

# The Journal of PHARMACOLOGY

## And Experimental Therapeutics

A Publication of the American Society for Pharmacology and Experimental Therapeutics

July 2019

Vol. 370, No. 1

### Contents

#### MINIREVIEWS

- Cancer and the Dopamine D<sub>2</sub> Receptor: A Pharmacological Perspective 111  
*Jillian S. Weissenrieder, Jeffrey D. Neighbors, Richard B. Mailman, and Raymond J. Hohl*

#### BEHAVIORAL PHARMACOLOGY

- Impact of Pharmacological Manipulation of the  $\kappa$ -Opioid Receptor System on Self-grooming and Anhedonic-like Behaviors in Male Mice 1  
*Eduardo R. Butelman, Bryan D. McElroy, Thomas E. Prisinzano, and Mary Jeanne Kreek*
- ☐ In Utero Exposure to Norbuprenorphine, a Major Metabolite of Buprenorphine, Induces Fetal Opioid Dependence and Leads to Neonatal Opioid Withdrawal Syndrome 9  
*Bryce A. Griffin, Caitlin O. Caperton, Lauren N. Russell, Christian V. Cabanlong, Catheryn D. Wilson, Kyle R. Urquhart, Bradford S. Martins, Marcelle Dina Zita, Amy L. Patton, Alexander W. Alund, S. Michael Owens, William E. Fantegrossi, Jeffery H. Moran, and Lisa K. Brents*

#### CARDIOVASCULAR

- Myeloid Cell mPges-1 Deletion Attenuates Mortality Without Affecting Remodeling After Acute Myocardial Infarction in Mice 18  
*Lihong Chen, Guangrui Yang, Tingting Jiang, Soon Yew Tang, Tao Wang, Qing Wan, Miao Wang, and Garret A. FitzGerald*

#### CELLULAR AND MOLECULAR

- ☐ Effect of Adenylyl Cyclase Type 6 on Localized Production of cAMP by  $\beta$ -2 Adrenoceptors in Human Airway Smooth-Muscle Cells 104  
*Shailesh R. Agarwal, Chase Fiore, Kathryn Miyashiro, Rennolds S. Ostrom, and Robert D. Harvey*

#### DRUG DISCOVERY AND TRANSLATIONAL MEDICINE

- ☐ The MitoNEET Ligand NL-1 Mediates Antileukemic Activity in Drug-Resistant B-Cell Acute Lymphoblastic Leukemia 25  
*Werner J. Geldenhuys, Rajesh R. Nair, Debbie Piktel, Karen H. Martin, and Laura F. Gibson*
- ☐ The Dual Amylin and Calcitonin Receptor Agonist KBP-088 Induces Weight Loss and Improves Insulin Sensitivity Superior to Chronic Amylin Therapy 35  
*Anna Thorsø Larsen, Nina Sonne, Kim Vietz Andreassen, Kristoffer Gehring, Morten Asser Karsdal, and Kim Henriksen*
- ☐ Therapeutic Monoclonal Antibody Antagonizing Endothelin Receptor A for Pulmonary Arterial Hypertension 54  
*Cheng Zhang, Xiaofeng Wang, Hua Zhang, Chenjiang Yao, Hao Pan, Yong Guo, Kesuo Fan, and Shuqian Jing*
- Pharmacological Profile of AZD8871 (LAS191351), a Novel Inhaled Dual M<sub>3</sub> Receptor Antagonist/ $\beta$ <sub>2</sub>-Adrenoceptor Agonist Molecule with Long-Lasting Effects and Favorable Safety Profile 127  
*Mónica Aparici, Carla Carcasona, Israel Ramos, José Luís Montero, Raquel Ota, José Luís Ortiz, Julio Cortijo, Carlos Puig, Dolors Vilella, Jorge De Alba, Chris Doe, Amadeu Gavalda, and Montserrat Miralpeix*

#### INFLAMMATION, IMMUNOPHARMACOLOGY, AND ASTHMA

- ☐ Pregnane X Receptor Activation Triggers Rapid ATP Release in Primed Macrophages That Mediates NLRP3 Inflammasome Activation 44  
*Grace Hudson, Kyle L. Flannigan, Vivek Krishna Pulakazhi Venu, Laurie Alston, Christina F. Sandall, Justin A. MacDonald, Daniel A. Muruve, Thomas K.H. Chang, Sridhar Mani, and Simon A. Hirota*

Inhibitory Effect of Jing-Fang Powder n-Butanol Extract and Its Isolated Fraction D on Lipopolysaccharide-Induced Inflammation in RAW264.7 Cells	62
<i>Zhili Rao, Haijuan Cao, Boyu Shi, Xiaobo Liu, Jie Luo, and Nan Zeng</i>	

## **METABOLISM, TRANSPORT, AND PHARMACOGENOMICS**

Quantitative Contribution of Six Major Transporters to the Hepatic Uptake of Drugs: “SLC-Phenotyping” Using Primary Human Hepatocytes	72
<i>Yi-an Bi, Chester Costales, Sumathy Mathialagan, Mark West, Soraya Eatemadpour, Sarah Lazzaro, Laurie Tylaska, Renato Scialis, Hui Zhang, John Umland, Emi Kimoto, David A. Tess, Bo Feng, Larry M. Tremaine, Manthena V. S. Varma, and A. David Rodrigues</i>	
Treatment of $\gamma$ -Hydroxybutyric Acid and $\gamma$ -Butyrolactone Overdose with Two Potent Monocarboxylate Transporter 1 Inhibitors, AZD3965 and AR-C155858	84
<i>Kristin E. Follman and Marilyn E. Morris</i>	
Characterization of Vitamin A Metabolome in Human Livers With and Without Nonalcoholic Fatty Liver Disease	92
<i>Guo Zhong, Jay Kirkwood, Kyoung-Jae Won, Natalie Tjota, Hyunyoung Jeong, and Nina Isoherranen</i>	

[S] Supplemental material is available at [jpet.aspetjournals.org](http://jpet.aspetjournals.org).

*About the cover:* Treatment with D2 antagonists affects many vital metabolic processes within cancer cells and tumors. See the article by Weissenrieder et al., ([dx.doi.org/10.1124/jpet.119.256818](https://doi.org/10.1124/jpet.119.256818)).