

# The Journal of PHARMACOLOGY

## And Experimental Therapeutics

A Publication of the American Society for Pharmacology and Experimental Therapeutics

February 2018

Vol. 364, No. 2

### Contents

#### MINIREVIEWS

- Genetic and Molecular Regulation of Extrasynaptic GABA-A Receptors in the Brain: Therapeutic Insights for Epilepsy 180  
*Shu-Hui Chuang and Doodipala Samba Reddy*
- ▣ Etiopathogenesis and Pharmacological Prevention of a Type-2 Diabetes Model in Male Mice 347  
*Alberto Loizzo, Santi M. Spampinato, Gabriele Campana, and Stefano Loizzo*

#### BEHAVIORAL PHARMACOLOGY

- Chronic  $\Delta^9$ -THC in Rhesus Monkeys: Effects on Cognitive Performance and Dopamine D2/D3 Receptor Availability 300  
*William S. John, Thomas J. Martin, Kiran Kumar Solingapuram Sai, Susan H. Nader, H. Donald Gage, Akiva Mintz, and Michael A. Nader*
- Inhibition of Cocaine and 3,4-Methylenedioxypyrovalerone (MDPV) Self-Administration by Lorcaserin Is Mediated by 5-HT<sub>2C</sub> Receptors in Rats 359  
*Brenda M. Gannon, Agnieszka Sulima, Kenner C. Rice, and Gregory T. Collins*

#### CARDIOVASCULAR

- ▣ Nonclinical Cardiovascular Studies of Prucalopride, a Highly Selective 5-Hydroxytryptamine 4 Receptor Agonist 156  
*Kelly Conlon, Joris H. De Maeyer, Chris Bruce, Jan A. J. Schuurkes, Lee Christie, James McRedmond, Katayoun Derakhchan, and Paul R. Wade*
- Impaired Pulmonary Arterial Vasoconstriction and Nitric Oxide-Mediated Relaxation Underlie Severe Pulmonary Hypertension in the Sugen-Hypoxia Rat Model 258  
*Helen Christou, Hannes Hudalla, Zoe Michael, Evgenia J. Filatava, Jun Li, Minglin Zhu, Jose S. Possomato-Vieira, Carlos Dias-Junior, Stella Kourembanas, and Raouf A. Khalil*

#### CELLULAR AND MOLECULAR

- ▣ A Potent Antagonist of Protease-Activated Receptor 2 That Inhibits Multiple Signaling Functions in Human Cancer Cells 246  
*Yuhong Jiang, Mei-Kwan Yau, Junxian Lim, Kai-Chen Wu, Weijun Xu, Jacky Y. Suen, and David P. Fairlie*

#### DRUG DISCOVERY AND TRANSLATIONAL MEDICINE

- ▣ A Combination of G Protein-Coupled Receptor Modulators Protects Photoreceptors from Degeneration 207  
*Tivadar Orban, Henri Leinonen, Tamar Getter, Zhiqian Dong, Wenyu Sun, Songqi Gao, Alexander Veenstra, Hossein Heidari-Torkabadi, Timothy S. Kern, Philip D. Kiser, and Krzysztof Palczewski*
- Dimethoxy-etomidate: A Nonhypnotic Etomidate Analog that Potently Inhibits Steroidogenesis 229  
*Megan McGrath, Celena Ma, and Douglas E. Raines*
- Tegoprazan, a Novel Potassium-Competitive Acid Blocker to Control Gastric Acid Secretion and Motility 275  
*Nobuyuki Takahashi and Yukinori Take*
- Inhibition of Myeloperoxidase by *N*-Acetyl Lysyltyrosylcysteine Amide Reduces Oxidative Stress-Mediated Inflammation, Neuronal Damage, and Neural Stem Cell Injury in a Murine Model of Stroke 311  
*Guoliang Yu, Ye Liang, Shikan Zheng, and Hao Zhang*
- ▣ Cancer Stem Cell-Suppressing Activity of Chrysotoxine, a Bibenzyl from *Dendrobium pulchellum* 332  
*Narumol Bhummaphan, Varisa Pongrakhananon, Boonchoo Sritularak, and Pithi Chanvorachote*

## ENDOCRINE AND DIABETES

Restoration of Rostral Ventrolateral Medulla Cystathionine- $\gamma$  Lyase Activity Underlies Moxonidine-Evoked Neuroprotection and Sympathoinhibition in Diabetic Rats 170

*Mohamed A. Fouda, Shaimaa S. El-Sayed, and Abdel A. Abdel-Rahman*

## GASTROINTESTINAL, HEPATIC, PULMONARY, AND RENAL

☐ Selective Cannabinoid 2 Receptor Stimulation Reduces Tubular Epithelial Cell Damage after Renal Ischemia-Reperfusion Injury 287

*Jeffrey D. Pressly, Suni M. Mustafa, Ammaar H. Adibi, Sahar Alghamdi, Pankaj Pandey, Kuldeep K. Roy, Robert J. Doerksen, Bob M. Moore, Jr., and Frank Park*

## INFLAMMATION, IMMUNOPHARMACOLOGY, AND ASTHMA

Adenosine A<sub>2A</sub> Receptor Agonist, 2-*p*-(2-Carboxyethyl)phenethylamino-5'-*N*-ethylcarboxamidoadenosine Hydrochloride Hydrate, Inhibits Inflammation and Increases Fibroblast Growth Factor-2 Tissue Expression in Carrageenan-Induced Rat Paw Edema 221

*Armando Ialenti, Elisabetta Caiazzo, Silvana Morello, Rosa Carnuccio, and Carla Cicala*

## METABOLISM, TRANSPORT, AND PHARMACOGENOMICS

☐ Longitudinal Influence of Pregnancy on Nicotine Metabolic Pathways 238

*Taraneh Taghavi, Christopher A. Arger, Sarah H. Heil, Stephen T. Higgins, and Rachel F. Tyndale*

Low-Dose Anthracycline and Risk of Heart Failure in a Pharmacokinetic Model of Human Myocardium Exposure: Analog Specificity and Role of Secondary Alcohol Metabolites 323

*Emanuela Salvatorelli, Pierantonio Menna, Massimo Chello, Elvio Covino, and Giorgio Minotti*

## NEUROPHARMACOLOGY

Safinamide Differentially Modulates In Vivo Glutamate and GABA Release in the Rat Hippocampus and Basal Ganglia 198

*Michele Morari, Alberto Brugnoli, Clarissa Anna Pisanò, Salvatore Novello, Carla Caccia, Elsa Melloni, Gloria Padoani, Silvia Vailati, and Marco Sardina*

## ERRATUM

Correction to “Discovery of Novel Small-Molecule Inducers of Heme Oxygenase-1 That Protect Human iPSC-Derived Cardiomyocytes from Oxidative Stress” 179

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

*About the cover:* Trafficking of Zn<sup>2+</sup> at the gluzineric synapse. See the article by Chuang and Reddy ([dx.doi.org/10.1124/jpet.117.244673](https://doi.org/10.1124/jpet.117.244673)).