



UNIVERSITY of MARYLAND
SCHOOL OF PHARMACY



From the Chair's Desk

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

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Dear alumni and colleagues,

Happy New Year! If 2018 is any indication, 2019 promises to be a year of tremendous growth and development for the Department of Pharmaceutical Sciences at the University of Maryland School of Pharmacy. Of particular interest is the launch of the [Master of Science \(MS\) in Pharmaceutical Sciences \(PSC\)](#) at the [Universities at Shady Grove in Rockville, Md.](#) This new 16-month, full-time program integrates basic and applied pharmaceutical sciences with hands-on laboratory research experience. It will provide students with the advanced education and cutting-edge training needed to obtain high-level research and leadership positions in pharmaceutical and biotechnology companies, as well as in the federal government.

I encourage you to share information on the MS in PSC with those you know who may be considering pursuit of a graduate degree. Applications for fall 2019 admission are being accepted until May.

Sincerely,

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



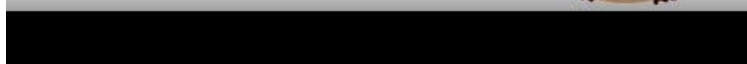
Giving Day 2019 Success



Together, we raised more than
\$70,000 from 532 supporters!



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Feb. 1 and 2 were an exciting time for the School of Pharmacy, with our alumni, faculty, staff, students, and friends coming together again in support of the School during our third online Giving Day! Due to the combined efforts of the School community, we surpassed our goal of 220 donors, raising more than \$70,000 from over 330 donors! PSC received more than \$5,000 in gifts from 34 donors. The department's Graduate Student Scholarship Fund received more than \$2,540 from 14 donors. We have a remarkably strong School of Pharmacy community, one that believes in the quality of our education, practice, research, and community programs. Your collective actions helped make our Giving Day a success, and we are forever grateful for your contributions.

School Launches new Master's in Pharmaceutical Sciences



MS in Pharmaceutical Sciences Program Overview

The School of Pharmacy has launched a new [Master of Science \(MS\) in Pharmaceutical Sciences \(PSC\)](#) to provide students with the advanced education and cutting-edge training needed to obtain high-level research and leadership positions in pharmaceutical and biotechnology companies, as well as in the federal government. The 16-month, full-time program is based at the [Universities at Shady Grove](#) in Rockville, Md., and integrates basic and applied pharmaceutical sciences with hands-on laboratory research experience. The MS in PSC is a full-time academic program designed for students who are interested in pursuing careers in scientific research. A hallmark of the MS in PSC is the completion of a [biopharmaceutical research internship](#) - an experience facilitated by the program's prime location at the Universities at Shady Grove, which is just a short drive from several premier pharmaceutical and biotechnology companies, research laboratories, and federal agencies that offer potential internships for students. Applications are being accepted until May 1. [Click here](#) for details.

M-CERSI Cooperative Agreement Grant Renewed by FDA



CERSI

University of Maryland

The [University of Maryland Center of Excellence in Regulatory Science and Innovation \(M-CERSI\)](#) has been renewed for funding under a cooperative agreement grant from the U.S. Food and Drug Administration (FDA). A collaborative partnership led by [James Polli, PhD](#), the Shangraw/Noxell Endowed Chair in Industrial Pharmacy and Pharmaceutics at the School of Pharmacy, and William E. Bentley, PhD, the Robert E. Fischell Distinguished Chair of Engineering at the University of Maryland, College Park (UMCP), M-CERSI is one of only four FDA-funded CERSIs in the U.S., and the only CERSI to receive continuous funding from the FDA since it first launched in 2011. This latest renewal, which allows for up to \$5 million per year over five years, will allow M-CERSI to continue its mission to contribute to modernizing and improving the ways in which drugs and medical devices are reviewed and evaluated. M-CERSI brings together researchers from across the University of Maryland, Baltimore (UMB) and UMCP to focus on priorities outlined by the FDA, including improving preclinical assessments of the safety and efficacy of new drugs and devices; ensuring readiness to evaluate innovative and emerging technologies; harnessing diverse data through information sciences to improve health outcomes; and addressing minority health and health disparities. It also serves as an open forum to promote regulatory science exchange. [Read more here...](#)

Researchers Show Clinical and Environmental Factors Impact Absorption of Common Sunscreen Ingredient



With the growing awareness of ultraviolet (UV) exposure resulting in an increased risk of photoaging and skin cancers, consumers are using higher sun protection factor (SPF) sunscreens with frequent reapplication. However, new research conducted by a PSC graduate student Paige Zambrana and [Audra Stinchcomb, PhD](#), professor in PSC, demonstrates that heat and reapplication influences different sunscreen products containing the same amount of a key ingredient, oxybenzone, potentially affecting safety and toxicity of the UV filters included in sunscreens. Titled "Evaluation of Reapplication and Controlled Heat Exposure on Oxybenzone Permeation from Commercial Sunscreen Using Excised Human Abdominal Skin," this research was presented at the 2018 American Association of Pharmaceutical Scientists (AAPS) PharmSci 360 Meeting in November in Washington, DC. [Read more here...](#)

Yu Awarded \$600,000 Grant to Develop New Biomanufacturing Analytical Technologies



[Bruce Yu, PhD](#), professor in PSC, has been awarded a \$600,000 grant from the [National Institute for Innovation in Manufacturing Biopharmaceuticals \(NIIMBL\)](#) to develop new analytical technologies for use in biopharmaceuticals manufacturing. The grant is among the first group of awards to be issued by NIIMBL - a national institute established in 2016 to advance leadership in pharmaceutical manufacturing across the United States. [Read more here...](#)

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.

- [Alex MacKerell, PhD](#), the Grollman-Glick Professor and director of the Computer-Aided Drug Design Center, has been designated a World Class Researcher by Clarivate Analytics for his "exceptional research performance, demonstrated by production of multiple highly cited papers that rank in the top 1% by citations for field and year in Web of Science."
- **Yulemni Morel, Brianna Scotland, and Raquel Shortt**, all graduate students, have been named Meyerhoff Graduate Fellows.
- [Audra Stinchcomb, PhD](#), professor, received a United States patent for "Extending and Maintaining Micropore Viability of Microneedle Treated Skin with Lipid Biosynthesis Inhibitors for Sustained Drug Delivery."
- [Jia Bei Wang, PhD](#), professor of pharmaceutical sciences, received a United States patent for "Combination Dopamine Antagonist and Opiate Receptor Antagonist Treatment of Addictive Behavior."

Grants and Fellowships

- [Stephen Hoag, PhD](#), professor, has received a \$205,000 contract from the National Institute of Pharmaceutical Technology and Education for "Methods For Evaluation of Abuse Deterrence Via Smoking And Vaping." He also received a \$239,600 contract from Wyle Laboratories for "ExMC Pharmacy Research Project Drug Stability Analyses" and a \$50,000 contract from the U.S. Food and Drug Administration for "Professional Service for Manufacturing and In Vitro Component of an Assessment of a Proposed In Vitro Bioequivalence Approach for Evaluating Generic and New Animal Formulations."
- [Lisa Jones, PhD](#), assistant professor, has received a four-year \$1.2 million R01 grant from the National Institutes of Health for "Development of an In Vivo Footprinting Method Coupled with Mass Spectrometry in *C. elegans*" and a four-year \$1.1 million R01 grant from the National Institute of General Medical Sciences for "Development of a Novel Pulse-chase in-cell Footprinting Method for Protein Folding Analysis."
- [Maureen Kane, PhD](#), associate professor and executive director of the Mass Spectrometry Center, has received a \$514,592 R01 grant from the National Institute of Child Health and Human Development for "Molecular Determinants of Retinoid Metabolism in Embryonic Tissues."
- [James Polli, PhD](#), the Shangraw/Noxell Endowed Chair, has received a five-year, up to \$5 million grant from the U.S. Food and Drug Administration for "University of Maryland Center of Excellence in Regulatory Science and Innovation."
- [Jana Shen, PhD](#), associate professor and co-director of the Computer-Aided Drug Design Center, has received a four-year \$1.3 million R01 grant from the National Institute of General Medical Sciences for "Electrostatic Modulation of Protein Dynamics and Interactions." She also received a \$11,512 NIH-R01 sub-contract from Arizona State University for "Molecular Mechanisms of Secondary Active Transporters" and a \$100,000 grant from the National Science Foundation through a collaboration with the University of Maryland, College Park for "Thin Film Biofabrication for Integrated Bio-electronics."
- [Hongbing Wang, PhD](#), professor, has received a \$29,000 NIH-R01 sub-contract contract from Johns Hopkins University for "Understanding the Pathogenesis of Elevated Androgen Induced Metabolic Dysfunction in Females."

- [Fengtian Xue, PhD](#), associate professor, has received a \$115,000 grant from the Maryland Technology Development Corporation for "Wnt/beta-catenin Pathway Inhibitor and AMPK activator YW2065 for Colorectal Cancer (CRC)."