

# PHARMSCI DEPARTMENT NEWSLETTER

April 2019

## 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](mailto:kbw17@pitt.edu)).

## PUBLICATIONS

Kochanek SJ, Close DA, **Johnston PA**. High Content Screening Characterization of Head and Neck Squamous Cell Carcinoma Multicellular Tumor Spheroid Cultures Generated in 384-Well Ultra-Low Attachment Plates to Screen for Better Cancer Drug Leads. *Assay Drug Dev Technol*. 2019 Jan;17(1):17-36. PMID: 30592624.

Close DA, Wang AX, Kochanek SJ, Shun T, Eiseman JL, **Johnston PA**. Implementation of the NCI-60 Human Tumor Cell Line Panel to Screen 2260 Cancer Drug Combinations to Generate >3 Million Data Points Used to Populate a Large Matrix of Anti-Neoplastic Agent Combinations (ALMANAC) Database. *SLAS Discov*. 2018 Nov 30 [Epub ahead of print] PMID: 30500310.

Barbosa AC, Feng Y, Yu C, Huang M, **Xie W**. Estrogen sulfotransferase in the metabolism of estrogenic drugs and in the pathogenesis of diseases. *Expert Opin Drug Metab Toxicol*. 2019 Mar 1 [Epub ahead of print]. PMID: 30822161.

Wu N, **Feng Z**, He X, Kwon W, **Wang J**, **Xie X-Q**. Insight of Captagon Abuse by Chemogenomics Knowledgebase-guided Systems Pharmacology Target Mapping Analyses. *Sci Rep*. 2019 Feb 19; 9 (1):2268. PMID: 30783122.

Su L, Wang Y, **Wang J**, Mifune Y, Morin M, Jones B, Moresco E, Boger D, Beutle B, Zhang H. Structural basis of TLR2/TLR1 activation by the synthetic agonist Diprovocim. *J. Med. Chem*. 2019 Mar 4. DOI: 10.1021/acs.jmedchem.8b01583.

Ge H, Bian Y, He X, **Xie X-Q**, **Wang J**. Significantly different effects of tetrahydroberberrubine enantiomers on dopamine D1/D2 receptors revealed by experimental study and integrated in silico simulation. *J. Comput-Aided Mol Des*. 2019 Mar 6. DOI: <https://doi.org/10.1007/s10822-019-00194-z>.

**Vanyukov M, Tarter R**. Genetics and Epigenetics of Substance Use. Sloboda Z, Petras H, Robertson E, Hingson R (eds). Prevention of Substance Use. Springer International Publishing. 2019; pp. 57-73. DOI: 10.1007/978-3-030-00627-3\_4.

An Y, Wang P, Xu P, Tung H-C, Xie Y, **Kirisci L**, Xu M, Ren S, X Tian, **Ma X, Xie W**. An unexpected role of cholesterol sulfotransferase and its regulation in sensitizing mice to acetaminophen induced liver injury. *Molecular Pharmacology* (Manuscript accepted)

Singh M, Tian X-J, Donnenberg VS, Watson AM, Zhang J, Stabile LP, Watkins SC, Xing J, **Sant S**. Targeting the temporal dynamics of hypoxia-induced tumor-secreted factors halts tumor migration. *Cancer Research*. (Manuscript accepted)

Wan Z, Sun J, Xu J, Moharil P, Chen J, Xu J, Zhu J, Li J, Huang Y, Xu P, **Ma X, Xie W**, Lu B, and **Li, S**. Dual functional immunostimulatory polymeric prodrug carrier with pendent indoximod for enhanced cancer immunochemotherapy. *Acta Biomaterialia*. 22 Jan 2019. SSRN 3320735. (Manuscript accepted)

## GRANTS

### Wen Xie

**Title:** "PXR-Mediated Xenobiotic Response in the Pathogenesis Hemorrhagic Shock"

**Funding agency:** NIH

**Grant number:** R01DK117370

**Funding period:** 01/15/19 – 11/30/22

**Role:** PI

### Wen Xie

**Title:** "Role of the ADAR1-Mediated RNA Editing / RNA Sensing Axis in Sterile Inflammation"

**Funding agency:** NIH

**Grant number:** R01AI139544

**Funding period:** 02/01/19 – 01/31/24

**Role:** Co-Investigator (Qingde Wang, PI)

### Paul A. Johnston

**Title:** "qHTS of Patient Derived HCC Models to Identify Novel Probes/Therapeutic Agents"

**Funding agency:** NCI

**Grant number:** 1R01CA229836

**Funding period:** 03/01/2019 to 02/28/23

**Role:** PI

## INVITED PRESENTATIONS

**Paul A. Johnston** gave a podium presentation at the Society for Laboratory Automation and Screening (SLAS) International Conference and Exhibition. Washington DC. February 4, 2019. The title of his presentation was "Development and Characterization of Patient Derived 3D Hepatocellular Carcinoma Organoid Models using HCS Methods and their Application to Precision Medicine and Drug Discovery."

**Paul A. Johnston** gave a podium presentation at the Society for Laboratory Automation and Screening (SLAS) International Conference and Exhibition. Washington DC. February 6, 2019. The title of his presentation was "High-content imaging data coupled with computational modeling to expand our understanding of multicellular systems."

## PROFESSIONAL SERVICE

**Xiaochao Ma** was a Reviewer for the Foundation of American Association for the Study of Liver Diseases (AASLD) on March 1-2, 2019.

**Wen Xie** has been invited to serve as Guest Editor for Acta Pharmaceutica Sinica B (APSB), to organize a Thematic Issue on Drug Metabolism and Disposition in Diseases. APSB is an official journal of the Chinese Pharmaceutical Association with a 2017 impact factor of 6.014

**Shilpa Sant** was an *ad hoc* Reviewer for an NIH study section, *Cellular and Molecular Technologies (CMT)* (Feb 20-21, 2019)

**Song Li** was an *ad hoc* Reviewer for a Department of Defense's Breast Cancer Research Program (BCRP) study section, *Clinical and Experimental Therapeutics* on January 5, 2019.

## **AWARDS AND HONORS**

**Barry Gold** becomes Professor Emeritus of Pharmaceutical Sciences in the School of Pharmacy effective the end of April 2019.

## **GRADUATE DISSERTATION DEFENSE**

**PhD Candidate:** Jieni Xu

**Primary Advisor:** Song Li

**Thesis Title:** *"Multifunctional Nanocarriers for Combination Cancer Therapy"*

**Date:** February 21, 2019

**PhD Candidate:** Tao Long

**Primary Advisor:** Robert Gibbs

**Thesis Title:** *"Metabolomics Analysis of Brain Monoamines, Metabolites and Amino Acids in Two Models of Menopause with/without Estrogen Receptor Agonists Treatments"*

**Date:** February 28, 2019