

# The Journal of PHARMACOLOGY

## And Experimental Therapeutics

A Publication of the American Society for Pharmacology and Experimental Therapeutics

August 2019

Vol. 370, No. 2

### Contents

#### MINIREVIEWS

- Contrast Induced Acute Kidney Injury and Direct Cytotoxicity of Iodinated Radiocontrast Media on Renal Proximal Tubule Cells 160  
*Dakota B. Ward and Monica A. Valentovic*
- Engineered Mesenchymal Stem Cells for Targeting Solid Tumors: Therapeutic Potential beyond Regenerative Therapy 231  
*Shen Cheng, Susheel Kumar Nethi, Sneha Rathi, Buddhadev Layek, and Swayam Prabha*

#### CARDIOVASCULAR

- Pharmacology of Ranolazine versus Common Cardiovascular Drugs in Patients with Early Diastolic Dysfunction Induced by Anthracyclines or Nonanthracycline Chemotherapeutics: A Phase 2b Minitrial 197  
*Giorgio Minotti, Pierantonio Menna, Vito Calabrese, Carlo Greco, Grazia Armento, Ombretta Annibali, Francesco Marchesi, Emanuela Salvatorelli, and Giorgio Reggiardo*
- Protamine Sulfate Induces Mitochondrial Hyperpolarization and a Subsequent Increase in Reactive Oxygen Species Production 308  
*Rabia Ramzan, Susanne Michels, Petra Weber, Annika Rhiel, Marc Iqrsusi, Ardawan J. Rastan, Carsten Culmsee, and Sebastian Vogt*

#### CELLULAR AND MOLECULAR

- Cellular Uptake and Efflux of Palbociclib In Vitro in Single Cell and Spheroid Models 242  
*M. Jove, J.A. Spencer, M.E. Hubbard, E.C. Holden, R.D. O'Dea, B.S. Brook, R.M. Phillips, S.W. Smye, P.M. Loadman, and C.J. Twelves*
- Pharmacological Activation of Thermo-Transient Receptor Potential Vanilloid 3 Channels Inhibits Hair Growth by Inducing Cell Death of Hair Follicle Outer Root Sheath 299  
*Kangjiao Yan, Xiaoying Sun, Gongxin Wang, Yani Liu, and KeWei Wang*

#### DRUG DISCOVERY AND TRANSLATIONAL MEDICINE

- Preclinical Pharmacokinetics of Fosiclopirox, a Novel Treatment of Urothelial Cancers, in Rats and Dogs 148  
*Scott J. Weir, Robyn Wood, Karl Schorno, Amanda E. Brinker, Prabhu Ramamoorthy, Kathy Heppert, Lian Rajewski, Mehmet Tanol, Tammy Ham, Michael J. McKenna, William McCulloch, Michael Dalton, Gregory A. Reed, Roy A. Jensen, Michael J. Baltezor, Shrikant Anant, and John A. Taylor, III*
- A Reduction in B, T, and Natural Killer Cells Expressing CD38 by TAK-079 Inhibits the Induction and Progression of Collagen-Induced Arthritis in Cynomolgus Monkeys 182  
*Wouter Korver, Mary Carsillo, Josh Yuan, Neeraja Idamakanti, Matthew Wagoner, Pu Shi, Cindy Q. Xia, Glendna Smithson, Lachy McLean, Jonathan Zalevsky, and Eric R. Fedyk*
- Clinically Advanced p38 Inhibitors Suppress DUX4 Expression in Cellular and Animal Models of Facioscapulohumeral Muscular Dystrophy 219  
*Jonathan Oliva, Scott Galasinski, Amelia Richey, Amy E. Campbell, Marvin J. Meyers, Neal Modi, Jun Wen Zhong, Rabi Tawil, Stephen J. Tapscott, and Francis M. Sverdrup*
- Blood Pharmacokinetics Imaging by Noninvasive Heart Fluorescence Tomography and Application to Kidney Glomerular Filtration Rate Assessment 288  
*Bagna Bao, Kristine O. Vasquez, Guojie Ho, Jun Zhang, Jeannine Delaney, Milind Rajopadhye, and Jeffrey D. Peterson*

## ENDOCRINE AND DIABETES

- SCO-267, a GPR40 Full Agonist, Improves Glycemic and Body Weight Control in Rat Models of Diabetes and Obesity 172  
*Hikaru Ueno, Ryo Ito, Shin-ichi Abe, Mitsugi Ookawara, Hirohisa Miyashita, Hitomi Ogino, Yasufumi Miyamoto, Tomoki Yoshihara, Akihiro Kobayashi, Yoshiyuki Tsujihata, Koji Takeuchi, Masanori Watanabe, Yukio Yamada, Tsuyoshi Maekawa, Nobuhiro Nishigaki, and Yusuke Moritoh*

## GASTROINTESTINAL, HEPATIC, PULMONARY, AND RENAL

- Knockout of Dual-Specificity Protein Phosphatase 5 Protects Against Hypertension-Induced Renal Injury 206  
*Chao Zhang, Xiaochen He, Sydney R. Murphy, Huawei Zhang, Shaoxun Wang, Ying Ge, Wenjun Gao, Jan M. Williams, Aron M. Geurts, Richard J. Roman, and Fan Fan*

## INFLAMMATION, IMMUNOPHARMACOLOGY, AND ASTHMA

- Novel Inhaled Pan-JAK Inhibitor, LAS194046, Reduces Allergen-Induced Airway Inflammation, Late Asthmatic Response, and pSTAT Activation in Brown Norway Rats 137  
*Marta Calbet, Isabel Ramis, Elena Calama, Cristina Carreño, Stephane Paris, Monica Maldonado, Adelina Orellana, Elena Calaf, Montse Pauta, Jorge De Alba, Jordi Bach, and Montserrat Miralpeix*

## METABOLISM, TRANSPORT, AND PHARMACOGENOMICS

- Mechanistic Basis of Cabotegravir–Glucuronide Disposition in Humans 269  
*Mitesh Patel, H. Christian Eberl, Andrea Wolf, Esaie Pierre, Joseph W. Polli, and Maciej J. Zamek-Gliszczynski*
- Translation of In Vitro Transport Inhibition Studies to Clinical Drug-Drug Interactions for Glecaprevir and Pibrentasvir 278  
*Matthew P. Kosloski, Daniel A.J. Bow, Ryota Kikuchi, Haoyu Wang, Elaine J. Kim, Kennan Marsh, Federico Mensa, Jens Kort, and Wei Liu*
- Modeling Corticosteroid Pharmacokinetics and Pharmacodynamics, Part I: Determination and Prediction of Dexamethasone and Methylprednisolone Tissue Binding in the Rat 318  
*Vivaswath S. Ayyar, Dawei Song, Debra C. DuBois, Richard R. Almon, and William J. Jusko*
- Modeling Corticosteroid Pharmacokinetics and Pharmacodynamics, Part II: Sex Differences in Methylprednisolone Pharmacokinetics and Corticosterone Suppression 327  
*Vivaswath S. Ayyar, Debra C. DuBois, Toshimichi Nakamura, Richard R. Almon, and William J. Jusko*
- Modeling Corticosteroid Pharmacokinetics and Pharmacodynamics, Part III: Estrous Cycle and Estrogen Receptor–Dependent Antagonism of Glucocorticoid-Induced Leucine Zipper (GILZ) Enhancement by Corticosteroids 337  
*Vivaswath S. Ayyar, Debra C. DuBois, Richard R. Almon, and William J. Jusko*

## NEUROPHARMACOLOGY

- Heteromeric Neuronal Nicotinic Acetylcholine Receptors with Mutant  $\beta$  Subunits Acquire Sensitivity to  $\alpha 7$ -Selective Positive Allosteric Modulators 252  
*Clare Stokes, Sumanta Garai, Abhijit R. Kulkarni, Lucas N. Cantwell, Colleen M. Noviello, Ryan E. Hibbs, Nicole A. Horenstein, Khalil A. Abboud, Ganesh A. Thakur, and Roger L. Papke*

## ERRATUM

- Correction to “Targeting Dopamine D<sub>2</sub>, Adenosine A<sub>2A</sub>, and Glutamate mGlu<sub>5</sub> Receptors to Reduce Repetitive Behaviors in Deer Mice” 218

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

About the cover: Diagrammatic representation of the FMT heart tomography PK model. See the article by Bao et al ([dx.doi.org/10.1124/jpet.119.257071](https://doi.org/10.1124/jpet.119.257071)).