



UNIVERSITY of MARYLAND  
SCHOOL OF PHARMACY

# From the Chair's Desk

News from Paul Shapiro, PhD  
Chair, Department of Pharmaceutical Sciences

## In This Issue

Winter 2018

[A Metabolic Pathway that Feeds Liver Cancer](#)

[Grad Gathering Welcomes PSC and Regulatory Science Alumni Back to School](#)

[AAPS/DDI Meeting Brings Drug Design and Discovery Experts to the School](#)

[Shark Tank Competition Celebrates Pharmapreneurial Innovation](#)

[Pharmaceutical Sciences Takes Center Stage for University's CURE Scholars](#)

[Kudos!](#)

[Grants and Fellowships](#)

Dear alumni and colleagues,

Happy New Year! 2018 promises to be an exciting one for the Department of Pharmaceutical Sciences at the University of Maryland School of Pharmacy. I'm always impressed with the groundbreaking discoveries of our faculty and their contributions to the training and education of young scientists. This issue of our department newsletter highlights several faculty, including Hongbing Wang, PhD, and his recently published discoveries on how energy requirements are met in liver cancer; Lisa Jones, PhD, and her outreach to provide research experiences for middle school students, and Angela Wilks, PhD, and Sarah Michel, PhD, for their initiative to develop a new organized research center focusing on the role of metals in biology and therapeutics.



Congratulations to each of these faculty members!

PSC is in the process of recruiting its next class of graduate students and is also interviewing candidates for several new faculty positions. So 2018 is shaping up to be a year of continued growth and impact.

Sincerely,

[Paul Shapiro, PhD](#)  
Professor and Chair  
Department of Pharmaceutical Sciences

## A Metabolic Pathway that Feeds Liver Cancer

Research published by [Hongbing Wang, PhD](#), professor in PSC, may explain how some liver cancer cells obtain the nutrition they need to proliferate. The results of this research were published as an Editors' Pick in the Aug. 18 issue of the [Journal of Biological Chemistry](#). Because they multiply quickly and spread throughout the body, cancer cells require more energy than normal cells. One approach to treating cancer, therefore, is targeting the pathways that cancer cells have adapted to meet these energy needs, thus "starving" the cancer. Dr. Wang's laboratory was interested in how this principle applied to cancers of the liver. [Read more here...](#)



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## Grad Gathering Welcomes PSC and Regulatory Science Alumni Back to School



More than 100 alumni, graduate students, and faculty came together for a Grad Gathering hosted by the [PhD in Pharmaceutical Sciences \(PSC\)](#) and [MS in Regulatory Science programs](#) at the School of Pharmacy on Sept. 22. The day-long event featured a wide range of activities designed to foster networking and professional development among all attendees, including a keynote address delivered by Vijay V. Upreti, PhD '07, FCP, director of clinical pharmacology, modeling, and simulation in medical sciences at Amgen; career panel discussions; and research poster sessions. Participants were also invited to attend an Alumni and Department Happy Hour, which provided an informal setting for faculty, students, and alumni to reconnect and reminisce about their experiences in the programs. [Read more here...](#)

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## AAPS/DDI Meeting Brings Drug Design and Discovery Experts to the School



The School of Pharmacy hosted the regional meeting of the American Association of Pharmaceutical Scientists Drug Discovery and Development Interface (DDDI) section in August. Designed to provide a forum for drug discovery and preclinical scientists to discuss recent advances in the field of pharmaceutical sciences, the event was attended by more than 50 researchers and featured seven engaging presentations focused on the theme of advancements in drug discovery. The DDDI section brings together researchers from academia, government, and industry whose work focuses on issues at the critical interface between drug discovery and drug development. [Hazem E. Hassan, PhD](#), MS, RPh, RCDS, assistant professor in PSC, and [Steven Fletcher, PhD](#), associate professor in PSC, are actively involved with the section and served as members of the Program Committee tasked with organizing the meeting. [Read more here...](#)

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## Shark Tank Competition Celebrates Pharmapreneurial Innovation



The School of Pharmacy hosted a Shark Tank-style competition in June to showcase the pharmapreneurial talent of faculty across its departments, and I'm happy to report that the PSC team of [Angela Wilks, PhD](#), and [Sarah Michel, PhD](#), professors in PSC, were one of three winning teams with their proposal to establish a new research center at the School of Pharmacy focused on metalloprotein (proteins that require a metal ion) and metallotherapeutics research. Aptly named the Metallotherapeutics Research Center (METRC), the center would aim to improve human health and welfare locally, nationally, and internationally by identifying new metalloprotein drug targets, developing new metal therapeutics, and improving current metal-based medications. The

competition celebrated the School's recently launched [pharmapreneurism](#) initiative, which describes its commitment to supporting and best positioning faculty, staff, and students to achieve their career aspirations and address the nation's health care, research, policy, and societal needs, and awarded \$50,000 to one team from each department to help support their pioneering projects. [Read more here...](#)

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## Pharmaceutical Sciences Takes Center Stage for University's CURE Scholars



Students from the University of Maryland, Baltimore [CURE Scholars Program](#) visited the School of Pharmacy throughout the month of July to gain hands-on experience conducting research in the field of pharmaceutical sciences. The visits were organized by [Lisa Jones, PhD](#), assistant professor in PSC, as part of her \$1.1 million CAREER Award from the National Science Foundation, which supports her ongoing work to develop a new method to study the structure of cell membrane proteins in the cellular environment. [Read more here...](#)

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## Retired Professor's Gift Honors SOP Class of 1999



Gary G. Buterbaugh, PhD, retired professor from PSC, has committed a gift of \$58,000 to the School to establish a new fund in honor of the Class of 1999 for which he served as faculty advisor. The newly created Class

of 1999 Award will assist fourth-year student pharmacists with travel to national or state conferences and students who are facing a hardship situation that could interfere with their ongoing pharmacy education. Dr. Buterbaugh joined the School of Pharmacy as an assistant professor of pharmacology and toxicology in 1969. In the 1990s, he played a crucial role in transforming the School's three-year Bachelor of Science in pharmacy program into the four-year Doctor of Pharmacy (PharmD) program that faculty, staff, and students recognize today. Although Dr. Buterbaugh retired as a professor after more than 40 years of service to the School in 2011, he continues to reflect on his time at the School and his interactions with students. Those interactions motivated him to make a gift to the School. [Read more here...](#)

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## Kudos!

Our department's faculty and students are regularly recognized at the local and national level for their expertise. Here is a short list of recent accomplishments.

- The School's student chapter of the American Association of Pharmaceutical Scientists received an Honorable Mention in the 2017 Student Chapter of the Year competition.
- [Andrew Coop, PhD](#), professor and associate dean for academic affairs, has been named chair of the Awards Committee of the College on Problems of Drug Dependence.
- [Alecia Dent](#), graduate student, was elected chair of the Graduate Research Seminar for the 2019 Gordon Research Conference on the Cell Biology of Metals.

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## Grants and Fellowships

- [Joel Brandis](#), graduate student, received a one-year \$10,000 grant from the American Foundation for Pharmaceutical Education for "Development of Bioanalytical Mass Spectrometric Approaches to Measure Iron Release in Plasma of Patients Treated with IV Iron Preparations."
- [Alecia Dent](#), graduate student, received a two-year \$58,346 grant from the National Institute of General Medical Sciences for "The Non-redundant Role of the Has and Phu heme Acquisition Systems of *Pseudomonas aeruginosa* in Iron Homeostasis."
- [Brandon Drennen](#), graduate student, received a one-year \$10,000 grant from the American Foundation for Pharmaceutical Education for "Towards a New Therapeutic Modality for the Treatment of Alzheimers: Interception of Transient Helical States of beta-Amyloid with Small-Molecule Proteomimetics."
- [Lisa Jones, PhD](#), assistant professor, received a two-year \$108,000 grant from the Cystic Fibrosis Foundation for "A Novel Protein Footprinting Method Coupled with Mass Spectrometry for the Structural Analysis of Class II CFTR Mutants."
- [Alex MacKerell, PhD](#), Grollman-Glick Professor of Pharmaceutical Sciences and director of the Computer-Aided Drug Design Center, received a four-year \$1,120,464 grant from the National Institute of General Medical Sciences for "Oligonucleotide Conformational Heterogeneity."
- [Sarah Michel, PhD](#), professor, received a one-year \$80,000 contract from the U.S. Army Research Office for "Bioanalytical Mass Spectroscopic Approaches to Characterize Protein-Stabilized Gold Nanoclusters."
- [Mandy Oglesby-Sherrouse, PhD](#), assistant professor, received a one-year \$114,532 grant from the Massachusetts Institute of Technology for "Metallobiochemistry of Innate Immunity and Bacterial Physiology."
- [C.S. Raman, PhD](#), associate professor, received a two-year \$402,012 grant from the U.S. Department of Energy for "Redox Biochemistry of Energy Conservation in Methanogens and Their

Syntrophic Partners."

- [Hongbing Wang, PhD](#), professor, received a three-year \$1,189,652 grant from the National Institute of General Medical Sciences for "Function and Regulation of SLC13A5 in the Liver."
- [Patrick Wintrobe, PhD](#), associate professor, received a one-year \$55,085 contract from Vanderbilt Medical Center for "Mechanisms of Glycosaminoglycan-Catalyzed Protease Inactivation by Serpins."