

DRUG METABOLISM AND DISPOSITION

A Publication of the American Society for Pharmacology and Experimental Therapeutics

January 2015

Vol. 43, No. 1

CONTENTS

MINIREVIEW

- Reaction Phenotyping: Advances in the Experimental Strategies Used to Characterize the Contribution of Drug-Metabolizing Enzymes. *Michael A. Zientek and Kuresh Youdim* **163**

SHORT COMMUNICATION

- Involvement of the H⁺/Organic Cation Antiporter in Nicotine Transport in Rat Liver. *Yuma Tega, Shin-ichi Akanuma, Yoshiyuki Kubo, and Ken-ichi Hosoya* **89**

ARTICLES

- Age-Dependent Activity of the Uptake Transporters Ntcp and Oatp1b2 in Male Rat Hepatocytes: From Birth Till Adulthood. *Sarinj Fattah, Patrick Augustijns, and Pieter Annaert* **1**

- Modulation of (–)-Epicatechin Metabolism by Coadministration with Other Polyphenols in Caco-2 Cell Model. *Belén Sanchez-Bridge, Antoine Lévêques, Hequn Li, Emmanuelle Bertschy, Amaury Patin, and Lucas Actis-Goretta* **9**

- A Nonradioactive Approach to Investigate the Metabolism of Therapeutic Peptides by Tagging with ¹²⁷I and Using Inductively-Coupled Plasma Mass Spectrometry Analysis. *Heng-Keang Lim, Yuan Cao, Xi Qiu, Jose Silva, and David C. Evans* **17**

- Evaluation of 89 Compounds for Identification of Substrates for Cynomolgus Monkey CYP2C76, a New Bupropion/Nifedipine Oxidase. *Shinya Hosaka, Norie Murayama, Masahiro Satsukawa, Makiko Shimizu, Shotaro Uehara, Hideki Fujino, Kazuhide Iwasaki, Shunsuke Iwano, Yasuhiro Uno, and Hiroshi Yamazaki* **27**

- Inhibition of Human Aldehyde Oxidase Activity by Diet-Derived Constituents: Structural Influence, Enzyme-Ligand Interactions, and Clinical Relevance. *John T. Barr, Jeffrey P. Jones, Nicholas H. Oberlies, and Mary F. Paine* **34**

- Anti-CD28 Monoclonal Antibody–Stimulated Cytokines Released from Blood Suppress CYP1A2, CYP2B6, and CYP3A4 in Human Hepatocytes In Vitro. *Maciej Czerwiński, Faraz Kazmi, Andrew Parkinson, and David B. Buckley* **42**

- Mechanistic Understanding of Translational Pharmacokinetic-Pharmacodynamic Relationships in Non-clinical Tumor Models: A Case Study of Orally Available Novel Inhibitors of Anaplastic Lymphoma Kinase. *Shinji Yamazaki, Justine L Lam, Helen Y Zou, Hui Wang, Tod Smeal, and Paolo Vicini* **54**

- The Hepatobiliary Disposition of Timosaponin B2 Is Highly Dependent on Influx/Efflux Transporters but Not Metabolism. *Jingjing Sheng, Xiaoting Tian, Guanglin Xu, Zhitao Wu, Chen Chen, Le Wang, Lili Pan, Chenggang Huang, and Guoyu Pan* **63**

- Quantitative Structure-Pharmacokinetic Relationships for the Prediction of Renal Clearance in Humans. *Rutwij A. Dave and Marilyn E. Morris* **73**

- Imperatorin Is a Mechanism-Based Inactivator of CYP2B6. *Liwei Zheng, Jiaojiao Cao, Dan Lu, Lin Ji, Ying Peng, and Jiang Zheng* **82**

- Identification of a Functional Antioxidant Response Element within the Eighth Intron of the Human ABCC3 Gene. *Mark J. Canet, Matthew D. Merrell, Bryan G. Harder, Jonathan M. Maher, Tongde Wu, Andrew J. Lickteig, Jonathan P. Jackson, Donna D. Zhang, Masayuki Yamamoto, and Nathan J. Cherrington* **93**

- Effect of Experimental Kidney Disease on the Functional Expression of Hepatic Reductases. *Osama Y. Alshogran, Judith Naud, Andrew J. Ocque, François A. Leblond, Vincent Pichette, and Thomas D. Nolin* **100**

- Dog UDP-Glucuronosyltransferase Enzymes of Subfamily 1A: Cloning, Expression, and Activity. *Johanna Troberg, Erkka Järvinen, Maria Muniz,*

Downloaded from dmd.aspetjournals.org at ASPET Journals on November 29, 2020

Continued on next page

<i>Nina Sneitz, Johanna Mosorin, Marja Hagström, and Moshe Finel.</i>	107	<i>Kääriäinen, Jenni J. Hakkarainen, Aaro J. Jalkanen, Aleksanteri Petsalo, Marko Lehtonen, Lauri Peura, Jere Kurkipuro, Haritha Samaranyake, Seppo Ylä-Herttuala, Jarkko Rautio, and Markus M. Forsberg.</i>	140
HepaRG Cells as Human-Relevant In Vitro Model to Study the Effects of Inflammatory Stimuli on Cytochrome P450 Isoenzymes. <i>Katarina Rubin, Annika Janefeldt, Linda Andersson, Zsofia Berke, Ken Grime, and Tommy B. Andersson</i>	119	Transporter-Mediated Uptake of UDP–Glucuronic Acid by Human Liver Microsomes: Assay Conditions, Kinetics, and Inhibition. <i>Andrew Rowland, Peter I. Mackenzie, and John O. Miners</i>	147
Phase II Metabolism in Human Skin: Skin Explants Show Full Coverage for Glucuronidation, Sulfation, <i>N</i> -Acetylation, Catechol Methylation, and Glutathione Conjugation. <i>Nenad Manevski, Piet Swart, Kamal Kumar Balavenkatraman, Barbara Bertschi, Gian Camenisch, Olivier Kretz, Hilmar Schiller, Markus Walles, Barbara Ling, Reto Wettstein, Dirk J. Schaefer, Peter Itin, Joanna Ashton-Chess, Francois Pognan, Armin Wolf, and Karine Litherland.</i>	126	Assessing Steatotic Liver Function after Ischemia-Reperfusion Injury by In Vivo Multiphoton Imaging of Fluorescein Disposition. <i>Camilla A. Thorling, Lu Jin, Michael Weiss, Darrell Crawford, Xin Liu, Frank J. Burczynski, David Liu, Haolu Wang, and Michael S. Roberts</i>	154
Brain Pharmacokinetics of Ganciclovir in Rats with Orthotopic BT4C Glioma. <i>Mikko Gynther, Tiina M.</i>			
		ERRATUM	
		Correction to “Evaluation of Near Infrared Fluorescent Labeling of Monoclonal Antibodies as a Tool for Tissue Distribution”.	53

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

About the cover: Molecular docking of ECG in the homology model of human AO. See the article by Barr et al. ([dx.doi.org/10.1124/dmd.114.061192](https://doi.org/10.1124/dmd.114.061192)).