Contents

HIGHLIGHTED PAPERS

1

PERSPECTIVES IN PHARMACOLOGY

2 Revisiting the Isobole and Related Quantitative Methods for Assessing Drug Synergism
   Ronald J. Tallarida

9 Cigarette Smoking, Coffee Drinking, and Ingestion of Charcoal-Broiled Beef as Potential Modifiers of Drug Therapy and
   Confounders of Clinical Trials
   A. H. Conney and M. M. Reidenberg

BEHAVIORAL PHARMACOLOGY

177 Effects of Alterations in Cannabinoid Signaling, Alone and in Combination with Morphine, on Pain-Elicited
   and Pain-Suppressed Behavior in Mice

214 Cocaine Dose and Self-Administration History, but Not Initial Cocaine Locomotor Responsiveness, Affects Sensitization
   to the Motivational Effects of Cocaine in Rats
   Bruce H. Mandt, Emily Gomez, Nickie L. Johnston, Nancy R. Zahniser, and Richard M. Allen

CARDIOVASCULAR

131 Polyethylene Glycol-Modified Pigment Epithelial-Derived Factor: New Prospects for Treatment of Retinal Neovascularization
   Yu-Jing Bai, Lv-Zhen Huang, Xiao-Lei Xu, Wei Du, Ai-Yi Zhou, Wen-Zhen Yu, and Xiao-Xin Li

CHEMOTHERAPY, ANTIBIOTICS, AND GENE THERAPY

119 Combining Doublecortin-Like Kinase Silencing and Vinca Alkaloids Results in a Synergistic Apoptotic Effect in
   Neuroblastoma Cells
   Carla S. Verissimo, Sou Cheng, Jordi C. Puigvert, Yu Qin, Anne Vroon, Judith van Deutekom, Leo S. Price,
   Erik H. J. Danen, Bob van de Water, Carlos P. Fitzsimons, and Erno Vreugdenhil

DRUG DISCOVERY AND TRANSLATIONAL MEDICINE

106 The $\beta_2$-Adrenoceptor Agonist Formoterol Stimulates Mitochondrial Biogenesis
   Lauren P. Wills, Richard E. Trager, Gyda C. Beeson, Christopher C. Lindsey, Yuri K. Peterson, Craig C. Beeson, and
   Rick G. Schnellmann

188 The Novel Reversible Fatty Acid Amide Hydrolase Inhibitor ST4070 Increases Endocannabinoid Brain Levels and
   Counteracts Neuropathic Pain in Different Animal Models
   Antonio Caprioli, Roberto Coccurello, Cinzia Rapino, Stefano Di Serio, Monia Di Tommaso, Mario Vertechy,
   Valentina Vaccu, Natalia Battista, Flaminia Pavone, Mauro Maccarrone, and Franco Borsini

196 Arginine Attenuates Methylglyoxal- and High Glucose-Induced Endothelial Dysfunction and Oxidative Stress by an
   Endothelial Nitric-Oxide Synthase-Independent Mechanism
   Indu Dhar, Arti Dhar, Lingyun Wu, and Kaushik Desai

205 Repeated Administration of a Mutant Cocaine Esterase: Effects on Plasma Cocaine Levels, Cocaine-Induced Cardiovas-
   cular Activity, and Immune Responses in Rhesus Monkeys
   Gregory T. Collins, Remy L. Brim, Kathleen R. Noon, Diwahar Narasimhan, Nicholas W. Lukacs, Roger K. Sunahara,
   James H. Woods, and Mei-Chuan Ko
Endocrine and Diabetes

MLR-1023 Is a Potent and Selective Allosteric Activator of Lyn Kinase In Vitro That Improves Glucose Tolerance In Vivo
Michael S. Saporito, Alexander R. Ochman, Christopher A. Lipinski, Jeffrey A. Handler, and Andrew G. Reaume

The Lyn Kinase Activator MLR-1023 Is a Novel Insulin Receptor Potentiator that Elicits a Rapid-Onset and Durable Improvement in Glucose Homeostasis in Animal Models of Type 2 Diabetes
Alexander R. Ochman, Christopher A. Lipinski, Jeffrey A. Handler, Andrew G. Reaume, and Michael S. Saporito

The Dipeptidyl Peptidase-4 Inhibitor Linagliptin Attenuates Inflammation and Accelerates Epithelialization in Wounds of Diabetic ob/ob Mice
Christoph Schürmann, Andreas Linke, Kerstin Engelmann-Pilger, Cornelia Steinmetz, Michael Mark, Josef Pfeilschifter, Thomas Klein, and Stefan Frank

Gastrointestinal, Hepatic, Pulmonary, and Renal

Nonsteroidal Anti-Inflammatory Drug-Activated Gene-1 Plays a Role in the Impairing Effects of Cyclooxygenase Inhibitors on Gastric Ulcer Healing
Roccina Colucci, Luca Antonioli, Nunzia Bernardini, Chiara Ippolito, Cristina Segnani, Oriana Awwad, Marco Tuccori, Corrado Blandizzi, Carmelo Scarpignato, and Matteo Formai

Effects of Ritobegron (KUC-7483), a Novel Selective β1-Adrenoceptor Agonist, on Bladder Function in Cynomolgus Monkey
Itaru Marayama, Satoshi Tatemichi, Yoshiaki Goi, Kazuyasu Maruyama, Yuji Hoyano, Yoshinobu Yamazaki, and Hiroshi Kusama

Inflammation, Immunopharmacology, and Asthma

Carnosol and Carnosic Acids from Salvia officinalis Inhibit Microsomal Prostaglandin E2 Synthase-1
Julia Bauer, Susanne Kuehnl, Judith M. Rollinger, Olga Scherer, Hinnak Northoff, Hermann Stuppner, Oliver Werz, and Andreas Koeberle

Metabolism, Transport, and Pharmacogenomics

Impact of P-Glycoprotein (ABCB1) and Breast Cancer Resistance Protein (ABCG2) on the Brain Distribution of a Novel BRAF Inhibitor: Vemurafenib (PLX4032)
Rajendar K. Mittapalli, Shruthi Vaidhyananathan, Ramola Sane, and William F. Elmquist

Neuropharmacology

Morphine Activates the E26-Related Transcription Factor-1/Serum Response Factor Pathway via Extracellular Signal-Regulated Kinases 1/2 in F11 Cells Derived from Dorsal Root Ganglia Neurons
Kathrin Rothe, Hans Jürgen Solinski, Ingrid Boekhoff, Thomas Gudermann, and Andreas Breit

Etodolac, a Cyclooxygenase-2 Inhibitor, Attenuates Paclitaxel-Induced Peripheral Neuropathy in a Mouse Model of Mechanical Allodynia
Sunao Ito, Koyuki Tajima, Masaki Nogawa, Naoki Inoue, Takashi Kyo, Yosuke Takahashi, Takahiro Sasagawa, Akio Nakamura, Takashi Kotera, Makoto Ueda, Yasuhiro Yamashita, and Kouji Banno

Positive Allosteric Modulators Differentially Affect Full versus Partial Agonist Activation of the Glycine Receptor
Dean Kirson, Jelena Todorovic, and S. John Mihic

Pharmacology of JNJ-37822681, a Specific and Fast-Dissociating D2 Antagonist for the Treatment of Schizophrenia
Xavier Langlois, Anton Megens, Hilde Laveyens, John Atack, Miroslav Cik, Paula te Riele, Luc Peeters, Ria Wouters, Jef Vermeire, Herman Hendricks, Gregor Macdonald, and Marcel De Bruyn

Pyroglutamyl Peptidase II Inhibition Enhances the Analeptic Effect of Thyrotropin-Releasing Hormone in the Rat Medial Septum
Ivan Lezcano, Rosa Maria Uribe, Erick Martinez-Chavez, Miguel Angel Vargas, Magdalini Matziari, Patricia Joseph-Bravo, and Jean-Louis Charli

Toxicology

Resveratrol Inhibits Paraquat-Induced Oxidative Stress and Fibrogenic Response by Activating the Nuclear Factor Erythroid 2-Related Factor 2 Pathway
Xiaoqing He, Liping Wang, Grazyna Szklarz, Yongyi Bi, and Qiang Ma
Unique O-Methoxyethyl Ribose-DNA Chimeric Oligonucleotide Induces an Atypical Melanoma Differentiation-Associated Gene 5-Dependent Induction of Type I Interferon Response


ERRATUM
Correction to “Synergistic Interaction between the Two Mechanisms of Action of Tapentadol in Analgesia”

NOTICE OF RETRACTION

NOTICE OF WITHDRAWAL

Supplemental material is available online at http://jpet.aspetjournals.org.

About the cover: Wound morphology upon linagliptin treatment. See the article by Schürmann et al. on page 71 of this issue.