drug interaction: case study with grapefruit juice and CYP3A4 drug substrates,” in the Journal of Pharmacology and Experimental Therapeutics.

### Presentations

- **John White** presented, “Caffeine pharmacokinetics,” to the Toxicology Forum on July 7, 2014, in Aspen, Colo.
- Pharmacotherapy Associate Professor **Joshua J. Neumiller** and one co-speaker presented, “Medications update – new and emerging therapies,” at the American Association of Diabetes Educators (AADE) 2014 Annual Meeting on August 8, 2014, in Orlando, Fla.
- **Josh Neumiller** presented, “Addressing challenges of weight loss in the obese person,” at the American Association of Diabetes Educators (AADE) 2014 Annual Meeting on August 9, 2014, in Orlando, Fla.
- **Mary Paine** presented, “Quantitative prediction and clinical evaluation of an herb-drug interaction,” at the Rocky Mountain Discussion Group of the American Association of Pharmaceutical Sciences Annual Meeting on August 13, 2014.
- Pharmaceutical Sciences Assistant Professor **Zhenjia Wang** was selected in Late-Breaking Topics/Young Investigators to present, “Drug carriers in medicine and biology,” in the Gordon Research Conference in Waterville Valley, N.H., on August 17-22, 2014.

### Service

- **Josh Neumiller** moderated the session, “Integrated care models that involve pharmacists – lessons from Project IMPACT: Diabetes,” at the American Association of Diabetes Educators (AADE) 2014 Annual

Meeting on August 6, 2014, in Orlando, Fla.

- Pharmacotherapy Professor and Associate Dean for Professional and Continuing Education **Daniel E. Baker** has been appointed to a four-year term as consultant to the U.S. Food and Drug Administration Arthritis Advisory Committee. His appointment will begin on September 21, 2014. Baker will be serving as a consultant/special government employee. The committee's job is to review and evaluate data concerning the safety and effectiveness of marketed and investigational human drug products for use in the treatment of arthritis, rheumatism, and related diseases, and makes appropriate recommendations to the commissioner of food and drugs.
- Pharmacotherapy Clinical Professor and Associate Dean for Advancement **Linda Garrelts MacLean** was elected to the board of trustees of the American Pharmacists Association and will be installed at the 162nd APhA annual meeting in San Diego, Calif.
- **Mary Paine** has been appointed an associate editor for the journal Clinical Pharmacology and Therapeutics.

### **Grants**

- Allen I. White Distinguished Professor and Experimental and Systems Pharmacology Chair **K. Michael Gibson** has been awarded \$100,000 over two years from the NCS for the research project, "Treatment of chronic gamma-hydroxy-butyrate (GHB) intoxication with GHB receptor ligands."
- Pharmaceutical Sciences Assistant Professor **Gregory Poon** has been awarded \$431,958 over three years from the National Institutes of Health for the research project, "Osmotic responsiveness of the master immune regulator PU.1."

### **Awards**

- **John White** and Pharmacotherapy Associate Professor **Mark Garrison** were both inducted into the WSU Quarter Century Club in honor of their 25 years of service to the University.

## STUDENT ACHIEVEMENT

### **Doctor of Philosophy (Ph.D.) students**

- **Brandon Gufford** published as the lead author with faculty co-authors **Gang Chen**, **Philip Lazarus**, **Mary Paine** and two others, "Identification of diet-derived constituents as potent inhibitors of intestinal glucuronidation," in the journal Drug Metabolism and Disposition by the American Society for Pharmacology and Experimental Therapeutics. [read more](#)
- **Brandon Gufford** received an award for top trainee poster presentation at the 2014 AAPS Rocky Mountain Discussion Group Annual Meeting in Missoula, Mont., August 13, 2014.

# Coming Events

- September 21, 2014  
U.S. Transuranium and Uranium Registries Associate Research Professor **Sergei Tolmachev** has been invited to present research findings at the 2014 Radiation Research Society Meeting in Las Vegas, Nev.
- October 17, 2014  
**Vanessa González-Pérez** has been invited to present, “The building blocks to become a successful leader: Identifying motivation and strengths, approaches to time management, increasing productivity, and application of transferable skills,” at the Society for Advancement of Hispanics/Chicanos and Native Americans in Science (SACNAS) National Conference in Los Angeles, Calif.



College of Pharmacy

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