

DRUG METABOLISM AND DISPOSITION

A Publication of the American Society for Pharmacology and Experimental Therapeutics

November 2008

Vol. 36, No. 11

CONTENTS

SHORT COMMUNICATIONS

- Principal Component Analysis of CYP2C9 and CYP3A4 Probe Substrate/Inhibitor Panels. *Abhinav Nath and William Atkins* **2151**
- Apparent Differences in Mechanisms of Harmol Sulfate Biliary Excretion in Mice and Rats. *Maciej J. Zamek-Gliszczyński, Keith A. Hoffmaster, Ken-ichi Nezasa, and Kim L. R. Brouwer* **2156**
- Isolation and Identification of Urinary Metabolites of Berberine in Rats and Humans. *Feng Qiu, Zhiyong Zhu, Ning Kang, Shujuan Piao, Gengyao Qin, and Xinsheng Yao* **2159**
- Generation of Human Metabolites of 7-Ethoxycoumarin by Bacterial Cytochrome P450 BM3. *Dong-Hyun Kim, Keon-Hee Kim, Dae-Hwan Kim, Kwang-Hyeon Liu, Heung-Chae Jung, Jae-Gu Pan, and Chul-Ho Yun* **2166**
- Identification of Stereoisomeric Metabolites of Meisoindigo in Rat Liver Microsomes by Achiral and Chiral Liquid Chromatography/Tandem Mass Spectrometry. *Meng Huang, Lin Tang Goh, and Paul C. Ho* **2171**
- Pharmacokinetics, Metabolism, and Excretion of Torcetrapib, a Cholesteryl Ester Transfer Protein Inhibitor, in Humans. *Deepak Dalvie, Weichao Chen, Chenghong Zhang, Alfin D. Vaz, Teresa A. Smolarek, Loretta M. Cox, Jian Lin, and R. Scott Obach* **2185**
- The Molecular Basis of CYP2D6-Mediated *N*-Dealkylation: Balance between Metabolic Clearance Routes and Enzyme Inhibition. *Britta Bonn, Collen M. Masimirembwa, Yasmin Aristei, and Ismael Zamora* **2199**
- Identification of Hydroxywarfarin Binding Site in Human UDP Glucuronosyltransferase 1A10: Phenylalanine⁹⁰ Is Crucial for the Glucuronidation of 6- and 7-Hydroxywarfarin but Not 8-Hydroxywarfarin. *Grover P. Miller, Cheryl F. Lichti, Agnieszka K. Zielinska, Anna Mazur, Stacie M. Bratton, Anna Gallus-Zawada, Moshe Finel, Jeffrey H. Moran, and Anna Radominska-Pandya* **2211**
- Hepatic Metabolism and Biliary Excretion of Silymarin Flavonolignans in Isolated Perfused Rat Livers: Role of Multidrug Resistance-Associated Protein 2 (Abcc2). *Sonia R. Miranda, Jin Kyung Lee, Kim L. R. Brouwer, Zhiming Wen, Philip C. Smith, and Roy L. Hawke* **2219**
- Enzyme Kinetics of GTI-2040, a Phosphorothioate Oligonucleotide Targeting Ribonucleotide Reductase. *Xiaohui Wei, Guowei Dai, Zhongfa Liu, Hao Cheng, Zhiliang Xie, Rebecca Klisovic, Guido Marcucci, and Kenneth K. Chan* **2227**
- Differential Inhibition of Cytochromes P450 3A4 and 3A5 by the Newly Synthesized Coumarin Derivatives 7-Coumarin Propargyl Ether and 7-(4-Trifluoromethyl)coumarin Propargyl Ether. *Chitra Sridar, Ute M. Kent, Kate Noon, Alecia McCall, Bill Alworth, Maryam Foroozesh, and Paul F. Hollenberg* **2234**
- Effects of L-Lactate and D-Mannitol on γ -Hydroxybutyrate Toxicokinetics and Toxicodynamics in Rats. *Qi Wang, Xiaodong Wang, and Marilyn E. Morris* **2244**

Continued on next page

- L-Methionine-*dl*-sulfoxide Metabolism and Toxicity in Freshly Isolated Mouse Hepatocytes: Gender Differences and Inhibition with Aminooxyacetic Acid. *Joseph T. Dever and Adnan A. Elfarrar* **2252**
- Oxidative in Vitro Metabolism of Liquiritigenin, a Bioactive Compound Isolated from the Chinese Herbal Selective Estrogen β -Receptor Agonist MF101. *René Kupfer, Leah Swanson, Sylvia Chow, Richard E. Staub, Yan Ling Zhang, Isaac Cohen, and Uwe Christians* **2261**
- Identification of *Ginkgo biloba* as a Novel Activator of Pregnane X Receptor. *Eugene Y. H. Yeung, Tatsuya Sueyoshi, Masahiko Negishi, and Thomas K. H. Chang* **2270**
- Modulation of Cytochrome P450 Gene Expression and Arachidonic Acid Metabolism during Isoproterenol-Induced Cardiac Hypertrophy in Rats. *Beshay N. M. Zordoky, Mona E. Aboutabl, and Ayman O. S. El-Kadi* **2277**
- Defective Activity of Recombinant Cytochromes P450 3A4.2 and 3A4.16 in Oxidation of Midazolam, Nifedipine, and Testosterone. *Mitsue Miyazaki, Katsunori Nakamura, Yukiyooshi Fujita, F. Peter Guengerich, Ryuya Horiuchi, and Koujirou Yamamoto* **2287**
- Metabolic Profiling and Cytochrome P450 Reaction Phenotyping of Medroxyprogesterone Acetate. *Jiang-Wei Zhang, Yong Liu, Jiu-Yang Zhao, Li-Ming Wang, Guang-Bo Ge, Yang Gao, Wei Li, Hong-Tao Liu, Hui-Xin Liu, Yan-Yan Zhang, Jie Sun, and Ling Yang* **2292**
- Significance of Organic Cation Transporter 3 (SLC22A3) Expression for the Cytotoxic Effect of Oxaliplatin in Colorectal Cancer. *Sachiko Yokoo, Satoshi Masuda, Atsushi Yonezawa, Tomohiro Terada, Toshiya Katsura, and Ken-ichi Inui* **2299**
- The Configuration of the 17-Hydroxy Group Variably Influences the Glucuronidation of β -Estradiol and Epiestradiol by Human UDP-Glucuronosyltransferases. *Katriina Itäaho, Peter I. Mackenzie, Shin-ichi Ikushiro, John O. Miners, and Moshe Finel* **2307**
- Characterization of CYP2A13*2, a Variant Cytochrome P450 Allele Previously Found to Be Associated with Decreased Incidences of Lung Adenocarcinoma in Smokers. *Jaime D'Agostino, Xiuling Zhang, Hong Wu, Guoyu Ling, Suping Wang, Qing-Yu Zhang, Fucui Liu, and Xinxin Ding* **2316**
- Intravenous Formulation of *N*-Hydroxy-*N'*-(4-*n*-butyl-2-methylphenyl)formamidine (HET0016) for Inhibition of Rat Brain 20-Hydroxyecosatetraenoic Acid Formation. *Ying Mu, Megan M. Klamerus, Tricia M. Miller, Lisa C. Rohan, Steven H. Graham, and Samuel M. Poloyac* **2324**
- The Expression of Most UDP-Glucuronosyltransferases (UGTs) Is Increased Significantly during Caco-2 Cell Differentiation, whereas UGT1A6 Is Highly Expressed Also in Undifferentiated Cells. *Sanna Siissalo, Hongbo Zhang, Eric Stilgenbauer, Ann Marie Kaukonen, Jouni Hirvonen, and Moshe Finel* **2331**
- Metabolism and Disposition of Fluticasone Furoate, an Enhanced-Affinity Glucocorticoid, in Humans. *Stephen C. Hughes, Peter C. Shardlow, Frank J. Hollis, Rebecca J. Scott, Dimple S. Motivaras, Ann Allen, and Victoria M. Rousell* **2337**
- The Role of Human Hepatic Cytochrome P450 Isozymes in the Metabolism of Racemic 3,4-Methylenedioxy-Methamphetamine and Its Enantiomers. *Markus R. Meyer, Frank T. Peters, and Hans H. Maurer* **2345**
- Modeling, Prediction, and in Vitro in Vivo Correlation of CYP3A4 Induction. *Magang Shou, Mike Hayashi, Yvonne Pan, Yang Xu, Kari Morrissey, Lilly Xu, and Gary L. Skiles* **2355**
- Application of Molecular Modeling for Prediction of Substrate Specificity in Cytochrome P450 1A2 Mutants. *Youbin Tu, Rahul Deshmukh, Meena Sivaneri, and Grazyna D. Szklarz* **2371**
- Metabolism of Phenylhistin Enantiomers by Cytochromes P450: A Possible Explanation for Their Different Cytotoxicity. *Lionel Perrin, Caroline Aninat, Véronique Hamon, Yoshio Hayashi, Catherine Abadie, Bruno Heyd, François André, and Marcel Delaforge* **2381**
- Preclinical Pharmacokinetics of a HepDirect Prodrug of a Novel Phosphonate-Containing Thyroid Hormone Receptor Agonist. *James M. Fujitaki, Edward E. Cable, Bruce R. Ito, Bao-Hong Zhang, Jinzhao Hou, Chun Yang, David A. Bullough, James L. Ferrero, Paul D. van Poelje, David L. Linemeyer, and Mark D. Erion* **2393**

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

About the cover: Simulated relationship of predicted DDIs as a function of in vivo free concentration of inducer ($[Ind]_{max,ss}$) and fraction of drug cleared by CYP3A4 ($f_{m, CYP3A4}$). See article by Shou et al. on page 2355 of this issue.