In This Issue

Summer 2019

Dear alumni and colleagues,

As chair of the Department of Pharmaceutical Sciences (PSC), I was thrilled to see PSC faculty sharing their ideas and projects at the recent annual meeting of the American Association of Colleges of Pharmacy. From posters and presentations to interacting with visitors at the University of Maryland School of Pharmacy's booth in the exhibit hall, our faculty were everywhere. I was also pleased to meet so many of our alumni and colleagues from other schools of pharmacy. It's always exciting to reconnect.

A highlight of the meeting for the department and the School was the session we hosted on Disruptive Innovation in Pharmacy - Pharmapreneurship, at which Dean Eddington, special guests, and a faculty panel discussed the disruptive innovation needed in American pharmacy education related to entrepreneurship, innovation, and groundbreaking research and partnerships. Click here to view a video on our pharmapreneurship initiative.

The department achievements below highlight our faculty's expertise, influence, and impact. But most importantly, they highlight our commitment to advancing pharmacy education, scientific discovery, patient care, and community engagement across the state of Maryland and beyond.

Sincerely,

Paul Shapiro, PhD
Professor and Chair
Department of Pharmaceutical Sciences

SOP Launches Nation's First Master's in Medical Cannabis Science and Therapeutics

The School of Pharmacy has launched a new Master of Science (MS) in Medical Cannabis Science and Therapeutics to provide students with the knowledge and skills needed to support patients and the medical cannabis industry, add to existing research in the field, and develop well-informed medical cannabis policy. Based at the Universities at Shady Grove (USG) in Rockville, Md., the two-year program blends online learning with face-to-face experiences, and is designed for any individual who has completed his or her undergraduate degree and is interested in pursuing a career in the medical cannabis industry. The MS in Medical Cannabis Science and Therapeutics is the first graduate program in the country dedicated to the study of medical cannabis. It aims to meet the needs of all individuals interested in advancing their knowledge about medical cannabis, including health care professionals such as physicians, nurses, and pharmacists; scientists and regulators; growers and dispensary owners; and policy and industry professionals. Read more here...

M-CERSI Conference Spotlights Regulatory Applications for Dissolution Testing

The School of Pharmacy welcomed nearly 170 researchers from across academia, government, and industry to Pharmacy Hall on May 21 and 22, for "In Vitro Dissolution Profiles Similarity Assessment in Support of Drug Product Quality: What, How, and When." The conference sponsored by the University of Maryland Center of Excellence in

Regulatory Science and Innovation (M-CERSI) featured numerous presentations and breakout sessions that aimed to help participants better understand the reliability and predictive ability of the most commonly used mathematical approaches to assess dissolution profiles' similarity, identify best practices for the assessment of similarity in dissolution profiles, and recognize the role of similarity testing considering safe space and clinically relevant dissolution specifications. Read more here...

Faculty Member Testifies Before U.S Senate HELP Committee on Opioid Crisis

On Feb. 12, 2019, Andrew Coop, PhD, professor in PSC and associate dean for academic affairs at the School of Pharmacy, testified before the U.S. Senate Committee on Health, Education, Labor, and Pensions (HELP) as part of a hearing titled "Managing Pain During the Opioid Crisis." Dr. Coop provided written and oral testimony during the hearing, and participated with other panelists in a lengthy question and answer session. Dr. Coop's remarks focused on his research to develop UMB 425 - an opioid painkiller with the potential for no abuse liability - and the role that pharmacists can play in helping to alleviate the opioid crisis. Read more here...

PSC Researcher Receives Biophysical Society's Junior Faculty Award

Lisa Jones, PhD, assistant professor in PSC, received the Biophysical Society's 2019 Junior Faculty Award. Presented by the organization's Biopolymers In Vivo Subgroup, the Junior Faculty Award aims to boost the visibility of a beginning faculty member whose research and recent achievements focus on cutting-edge investigations of biomolecular processes in living organisms. Dr. Jones' research focuses on the use of protein footprinting methods, coupled with mass spectrometry, to study protein interactions in biological processes. One protein footprinting method in which Jones specializes is fast photochemical oxidation of proteins (FPOP). She and her research team use this emerging technique to identify protein interactions and conformational change of various protein systems. Read more here...

Student Competition Spotlights Innovation in Regulatory Science

A team of third-year students in the Doctor of Pharmacy program at the School of Pharmacy set out to develop new guidelines that could be used by the FDA to help draft official guidances and recommendations that establish ownership rights for data collected by wearable and implantable health care devices, as well as give patients broad control over how that data is shared and used by others. Team members Thomas Adriaens, Kira Aldrich, Uyen Nguyen, Khang Nong, and Mary Zhang presented their proposal to a panel of three judges from the School of Pharmacy at this year's "America's Got Regulatory Science Talent" Competition on Feb. 6, who awarded them first place for their innovation and creativity. Four teams competed in this year's talent competition. Second place was awarded to **PhD in PSC** graduate students Ana Coutinho, Angela Lee, Bryan Eng, Dongyue Yue, Sharmila Das, and Yuwei Lu for their proposal to define a standard puff for first generation e-cigarettes, which could better equip the FDA to evaluate the safety of all first generation e-cigarettes against a common standard. 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.

- **Amy Defnet** and **Dante Johnson**, graduate students, received Best Poster Awards at the University of Maryland, Baltimore's 41st Annual Graduate Research Conference.
- **Chad Johnson**, graduate student, received an American Association of Colleges of Pharmacy's Walmart Scholars Award.

- **Fang-Yu Lin**, graduate student, received the American Chemical Society's Chemical Computing Group's Excellence Award for Graduate Students for the project "Optimization of the Drude Polarizable Protein Force Field."
- **Alexander 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."
- **Marc Taraban, PhD**, research assistant professor, received a Best Poster Award at the Practical Applications of NMR in Industry Conference 2019.
- **Fengtian Xue, PhD,** associate professor, received a United States Patent for "Compounds for Treating Parasitic Infections."

Grants and Fellowships

- **Stephen Hoag, PhD**, professor, received a two-year $56,335 contract from Battelle Memorial Institute for "The Effects of E-liquid Nicotine Concentration on the Abuse Liability of ENDS in Current Users."
- **Yuwei Lu**, graduate student, received a two-year $69,500 grant from the United States Pharmacopeial Convention for "Development of In Vitro Gut Fermentation Model to Investigate the In Vivo Performance of Enteric-coated ABAB Antibody Producing Saccharomyces Boulardi Oral Dosage Form for the Treatment of Clostridiu."
- **Alexander MacKerell, PhD**, the Grollman-Glick Professor of Pharmaceutical Sciences and director of the Computer-aided Drug Design Center, received a $3.5 million grant from the National Institute of General Medical Sciences, for "Macromolecular Conformational Heterogeneity" and received a $74,250 contract from SilcsBio, LLC for "Computational Methods for Accelerating Biologics Formulation."
- **Ryan Pearson, PhD**, assistant professor, received a one-year $10,000 New Investigator Award from the American Association of Colleges of Pharmacy for "Programming Immune Cell Sensitivity towards Toll-like Receptor Agonists."
- **Jordan Pritts** and **Stephanie Shiffka**, graduates students, received pre-doctoral fellowships from the American Foundation for Pharmaceutical Education.
- **Bruce Yu, PhD**, professor and director of the Bio- and Nano-technology Center, received a one-year $123,196 contract from Pfizer for "Water NMR to Determine Aggregation."

Publications

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