

The Journal of  
**PHARMACOLOGY**

**And Experimental Therapeutics**

A Publication of the American Society for Pharmacology and Experimental Therapeutics

December 2015

Vol. 355, No. 3

**Contents**

**HIGHLIGHTED PAPERS**

351

**COMMENTARY**

Editor's Note

352

*Michael F. Jarvis*

**MINIREVIEWS**

Cracking the Egg: Potential of the Developing Chicken as a Model System for Nonclinical Safety Studies of Pharmaceuticals  
*Sigrid Bjørnstad, Lars Peter Engeset Austdal, Borghild Roald, Joel Clinton Glover, and Ragnhild Elisabeth Paulsen*

386

Matrix Metalloproteinases as Regulators of Vein Structure and Function: Implications in Chronic Venous Disease  
*Elisabeth MacColl and Raouf A. Khalil*

410

**BEHAVIORAL PHARMACOLOGY**

Directly Observable Behavioral Effects of Lorcaserin in Rats

381

*Katherine M. Serafine, Kenner C. Rice, and Charles P. France*

The M1 Muscarinic Positive Allosteric Modulator PQCA Improves Performance on Translatable Tests of Memory and Attention in Rhesus Monkeys

442

*Henry S. Lange, Christopher E. Cannon, Jason T. Drott, Scott D. Kuduk, and Jason M. Uslander*

**CARDIOVASCULAR**

Magnesium Modifies the Impact of Calcitriol Treatment on Vascular Calcification in Experimental Chronic Kidney Disease

451

*Jason G. E. Zelt, Kristin M. McCabe, Bruno Svajger, Henry Barron, Kim Laverty, Rachel M. Holden, and Michael A. Adams*

□ Early Administration of Carvedilol Protected against Doxorubicin-Induced Cardiomyopathy

516

*Yung-Lung Chen, Sheng-Ying Chung, Han-Tan Chai, Chih-Hung Chen, Chu-Feng Liu, Yi-Ling Chen, Tien-Hung Huang, Yen-Yi Zhen, Pei-Hsun Sung, Cheuk-Kwan Sun, Sarah Chua, Hung-I Lu, Fan-Yen Lee, Jiunn-Jye Sheu, and Hon-Kan Yip*

**DRUG DISCOVERY AND TRANSLATIONAL MEDICINE**

□ LG308, a Novel Synthetic Compound with Antimicrotubule Activity in Prostate Cancer Cells, Exerts Effective Antitumor Activity

473

*Min Qin, Shihong Peng, Ning Liu, Meichun Hu, Yundong He, Guoliang Li, Huang Chen, Yuan He, Ang Chen, Xin Wang, Mingyao Liu, Yihua Chen, and Zhengfang Yi*

Integrated Pharmacokinetic/Pharmacodynamic Analysis for Determining the Minimal Anticipated Biological Effect Level of a Novel Anti-CD28 Receptor Antagonist BMS-931699

506

*Zheng Yang, Haiqing Wang, Theodora W. Salcedo, Suzanne J. Suchard, Jenny H. Xie, Lumelle A. Schneeweis, Catherine A. Fleener, James D. Calore, Rong Shi, Sean X. Y. Zhang, A. David Rodrigues, Bruce D. Car, Punit H. Marathe, and Steven G. Nadler*

**GASTROINTESTINAL, HEPATIC, PULMONARY, AND RENAL**

Autophagy Deficiency Diminishes Indomethacin-Induced Intestinal Epithelial Cell Damage through Activation of the ERK/Nrf2/HO-1 Pathway

353

*Satoshi Harada, Takatoshi Nakagawa, Shunichi Yokoe, Shoko Edogawa, Toshihisa Takeuchi, Takuya Inoue, Kazuhide Higuchi, and Michio Asahi*

- Ⓢ Cinnamamides, Novel Liver X Receptor Antagonists that Inhibit Ligand-Induced Lipogenesis and Fatty Liver 362  
*Woo-Cheol Sim, Dong Gwang Kim, Kyeong Jin Lee, You-Jin Choi, Yeon Jae Choi, Kye Jung Shin, Dae Won Jun, So-Jung Park, Hyun-Ju Park, Jiwon Kim, Won Keun Oh, and Byung-Hoon Lee*

## INFLAMMATION, IMMUNOPHARMACOLOGY, AND ASTHMA

- NLRP3 Inflammasome Involvement in the Organ Damage and Impaired Spermatogenesis Induced by Testicular Ischemia and Reperfusion in Mice 370  
*Letteria Minutoli, Pietro Antonuccio, Natasha Irrera, Mariagrazia Rinaldi, Alessandra Bitto, Herbert Marini, Gabriele Pizzino, Carmelo Romeo, Antonina Pisani, Giuseppe Santoro, Domenico Puzzolo, Carlo Magno, Francesco Squadrito, Antonio Micali, and Domenica Altavilla*

## METABOLISM, TRANSPORT, AND PHARMACOGENOMICS

- Ⓢ Transcriptional Regulation of Cytosolic Sulfotransferase 1C2 by Intermediates of the Cholesterol Biosynthetic Pathway in Primary Cultured Rat Hepatocytes 429  
*Elizabeth A. Rondini, Asmita Pant, and Thomas A. Kocarek*

## NEUROPHARMACOLOGY

- Ⓢ MLi-2, a Potent, Selective, and Centrally Active Compound for Exploring the Therapeutic Potential and Safety of LRRK2 Kinase Inhibition 397  
*Matthew J. Fell, Christian Mirescu, Kallol Basu, Boonlert Cheewatrakoolpong, Duane E. DeMong, J. Michael Ellis, Lynn A. Hyde, Yinghui Lin, Carrie G. Markgraf, Hong Mei, Michael Miller, Frederique M. Poulet, Jack D. Scott, Michelle D. Smith, Zhizhang Yin, Xiaoping Zhou, Eric M. Parker, Matthew E. Kennedy, and John A. Morrow*
- Chronic Nicotine Exposure Attenuates Methamphetamine-Induced Dopaminergic Deficits 463  
*Paula L. Vieira-Brock, Lisa M. McFadden, Shannon M. Nielsen, Jonathan D. Ellis, Elliot T. Walters, Kristen A. Stout, J. Michael McIntosh, Diana G. Wilkins, Glen R. Hanson, and Annette E. Fleckenstein*
- Inhibition of Plasma Membrane Na/Ca-Exchanger by KB-R7943 or Lithium Reveals Its Role in Ca-Dependent N-methyl-D-aspartate Receptor Inactivation 484  
*Dmitry A. Sibarov, Polina A. Abushik, Ekaterina E. Poguzhelskaya, Konstantin V. Bolshakov, and Sergei M. Antonov*
- Phosphorylation of the N-methyl-D-aspartate receptor is increased in the nucleus accumbens during both acute and extended morphine withdrawal 496  
*Ethan M. Anderson, Turi Reeves, Katherine Kapernaros, John K. Neubert, and Robert M. Caudle*

Ⓢ Supplemental material is available at <http://jpet.aspetjournals.org>.

About the cover: LG308 disrupted the microtubule organization in interphase and mitotic phase in PC-3M cells. See the article by Qin et al ([dx.doi.org/10.1124/jpet.115.225912](https://doi.org/10.1124/jpet.115.225912)).