

DRUG METABOLISM AND DISPOSITION

A Publication of the American Society for Pharmacology and Experimental Therapeutics

December 2017

Vol. 45, No. 12

CONTENTS

SHORT COMMUNICATION

Colistin is substrate of the carnitine/organic cation transporter 2 (OCTN2, SLC22A5). *Michele Visentin, Zhibo Gai, Angelo Torozzi, Christian Hiller, and Gerd A. Kullak-Ublick 1240*

ARTICLES

Use of Hybrid Capillary Tube Apparatus on 400 MHz NMR for Quantitation of Crucial Low-Quantity Metabolites Using aSICCO Signal. *Ranjeet Tiwari, Deepak Ahire, Hemantha Kumar, Sarmistha Sinha, Siddheshwar Kisan Chauthie, Murali Subramanian, Ramaswamy Iyer, Ramakanth Sarabu, and Lakshmikant Bajpai 1215*

RNA-Seq Profiling of Intestinal Expression of Xenobiotic Processing Genes in Germ-Free Mice. *Zidong Donna Fu, Felcy P. Selwyn, Julia Yue Cui, and Curtis D. Klaassen 1225*

Species-Specific Involvement of Aldehyde Oxidase and Xanthine Oxidase in the Metabolism of the Pyrimidine-Containing mGlu₅-Negative Allosteric Modulator VU0424238 (Auglurant). *Rachel D. Crouch, Anna L. Blobaum, Andrew S. Felts, P. Jeffrey Conn, and Craig W. Lindsley 1245*

Recovery of CYP3A Phenotype after Kidney Transplantation. *Kristine Hole, Elisabet Størset, Ane Olastuen, Tore Haslemo, Grete Birkeland Kro, Karsten Midtvedt, Anders Åsberg, and Espen Molden 1260*

Digging Deeper into CYP3A Testosterone Metabolism: Kinetic, Regioselectivity, and Stereoselectivity Differences between CYP3A4/5 and CYP3A7^[S]. *Sylvie E. Kandel, Lyrialle W. Han, Qingcheng Mao, and Jed N. Lampe 1266*

N-Acetyltransferase 2 Genotype-Dependent *N*-Acetylation of Hydralazine in Human Hepatocytes. *Cecily E. Allen, Mark A. Doll, and David W. Hein 1276*

Elucidation of the Impact of P-glycoprotein and Breast Cancer Resistance Protein on the Brain Distribution of Catechol-*O*-Methyltransferase Inhibitors. *Joana Bicker, Ana Fortuna, Gilberto Alves, Patrício Soares-da-Silva, and Amílcar Falcão 1282*

Progressive and Preferential Cellular Accumulation of Hydrophobic Bile Acids Induced by Cholestatic Drugs Is Associated with Inhibition of Their Amidation and Sulfation. *Ahmad Sharanek, Audrey Burban, Lydie Humbert, Christiane Guguen-Guillouzo, Dominique Rainteau, and André Guillouzo 1292*

Physiologically Based Pharmacokinetic Model Predictions of Panobinostat (LBH589) as a Victim and Perpetrator of Drug-Drug Interactions. *Heidi J. Einolf, Wen Lin, Christina S. Won, Lai Wang, Helen Gu, Dung Y. Chun, Handan He, and James B. Mangold 1304*

Pediatric Cytochrome P450 Activity Alterations in Nonalcoholic Steatohepatitis. *Hui Li, Mark J. Canet, John D. Clarke, Dean Billheimer, Stavra A. Xanthakos, Joel E. Lavine, Robert P. Erickson, and Nathan J. Cherrington 1317*

Studies on Para-Methoxymethamphetamine (PMMA) Metabolite Pattern and Influence of CYP2D6 Genetics in Human Liver Microsomes and Authentic Samples from Fatal PMMA Intoxications. *Merete Vevelstad, Elisabeth Leere Øiestad, Elisabeth Nerem, Marianne Arnestad, and Inger Lise Bogen 1326*

The Effect of Chronic Treatment with Lurasidone on Rat Liver Cytochrome P450 Expression and Activity in the Chronic Mild Stress Model of Depression. *Marta Kot, Anna Haduch, Mariusz Papp, and Władysława A. Daniel 1336*

Mouse Red Blood Cell-Mediated Rare Xenobiotic Phosphorylation of a Drug Molecule Not Intended to Be a Kinase Substrate. *Chungang Gu, Shenghua Wen, Peter Doig, Eric Gangl, Xiaolan Zheng, Yanjun Wang, and Jeffrey W. Johannes 1345*

Continued on next page

- ☐ Metabolic Epoxidation Is a Critical Step for the Development of Benzbromarone-Induced Hepatotoxicity. *Hui Wang, Ying Peng, Tingjian Zhang, Qunsheng Lan, Huimin Zhao, Wenbao Wang, Yufei Zhao, Xu Wang, Jianxin Pang, Shaojie Wang, and Jiang Zheng* **1354**
- ☐ Expression and Functional Characterization of Breast Cancer-Associated Cytochrome P450 4Z1 in *Saccharomyces cerevisiae*. *Matthew G. McDonald, Sutapa Ray, Clara J. Amorosi, Katherine A. Sitko, John P. Kowalski, Lorela Paco, Abhinav Nath, Byron Gallis, Rheem A. Total, Maitreya J. Dunham, Douglas M. Fowler, and Allan E. Rettie* **1364**

- ☐ Histone Modifications Regulate the Developmental Expression of Human Hepatic UDP-Glucuronosyltransferase 1A1. *Ya-Li Nie, Xiang-Guang Meng, Jing-Yang Liu, Liang Yan, Pei Wang, Hong-Zheng Bi, Quan-Cheng Kan, and Li-Rong Zhang* **1372**

ERRATUM

- Correction to “Clearance Prediction Methodology Needs Fundamental Improvement: Trends Common to Rat and Human Hepatocytes/Microsomes and Implications for Experimental Methodology”. **1239**

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

About the cover: Schematic representation of the diverse effects of the tested cholestatic drugs by Sharanek et al. ([dx.doi.org/10.1124/dmd.117.077420](https://doi.org/10.1124/dmd.117.077420)).