

DRUG METABOLISM AND DISPOSITION

A Publication of the American Society for Pharmacology and Experimental Therapeutics

August 2011

Vol. 39, No. 8

CONTENTS

SHORT COMMUNICATIONS

Prolonged Toxic Effects After Cocaine Challenge in Butyrylcholinesterase/Plasma Carboxylesterase Double Knockout Mice: A Model for Butyrylcholinesterase-Deficient Humans. *Ellen G. Duysen and Oksana Lockridge* **1321**

Effects of Ketamine on Human UDP-Glucuronosyltransferases In Vitro Predict Potential Drug-Drug Interactions Arising from Ketamine Inhibition of Codeine and Morphine Glucuronidation. *Veerawan Uchaipichat, Pritsana Raungrut, Nuy Chau, Benjamas Janchawee, Allan M. Evans, and John O. Miners* **1324**

Characterization of Recombinant Human Carboxylesterases: Fluorescein Diacetate as a Probe Substrate for Human Carboxylesterase 2. *Jie Wang, Eric T. Williams, Joanne Bourgea, Y. Nancy Wong, and Christopher J. Patten* **1329**

Subcellular Location and Molecular Mobility of Human Cytosolic Sulfotransferase 1C1 in Living Human Embryonic Kidney 293 Cells. *Jonathan J. Sheng and George K. Acquaaah-Mensah* **1334**

ARTICLES

Impact of Abcc2 [Multidrug Resistance-Associated Protein (Mrp) 2], Abcc3 (Mrp3), and Abcg2 (Breast Cancer Resistance Protein) on the Oral Pharmacokinetics of Methotrexate and Its Main Metabolite 7-Hydroxymethotrexate. *Maria L. H. Vlaming, Anita van Esch, Evita van de Steeg, Zeliha Pala, Els Wagenaar, Olaf van Tellingen, and Alfred H. Schinkel* **1338**

Human Paraoxonase 1 Is the Enzyme Responsible for Pilocarpine Hydrolysis. *Tomomi Hioki, Tatsuki Fukami, Miki Nakajima, and Tsuyoshi Yokoi* **1345**

In Vitro Age-Dependent Enzymatic Metabolism of Chlorpyrifos and Chlorpyrifos-Oxon in Human Hepatic Microsomes and Chlorpyrifos-Oxon in Plasma. *Jordan Ned Smith, Charles Timchalk, Michael J. Bartels, and Torka S. Poet* **1353**

Effects of Chronic Renal Failure on Kidney Drug Transporters and Cytochrome P450 in Rats. *Judith Naud, Josée Michaud, Stéphanie Beauchemin, Marie-Josée Hébert, Michel Roger, Stéphane Lefrançois, Francois A. Leblond, and Vincent Pichette* **1363**

An Evaluation of the Dilution Method for Identifying Metabolism-Dependent Inhibitors of Cytochrome P450 Enzymes. *Andrew Parkinson, Faraz Kazmi, David B. Buckley, Phyllis Yerino, Brandy L. Paris, Jeff Holsapple, Paul Toren, Steve M. Otradovec, and Brian W. Ogilvie* **1370**

Development of a Highly Sensitive Cytotoxicity Assay System for CYP3A4-Mediated Metabolic Activation. *Hiroko Hosomi, Tatsuki Fukami, Atsushi Iwamura, Miki Nakajima, and Tsuyoshi Yokoi* **1388**

Preclinical and Clinical Pharmacokinetics of PF-02413873, a Nonsteroidal Progesterone Receptor Antagonist. *Peter J. Bungay, Sarah Tweedy, David C. Howe, Karl R. Gibson, Hannah M. Jones, and Natalie M. Mount* **1396**

Microsomal Quercetin Glucuronidation in Rat Small Intestine Depends on Age and Segment. *Bradley W. Bolling, Michael H. Court, Jeffrey B. Blumberg, and C.-Y. Oliver Chen* **1406**

Effects of Interleukin-6 (IL-6) and an Anti-IL-6 Monoclonal Antibody on Drug-Metabolizing Enzymes in Human Hepatocyte Culture. *Leslie J. Dickmann, Sonal K. Patel, Dan A. Rock, Larry C. Wienkers, and J. Greg Slatter* **1415**

Continued on next page

- The Imidazoacridinone Antitumor Drug, C-1311, Is Metabolized by Flavin Monooxygenases but Not by Cytochrome P450s. *Agnieszka Potega, Emilia Dabrowska, Magdalena Niemira, Agata Kot-Wasik, Sebastien Ronseaux, Colin J. Henderson, C. Roland Wolf, and Zofia Mazerska* **1423**
- ▣ Identification of Cytochrome P450 Oxidoreductase Gene Variants That Are Significantly Associated with the Interindividual Variations in Warfarin Maintenance Dose. *Xiuling Zhang, Lei Li, Xinxin Ding, and Laurence S. Kaminsky*. **1433**
- Acute Doxorubicin Toxicity Differentially Alters Cytochrome P450 Expression and Arachidonic Acid Metabolism in Rat Kidney and Liver. *Beshay N. M. Zordoky, Anwar Anwar-Mohamed, Mona E. Aboutabl, and Ayman O. S. El-Kadi* **1440**
- ▣ Farnesoid X Receptor Activation by Chenodeoxycholic Acid Induces Detoxifying Enzymes through AMP-Activated Protein Kinase and Extracellular Signal-Regulated Kinase 1/2-Mediated Phosphorylation of CCAAT/Enhancer Binding Protein β . *Kyoung Noh, Young Mi Kim, Young Woo Kim, and Sang Geon Kim* **1451**
- ▣ A Single Dose Mass Balance Study of the Hedgehog Pathway Inhibitor Vismodegib (GDC-0449) in Humans Using Accelerator Mass Spectrometry. *Richard A. Graham, Bert L. Lum, Glenn Morrison, Ilsung Chang, Karin Jorga, Brian Dean, Young G. Shin, Qin Yue, Teresa Mulder, Vikram Malhi, Minli Xie, Jennifer A. Low, and Cornelis E. C. A. Hop* **1460**

▣ Supplemental material is available online at <http://dmd.aspetjournals.org>.

About the cover: FRAP assay monitored at different time intervals. See the article by Sheng and Acquah-Menshah on page 1334 of this issue.