

PHARMSCI DEPARTMENT NEWSLETTER

December 2018

OUR DEPARTMENT

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MESSAGE FROM THE DEPARTMENT

Our Department newsletter will be distributed to departmental faculty every two months. The purpose of the newsletter is to announce the achievements of faculty and their lab members in research, teaching, and service in a timely and succinct manner. The newsletter is meant to be a simple listing of your achievements and newsworthy events, so detailed elaborations are not necessary.

The Department newsletter is designed to be complementary to the School of Pharmacy's Event Notification. Please continue submitting your newsworthy events through the School of Pharmacy's Event Notification via the School of Pharmacy Intranet (<https://intranet.pharmacy.pitt.edu>).

Please submit your items to Karen Wagner by email (kbw17@pitt.edu).

PUBLICATIONS

Lu P, Cai X, Guo Y, Xu M, Tian J, Locker J, **Xie W**. Constitutive activation of the human aryl hydrocarbon receptor in mice promotes hepatocarcinogenesis independent of its coactivator Gadd45b. *Toxicol Sci*. 2018 Oct 22. [Epub ahead of print] PMID: 30346592

Koppolu S, Wang L, Mathur A, Nigam JA, Dezzutti CS, Isaacs C, Meyn L, Bunge KE, Moncla BJ, Hillier SL, **Rohan LC**, Mahal LK. Vaginal Product Formulation Alters the Innate Antiviral Activity and Glycome of Cervicovaginal Fluids with Implications for Viral Susceptibility. *ACS Infect Dis*. 2018 Sep 19. PMID: 30183260

Lizza JR, Bremerich M, McCabe SR, **Wipf P**. "2,2,6,6-Tetramethylpiperidin-1-Yloxycarbonyl: A Protecting Group for Primary, Secondary, and Heterocyclic Amines." *Org. Lett*. 2018, 20(21), 6760-6764. PMID: 30350679

Krainz T, Lamade AM, Du L, Maskrey TS, Calderon M J, Watkins SC, Epperly MW, Greenberger JS, Bayir H, **Wipf P**, Clark RSB. "Synthesis and Evaluation of a Mitochondria-Targeting Poly(ADP-Ribose) Polymerase-1 Inhibitor." *ACS Chem. Biol*. 2018, 13(10), 2868-2879. PMID: 30184433

LaPorte MG, Burnett JC, Colombo R, Bulfer SL, Alvarez C, Chou TF, Neitz RJ, Green N, Moore WJ, Yue Z, Li S, Arkin MR, **Wipf P**, **Huryan DM**. "Optimization of Phenyl Indole Inhibitors of the AAA+ ATPase p97." *ACS Med. Chem. Lett*. 2018, 9(11), 1075-1081. PMID: 30429948

Sannino S, Guerriero CJ, Sabnis A J, Stolz DB, Wallace CT, **Wipf P**, Watkins SC, Bivona TG, Brodsky JL. "Compensatory Increases of Select Proteostasis Networks after Hsp70 Inhibition in Cancer Cells." *J. Cell Sci*. 2018, 131(17). PMID: 30131440

Zabbarova IV, Ikeda Y, Carder EJ, **Wipf P**, Wolf-Johnston AS, Birder LA, Yoshimura N, Getchell SE, Almansoori K, Tyagi P, Fry CH, Drake MJ, Kanai AJ. "Targeting P75 Neurotrophin Receptors Ameliorates Spinal Cord Injury-Induced Detrusor Sphincter Dyssynergia in Mice." *NeuroUrol. Urodyn*. 2018, 37, 2452-2461. PMID: 29806700

Ikeda Y, Zabbarova IV, Birder LA, **Wipf P**, Getchell SE, Tyagi P, Fry CH, Drake MJ, Kanai AJ. "Relaxin-2 Therapy Reverses Radiation-Induced Fibrosis and Restores Bladder Function in Mice." *Neurourol. Urodyn.* 2018, 37, 2441-2451. PMID: 29806709

Lou W, Ting HC, Reynolds CA, Tyurina Y Y, Tyurin VA, Li Y, Ji J, Yu W, Liang Z, Stoyanovsky DA, Anthony Muthu TS, Frasso MA, **Wipf P**, Greenberger JS, Bayir H, Kagan VE, Greenberg ML. "Genetic Re-Engineering of Polyunsaturated Phospholipid Profile of *Saccharomyces Cerevisiae* Identifies a Novel Role for Cld1 in Mitigating the Effects of Cardiolipin Peroxidation." *Biochim. Biophys. Acta, Mol. Cell Biol. L.* 2018, 1863(10), 1354-1368. PMID: 29935382

Wray R, Iscla I, Kovacs Z, **Wang J**, Blount P. Novel compounds that specifically bind and modulate Mscl: insights into channel gating mechanisms. *FASEB J.* 2018 Oct 25. PMID: 30359098

Zhu J, Wang P, Li F, Lu J, Shehu AI, Xie W, McMahon D, **Ma X**. CYP1A1 and 1B1-mediated metabolic pathways of dolutegravir, an HIV integrase inhibitor. *Biochem Pharmacol.* 2018 Dec;158:174-184. PMID: 30342022

Singh R, Mehrotra S, Gopalakrishnan M, Gojo I, Karp JE, Greer JM, Chen A, Piekarz R, Kiesel BF, Gobburu J, Rudek MA, **Beumer JH**, ETCTN-6745 study team. Population pharmacokinetics and exposure-response assessment of veliparib co-administered with temozolomide in patients with myeloid leukemias. *Cancer Chemother Pharmacol.* 2018 Nov 20. [Epub ahead of print] PMID: 30456480

GRANTS

Lirong Wang

Title: Synaptic Resilience to Psychosis in Alzheimer Disease

Funding agency: NATIONAL INSTITUTE OF MENTAL HEALTH, NIH

Grant number: 1R01MH116046-01A1

Funding period: 09/25/2018 - 06/30/2023

Role: Multiple Principal Investigator with Robert Sweet (Contact PI) and Julia Kofler (MPI)

Donna Huryn

Title: p97 Inhibitors

Funding agency: National Cancer Institute, NIH

Grant number: 16X116

Funding period extended: Nov 1, 2018- July 31, 2019

Role: Principal Investigator

Lisa Rohan

Title: Studies to Assess Interactions between Dapivirine and Vaginally Applied Over-the-Counter Products

Funding agency: National Institute of Allergy and Infectious Diseases, NIH

Grant number: Contract No. HHSN272201600008I

Funding period: Sept 2018-Sept 2020

Role: Principal Investigator

Lisa Rohan

Title: Physiologically-based model of the female reproductive tract: vaginal and intrauterine delivery components – Support New Approaches to Improve Product Manufacturing and Quality

Funding agency: FDA

Grant number: Contract No. HHSF223201810188C

Funding period: Sept 2018- Sept 2020

Role: Co-Investigator

Lisa Rohan

Title: Microbicide Trials Network Laboratory Center

Funding agency: National Institute of Allergy and Infectious Diseases with co-funding from the Eunice Kennedy Shriver National Institute of Child Health and Human Development and the National Institute of Mental Health, all of the U.S. National Institutes of Health

Grant number: UM1AI106707

Funding period: established in 2006 (ongoing)

Role: new co-PI

INVITED PODIUM PRESENTATIONS

Raman Venkataramanan was an invited speaker at the Frontiers in Addiction Research and Pregnancy Morehouse School of Medicine, Atlanta, GA, October 12-18, 2018. The title of his presentation was "*Practical considerations in PK and PD of drug abuse in Pregnancy.*"

Raman Venkataramanan was an invited speaker at the OBSTETRIC-FETAL PHARMACOLOGY Practical Prescribing and Research Methods Update in Northwest University Chicago, Nov 1-2, 2018. The title of his presentation was "PK/PD in Pregnancy."

Shilpa Sant was an invited Speaker at the annual meeting of American Institute of Chemical Engineers (AIChE) taking place in Pittsburgh on October 28-November 2, 2018. The title of her presentation was "Engineered microenvironments to study breast cancer progression."

Christian Fernandez was an invited speaker at the University of Iowa College of Pharmacy in Iowa City, IA on October 23, 2018. The title of his presentation was "The Pharmacogenomics of Adverse Drug Reactions to Asparaginase".

Wen Xie was an invited speaker and session chair at 22nd Microsomes and Drug Oxidations (MDO) Meeting Kanazawa, Japan. October 1-5, 2018. The title of his session was "*Nuclear Xenobiotic Receptors: Metabolism and Diseases*". The title of the presentation was "*Xenobiotic Receptors in the Crossroad of Xenobiotic and Endobiotic Metabolism*".

Donna Huryn was an invited speaker at Virginia Tech University. Blacksburg, VA. October 18-19, 2018. She spoke to the Virginia Tech Center for Drug Discovery on "*Adventures in Academic Drug Discovery: From Acid Isosteres to Zebrafish.*" On October 19, she give the VT Life Sciences seminar speaking on "*Novel Inhibitors of the AAA ATPase p97.*"

Wen Xie delivered the Joy Goodwin Lectureship Seminar, Auburn University College of Veterinary Medicine. Auburn, Alabama. October 31, 2018. The title of his lecture was "*Nuclear Receptor-mediated Gene Regulation in Drug Metabolism and Human Diseases.*"

Lisa Rohan was an invited speaker at the 2018 Contraceptive Development Meeting held at the University of Minnesota. Minneapolis, Mn. September 24-25, 2018. The title of her presentation was "Polymeric Films for Drug Delivery."

Shilpa Sant was a Plenary speaker at the Regenerative Engineering Symposium. Pittsburgh, PA. October 27-28, 2018. The title of her talk was "*RegenMatrix, a Bioactive Hydrogel: From Concept to Orthopedic Applications.*"

Shilpa Sant was an invited speaker at the American Institute of Chemical Engineering (AIChE) Annual Meeting, Pittsburgh, PA. October 28-November 2, 2018. The title of her presentation was "*Engineered microenvironments to study breast cancer progression.*"

Jan Beumer was an invited speaker at the American Society of Nephrology's Annual Kidney Week. San Diego, CA. October 23-28, 2018. The title of his presentation was "*Dosing Anticancer Agents in Patients with Underlying CKD: What Formula?*"

PROFESSIONAL SERVICE

Wen Xie was an *ad hoc* Reviewer for Polish National Science Center (October 2018).

Donna Huryn was an ad hoc Reviewer for NIH High Throughput Screening BST-55 study section (October 24-26).

Donna Huryn was a candidate for the Chair-elect position of the Pharmaceutical Sciences Section of the AAAS (election opens Oct 26).

Wen Xie was an ad hoc reviewer for the National Institute of Environmental Health Sciences (NIEHS) Board of Scientific Counselors (BSC) Review held at the Research Triangle Park, North Carolina, October 28-30, 2018.

Lisa Rohan was invited to serve as a standing member on the HIV Molecular Virology, Cell Biology, and Drug Development (HVCD) Study Section under the Division of AIDS, Behavioral and Population Sciences (DABP) at the NIH.

Lisa Rohan was a Panel Member for the discussion entitled “A Call to Action – the Path Forward” at the Magee-Womens Research Summit held at the David L. Lawrence Convention Center in Pittsburgh on October 9-10, 2018.

Jan Beumer was elected co-Chair by and from members to the National Cancer Institute Phase 1 Program Investigational Drug Steering Committee (IDSC). The IDSC aims to increase the predictive value of early phase trials, resulting in the design of more successful phase III trials. His two-year term begins on 1/1/2019, and he will be the first ever pharmaceutical scientist to serve in this role.

Jan Beumer co-chairs the Investigational Drug Steering Committee (IDSC) Pharmacology Task Force and is a member of the IDSC Clinical Trial Design Task Force and the IDSC coordination team.

Donna Huryn was appointed to fill the position of Past-Chair of the American Chemical Society Division of Organic Chemistry, the largest technical division of the ACS.

Xiaochao Ma was elected as a member of the Research Awards Committee, the American Association for the Study of Liver Diseases (AASLD), beginning on January 1, 2019 till December 31, 2021.

Xiaochao Ma's symposium proposal has been approved by the meeting organizers of American Society for Pharmacology and Experimental Therapeutics (ASPET). He will chair the session “Mechanisms of Drug-induced Liver Injury: From Bedside to Bench and Back” in the ASPET Annual Meeting at Experimental Biology (EB) 2019.

GRADUATE DISSERTATION DEFENSE

PhD Candidate: Jing Li

Primary Advisor: Lisa Rohan

Thesis Title: “The design of mucoadhesive extended release vaginal films for HIV prevention: leveraging thiomers and PLA-based polymers ”

Date: October 2, 2018

STUDENT ACHIEVEMENT

Yang Xie from Dr. **Wen Xie's** lab won the 2018 Norman R. and Priscilla A. Farnsworth Award.

Brian Kiesel was awarded the Clinical and Translational Sciences (CTS) pre-doctoral fellowship.