

# The Journal of PHARMACOLOGY

## And Experimental Therapeutics

A Publication of the American Society for Pharmacology and Experimental Therapeutics

December 2017

Vol. 363, No. 3

### Contents

#### MINIREVIEWS

- Mitochondrial-Based Therapeutics for the Treatment of Spinal Cord Injury: Mitochondrial Biogenesis as a Potential Pharmacological Target 303  
*Natalie E. Scholpa and Rick G. Schnellmann*

#### BEHAVIORAL PHARMACOLOGY

- Cannabinoid CB<sub>1</sub> Discrimination: Effects of Endocannabinoids and Catabolic Enzyme Inhibitors 314  
*Michael Z. Leonard, Shakiru O. Alapafuja, Lipin Ji, Vidyanand G. Shukla, Yingpeng Liu, Spyros P. Nikas, Alexandros Makriyannis, Jack Bergman, and Brian D. Kangas*
- Investigation of Diacylglycerol Lipase Alpha Inhibition in the Mouse Lipopolysaccharide Inflammatory Pain Model 394  
*Jenny L. Wilkerson, Giulia Donvito, Travis W. Grim, Rehab A. Abdullah, Daisuke Ogasawara, Benjamin F. Cravatt, and Aron H. Lichtman*

#### CARDIOVASCULAR

- Discovery and Preclinical Characterization of GSK1278863 (Daprodustat), a Small Molecule Hypoxia Inducible Factor–Prolyl Hydroxylase Inhibitor for Anemia 336  
*Jennifer L. Ariazi, Kevin J. Duffy, David F. Adams, Duke M. Fitch, Lusong Luo, Melissa Pappalardi, Mangatt Biju, Erin Hugger DiFilippo, Tony Shaw, Ken Wiggall, and Connie Erickson-Miller*
- Preclinical Pharmacology and Pharmacokinetics of Inhaled Hexadecyl-Treprostnil (C16TR), a Pulmonary Vasodilator Prodrug 348  
*Michel R. Corboz, Zhili Li, Vladimir Malinin, Adam J. Plaunt, Donna M. Konicek, Franziska G. Leifer, Kuan-Ju Chen, Charles E. Laurent, Han Yin, Marzena C. Biernat, Dany Salvail, Jianguo Zhuang, Fadi Xu, Aidan Curran, Walter R. Perkins, and Richard W. Chapman*
- Sustained Activation of Guanylate Cyclase-A with TDT, a Natriuretic Peptide Derivative, Exhibits Cardiorenal Protection in Dahl Salt-Sensitive Hypertensive Rats 402  
*Shohei Oishi, Naoko Suzuki, Yuri Hasui, Tsuyoshi Homma, Masanori Obana, Takahiro Nagayama, and Yasushi Fujio*
- The Blood Pressure–Lowering Effect of 20-HETE Blockade in *Cyp4a14*(–/–) Mice Is Associated with Natriuresis 412  
*Varunkumar Pandey, Victor Garcia, Ankit Gilani, Priyanka Mishra, Frank Fan Zhang, Mahesh P. Paudyal, John R. Falck, Alberto Nasjletti, Wen-Hui Wang, and Michal Laniado Schwartzman*

#### CELLULAR AND MOLECULAR

- Extracellular Signal–Regulated Kinase 1/2 Regulates Mouse Kidney Injury Molecule-1 Expression Physiologically and Following Ischemic and Septic Renal Injury 419  
*Justin B. Collier and Rick G. Schnellmann*

#### CHEMOTHERAPY, ANTIBIOTICS, AND GENE THERAPY

- Activation of Focal Adhesion Kinase and Src Mediates Acquired Sorafenib Resistance in A549 Human Lung Adenocarcinoma Xenografts 428  
*Qingyu Zhou, Xiaofang Guo, and Riya Choksi*

## DRUG DISCOVERY AND TRANSLATIONAL MEDICINE

- ▣ Novel Pharmacological Probes Reveal ABHD5 as a Locus of Lipolysis Control in White and Brown Adipocytes 367  
*Elizabeth A. Rondini, Ljiljana Mladenovic-Lucas, William R. Roush, Geoff T. Halvorsen, Alex E. Green, and James G. Granneman*

## GASTROINTESTINAL, HEPATIC, PULMONARY, AND RENAL

- 8-Aminoguanosine Exerts Diuretic, Natriuretic, and Glucosuric Activity via Conversion to 8-Aminoguanine, Yet Has Direct Antikaliuretic Effects 358  
*Edwin K. Jackson and Zaichuan Mi*
- ▣ Creation of a Claudin-2 Binder and Its Tight Junction–Modulating Activity in a Human Intestinal Model 444  
*Mutsumi Takigawa, Manami Iida, Shotaro Nagase, Hidehiko Suzuki, Akihiro Watari, Minoru Tada, Yoshiaki Okada, Takefumi Doi, Masayoshi Fukasawa, Kiyohito Yagi, Jun Kunisawa, and Masuo Kondoh*

## METABOLISM, TRANSPORT, AND PHARMACOGENOMICS

- ▣ Xenobiotic Nuclear Receptors Pregnane X Receptor and Constitutive Androstane Receptor Regulate Antiretroviral Drug Efflux Transporters at the Blood-Testis Barrier 324  
*Sana-Kay Whyte-Allman, Md Tozammel Hoque, Mohammad-Ali Jenabian, Jean-Pierre Routy, and Reina Bendayan*

## NEUROPHARMACOLOGY

- Treatment with Sulforaphane Produces Antinociception and Improves Morphine Effects during Inflammatory Pain in Mice 293  
*Alejandro Redondo, Pablo Aníbal Ferreira Chamorro, Gabriela Riego, Sergi Leánez, and Olga Pol*
- ▣ Preclinical Characterization of (*R*)-3-((3*S*,4*S*)-3-fluoro-4-(4-hydroxyphenyl)piperidin-1-yl)-1-(4-methylbenzyl)pyrrolidin-2-one (BMS-986169), a Novel, Intravenous, Glutamate *N*-Methyl-D-Aspartate 2B Receptor Negative Allosteric Modulator with Potential in Major Depressive Disorder 377  
*Linda J. Bristow, Jyoti Gulia, Michael R. Weed, Bettadapura N. Srikumar, Yu-Wen Li, John D. Graef, Pattipati S. Naidu, Charulatha Sanmathi, Jayant Aher, Tanmaya Bastia, Mahesh Paschapur, Narasimharaju Kalidindi, Kuchibhotla Vijaya Kumar, Thaddeus Molski, Rick Pieschl, Alda Fernandes, Jeffrey M. Brown, Digavalli V. Sivarao, Kimberly Newberry, Mark Bookbinder, Joseph Polino, Deborah Keavy, Amy Newton, Eric Shields, Jean Simmermacher, James Kempson, Jianqing Li, Huiping Zhang, Arvind Mathur, Raja Reddy Kallem, Meenakshee Sinha, Manjunath Ramarao, Reeba K. Vikramadithyan, Srinivasan Thangathirupathy, Jayakumar Warriar, Imadul Islam, Joanne J. Bronson, Richard E. Olson, John E. Macor, Charlie F. Albright, Dalton King, Lorin A. Thompson, Lawrence R. Marcin, and Michael Sinz*

## ERRATUM

- Correction to “8-Aminoguanosine and 8-Aminoguanine Exert Diuretic, Natriuretic, Glucosuric, and Antihypertensive Activity” 411

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

*About the cover:* Spinal cord injury (SCI) pathology. See the article by Scholpa and Schnellmann ([dx.doi.org/10.1124/jpet.117.244806](https://doi.org/10.1124/jpet.117.244806)).