

The Journal of
PHARMACOLOGY
And Experimental Therapeutics

A Publication of the American Society for Pharmacology and Experimental Therapeutics

March 2015

Vol. 352, No. 3

Contents

HIGHLIGHTED PAPERS

419

BEHAVIORAL PHARMACOLOGY

- Curcumin Attenuates Opioid Tolerance and Dependence by Inhibiting Ca^{2+} /Calmodulin-Dependent Protein Kinase II α Activity 420
Xiaoyu Hu, Fang Huang, Magdalena Szymusiak, Ying Liu, and Zaijie Jim Wang

CARDIOVASCULAR

- Thrombopoietin Receptor Agonists Protect Human Cardiac Myocytes from Injury by Activation of Cell Survival Pathways 429
John E. Baker, Jidong Su, Stacy Koprowski, Anuradha Dhanasekaran, Tom P. Aufderheide, and Garrett J. Gross

CHEMOTHERAPY, ANTIBIOTICS, AND GENE THERAPY

- § Effect of Premedications in a Murine Model of Asparaginase Hypersensitivity 541
Christian A. Fernandez, Colton Smith, Seth E. Karol, Laura B. Ramsey, Chengcheng Liu, Ching-Hon Pui, Sima Jeha, William E. Evans, Fred D. Finkelman, and Mary V. Relling

DRUG DISCOVERY AND TRANSLATIONAL MEDICINE

- A Novel Carbovine Derivative Inhibits Nitric Oxide Formation in Macrophages Independent of Effects on Tumor Necrosis Factor α and Interleukin-1 β Expression 438
Ana Cristina G. Grodzki, Bhaskar Poola, Nagarekha Pasupuleti, Michael H. Nantz, Pamela J. Lein, and Fredric Gorin

- § The Apoptotic Mechanism of Action of the Sphingosine Kinase 1 Selective Inhibitor SKI-178 in Human Acute Myeloid Leukemia Cell Lines 494
Taryn E. Dick, Jeremy A. Hengst, Todd E. Fox, Ashley L. Colledge, Vijay P. Kale, Shen-Shu Sung, Arun Sharma, Shantu Amin, Thomas P. Loughran Jr., Mark Kester, Hong-Gang Wang, and Jong K. Yun

- CHF6001 I: A Novel Highly Potent and Selective Phosphodiesterase 4 Inhibitor with Robust Anti-Inflammatory Activity and Suitable for Topical Pulmonary Administration 559
Nadia Moretto, Paola Caruso, Raffaella Bosco, Gessica Marchini, Fiorella Pastore, Elisabetta Armani, Gabriele Amari, Andrea Rizzi, Eleonora Ghidini, Renato De Fanti, Carmelida Capaldi, Laura Carzaniga, Emilio Hirsch, Carola Buccellati, Angelo Sala, Chiara Carnini, Riccardo Patacchini, Maurizio Delcanale, Maurizio Civelli, Gino Villetti, and Fabrizio Facchinetto

- § Efficacy and Mechanism of Action of Volasertib, a Potent and Selective Inhibitor of Polo-Like Kinases, in Preclinical Models of Acute Myeloid Leukemia 579
Dorothea Rudolph, Maria Antonietta Impagnatiello, Claudia Blaukopf, Christoph Sommer, Daniel W. Gerlich, Mareike Roth, Ulrike Tontsch-Grunt, Andreas Wernitznig, Fabio Savarese, Marco H. Hofmann, Christoph Albrecht, Lena Geiselmann, Markus Reschke, Pilar Garin-Chesa, Johannes Zuber, Jürgen Moll, Günther R. Adolf, and Norbert Kraut

- A Selective Orexin-1 Receptor Antagonist Attenuates Stress-Induced Hyperarousal without Hypnotic Effects 590
Pascal Bonaventure, Sujin Yun, Philip L. Johnson, Anantha Shekhar, Stephanie D. Fitz, Brock T. Shireman, Terry P. Lebold, Diane Nepomuceno, Brian Lord, Michelle Wennerholm, Jonathan Shelton, Nicholas Carruthers, Timothy Lovenberg, and Christine Dugovic

GASTROINTESTINAL, HEPATIC, PULMONARY, AND RENAL

- Effect of Memantine on Cough Reflex Sensitivity: Translational Studies in Guinea Pigs and Humans 448
Peter V. Dicpinigaitis, Brendan J. Canning, Rachel Garner, and Blake Paterson

*Seong-Joon Koh, Ji Won Kim, Byeong Gwan Kim, Kook Lae Lee, Jaeyoung Chun, and Joo Sung Kim**Senthilkumar Rajagopal, Ancy D. Nalli, Divya P. Kumar, Sayak Bhattacharya, Wenhui Hu, Sunila Mahavadi, John R. Grider, and Karnam S. Murthy**Gino Villetti, Chiara Carnini, Loredana Battipaglia, Laurent Preynat, Pier Tonino Bolzoni, Franco Bassani, Paola Caruso, Marco Bergamaschi, Anna Rita Pisano, Veronica Puviani, Fabio Franco Stellar, Valentina Cenacchi, Roberta Volta, Vittorio Bertacche, Valentina Mileo, Valentina Bagnacani, Elisa Moretti, Paola Puccini, Silvia Catinella, Fabrizio Facchinetto, Angelo Sala, and Maurizio Civelli***METABOLISM, TRANSPORT, AND PHARMACOGENOMICS***Anika L. Dzierlenga, John D. Clarke, Tiffanie L. Hargraves, Garrett R. Ainslie, Todd W. Vanderah, Mary F. Paine, and Nathan J. Cherrington*

- Four Cation-Selective Transporters Contribute to Apical Uptake and Accumulation of Metformin in Caco-2 Cell Monolayers 519

Tianxiang (Kevin) Han, William R. Proctor, Chester L. Costales, Hao Cai, Ruth S. Everett, and Dhiren R. Thakker

- Effects of β -Blockers and Tricyclic Antidepressants on the Activity of Human Organic Anion Transporting Polypeptide 1A2 (OATP1A2) 552

*Jennifer Lu, Veronique Michaud, Liliam Gabriela Guiarate Moya, Fleur Gaudette, Yat Hei Leung, and Jacques Turgeon***NEUROPHARMACOLOGY**

- In Vivo Pharmacological Characterization of TAK-063, a Potent and Selective Phosphodiesterase 10A Inhibitor with Antipsychotic-Like Activity in Rodents 471

Kazunori Suzuki, Akina Harada, Eri Shiraishi, and Haruhide Kimura

- Bias Analyses of Preclinical and Clinical D₂ Dopamine Ligands: Studies with Immediate and Complex Signaling Pathways 480

*Tarsis F. Brust, Michael P. Hayes, David L. Roman, Kevin D. Burris, and Val J. Watts***TOXICOLOGY***Shaojun Yang, Yi-Hua Jan, Vladimir Mishin, Jason R. Richardson, Muhammad M. Hossain, Ned D. Heindel, Diane E. Heck, Debra L. Laskin, and Jeffrey D. Laskin*

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

About the cover: Molecular models of human SPR complexed with sulfa drugs. See the article by Yang et al. ([dx.doi.org/10.1124/jpet.114.221572](https://doi.org/10.1124/jpet.114.221572)).