

# PHARMSCI DEPARTMENT NEWSLETTER

August 2018

## OUR DEPARTMENT

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## MESSAGE FROM THE DEPARTMENT

Our Department newsletter will be distributed to departmental faculty monthly, or once 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)).

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## PUBLICATIONS

**Beumer JH**, Chu E, Allegra C, Tanigawara Y, Milano G, Diasio R, Won Kim T, Mathijssen RH, Zhang L, Arnold D, Muneoka K, Boku N, Joerger M. Therapeutic Drug Monitoring in Oncology: IATDMCT Recommendations for 5-Fluorouracil Therapy. *Clin Pharmacol Ther.* 2018 Jun 20 [Epub ahead of print] PMID: 29923599

Wang Y, Wang Z, Xu J, Li J, **Li S, Zhang M, Yang D.** Systematic Identification of Non-coding Pharmacogenomic Landscape in Cancer, *Nat Commun*, 2018, Accepted

Wang Z, Yang B, **Zhang M**, Guo W, Wu Z, Jia L, Wang Y, **Li S, Xie W, Yang D.** lncRNA epigenetic landscape analysis identifies EPIC1 as an oncogenic lncRNA that interacts with MYC and promotes cell cycle progression in cancer, *Cancer Cell.* 2018; 33:706-720 PMID: 29622465

Li Z, Sun J, Huang Y, Liu Y, Xu J, Chen Y, Liang L, Li J, Liao Q, **Li S**, Zhou K. A nanomicellar prodrug carrier based on ibuprofen-conjugated polymer for co-delivery of doxorubicin. *Frontiers in Pharmacology* (In press).

Sun J, Sun L, Li J, Xu J, Wan Z, Ouyang Z, Liang L, **Li S**, Zeng D. A multi-functional polymeric carrier for simultaneous positron emission tomography imaging and combination therapy. *Acta Biomaterialia* 2018; 75: 312-322. PMID: 29885530

Patel A, Xue Y, Hartley R, Sant V, Eles J, Cui XT, Stolz DB, **Sant S.** Hierarchically aligned fibrous hydrogel films through microfluidic self-assembly of graphene and polysaccharides. *Biotechnol Bioeng.* 2018 Jul 16 [Epub ahead of print] PMID: 30011077

Singh M, Warita K, Warita T, Faeder JR, Lee REC\*, **Sant S**, Oltvai ZN. Shift from stochastic to spatially-ordered expression of serine-glycine synthesis enzymes in 3D microtumors. *Sci Rep.* 2018; 8: 9388. PMID: 29925909

Wang P, Sachar M, Guo GL, Shehu AI, Zhong XB, **Ma X**. Liver metabolomics in a mouse model of erythropoietic protoporphyria. *Biochem Pharmacol*. 2018; 154: 474-481. PMID: 29906468

Zhu J, Wang P, Shehu AI, Lu J, Bi H, **Ma X**. Identification of novel pathways in idelalisib metabolism and bioactivation. *Chem Res Toxicol*. 2018; 31: 548-555. PMID: 29896955

Bi Y, Shi X, Zhu J, Guan X, Garbacz WG, Huang Y, Gao L, Yan J, Xu M, Ren S, Ren S, Liu Y, **Ma X, Li S, Xie W**. Regulation of cholesterol sulfotransferase SULT2B1b by HNF4a constitutes a negative feedback control of hepatic gluconeogenesis. *Mol Cell Biol* 2018; 38: e00654-17. PMID: 29378829

Kong B, Sun R, Huang M, Chow MD, Zhong XB, **Xie W**, Lee YH, Guo GL. A novel fibroblast growth factor 15 dependent- and bile acid independent-promotion of liver regeneration in mice. *Hepatology*. 2018 Apr 19 [Epub ahead of print] PMID: 29672888

Evers R, Piquette-Miller M, Polli J, Russel F, Sprowl J, Tohyama K, Ware J, de Wildt S, **Xie W**, Brouwer K. Disease-associated changes in drug transporters may impact the PK and/or toxicity of drugs: a white paper from the International Transporter Consortium. *Clin Pharmacol Ther*. 2018 May 14 [Epub ahead of print] PMID: 29756222

Garbacz WG, Uppal H, Yan J, Xu M, Ren S, Stolz DB, Huang M, **Xie W**. Chronic activation of LXR sensitizes mice to high cholesterol diet induced gut toxicity. *Mol Pharmacol*. 2018 Jul 25 [Epub ahead of print] PMID: 30045953

Bi Y, Jiang M, Guo W, Guan X, Xu M, Ren S, **Yang D**, Gaikwad NW, Selcer KW, **Xie W**. Sex-dimorphic and sex hormone-dependent role of steroid sulfatase in adipose inflammation and energy homeostasis. *Endocrinology*. 2018 Jul 27 [Epub ahead of print] PMID: 30060148

Yoo YD, Mun SR, Ji CH, Sung KW, Kang KY, Heo AJ, Lee SH, An JY, Hwang J, **Xie XQ**, Ciechanover A, Kim BY, Kwon YT. N-terminal arginylation generates a bimodal degron that modulates autophagic proteolysis. *Proceedings of the National Academy of Sciences* 2018; 115: E2716-E2724. PMID: 29507222

Xue Y, **Feng ZW**, Li XY, Hu ZH, Xu Q, Wang Z, Cheng JH, Shi HT, Wang QB, Wu HY, **Xie XQ**, Lv QZ. The efficacy and safety of cilostazol as an alternative to aspirin in Chinese patients with aspirin intolerance after coronary stent implantation: a combined clinical study and computational system pharmacology analysis. *Acta Pharmacol Sin*. 2018; 39: 205-212. PMID:28933424

Cha-Molstad H, Lee SH, Kim JG, Sung KW, Hwang J, Shim SM, Ganipiseti S, **McGuire T**, Mook-Jung I, Ciechanover A, **Xie XQ**, Kim BY, Kwon YT. Regulation of autophagic proteolysis by the N-recognin SQSTM1/p62 of the N-end rule pathway. *Autophagy*. 2018; 14: 359-361. PMID:29261001

Jing Y, Bian Y, Hu Z, Wang L, and **Xie X-Q**. Deep Learning for Drug Design: an artificial intelligence paradigm for drug discovery in the Big Data era. *AAPS J*. 2018; 20: 58. PMID:29603063

Bian Y, **Xie XQ**. Computational Fragment-Based Drug Design: Current Trends, Strategies, and Applications. *AAPS J*. 2018; 20: 59. PMID: 29633051.

Adamik J, Silbermann R, Marino S, Sun Q, Anderson JL, Zhou D, **Xie X-Q**, Roodman GD, and Galson DL. XRK3F2 inhibition of p62-ZZ domain signaling rescues myeloma-induced GF11-driven epigenetic repression of the Runx2 gene in pre-osteoblasts to overcome differentiation suppression. *Front. Endocrinol*, 2018; 9: 344. PMID: 30008697.

## GRANTS

### **Sam Poloyac and Lee McDermott**

Title: 20-HETE Formation Inhibitors in Cardiac Arrest

Funding agency: National Institute for Neurological Disorders and Stroke (Innovation Grants to Nurture Initial Translational Efforts (IGNITE) program), NIH

Grant number: R21/R33 R21 NS107785

Funding period: 07/15/2018-06/30/2020 (with the R33 possibility of 3<sup>rd</sup> year funding to 2021)

Role: Co-PIs

### **Shilpa Sant**

Title: Three-dimensional organoid models to study breast cancer progression

Funding Agency: National Cancer Institute (NCI), NIH

Grant number: 1 R37 CA232209

Funding period: 07/01/18-06/30/23

Role: Principle Investigator

## PROFESSIONAL SERVICE

**Da Yang** was an *ad hoc* Reviewer for an NIH study section, CG – Cancer Genetics (June 18-19, 2018)

**Song Li** was an *ad hoc* Reviewer for NIH Gene and Drug Delivery Systems Study Section (June 21-22, 2018)

**Song Li** was an *ad hoc* Reviewer for NIH Small Business: Biomaterials, Delivery, and Nanotechnology Study Section (July 2-3, 2018)

**Wen Xie** was an *ad hoc* Reviewer for an NIH Special Panel, ZRG1 DKUS M50 - Microbiome and Environmental exposure (July 6, 2018)

## GRADUATE DISSERTATION DEFENSE

**PhD Candidate: Yingfei Xue**

**Primary Advisor: Shilpa Sant**

Thesis Title: "Micro-/nanotechnology to Engineer Regenerative Heart Valve Therapy"

Date: July 24, 2018

**PhD Candidate: Junyi Li**

**Primary Advisor: Robert Gibbs**

Thesis Title: "Local Estrogen Production in the Brain and its Regulation under Pathological Conditions"

Date: June 27, 2018

**PhD Candidate: Sung Tae Kim**

**Primary Advisor: Yong Tae Kwon**

Thesis Title: "The Role of the N-end Rule Pathway in Mammalian Development and Innate Immune Response"

Date: July 23, 2018