## SHORT COMMUNICATIONS

**Spironolactone and Canrenone Inhibit UGT2B7-Catalyzed Human Liver and Kidney Microsomal Aldosterone 18β-Glucuronidation: A Potential Drug Interaction.** Kathleen M. Knights, Kushari Bowalgaha, and John O. Miners .......................... 1011

**Expression and Characterization of Dog Cytochrome P450 2A13 and 2A25 in Baculovirus-Infected Insect Cells.** Diansong Zhou, Alban J. Linnenbach, Ruifeng Liu, Rick A. Luzietti, Jennifer J. Harris, Catherine L. Booth-Genthe, and Scott W. Grimm ............................ 1015


**Hepatic Uptake of the Magnetic Resonance Imaging Contrast Agent Gd-EOB-DTPA: Role of Human Organic Anion Transporters.** Mirko Leonhardt, Markus Keiser, Stefan Oswald, Jens Kühn, Jia Jia, Markus Grube, Heyo K. Kroemer, Werner Siegmund, and Werner Weitschies ........ 1024

## ARTICLES

**Interplay of Dissolution, Solubility, and Nonsink Permeation Determines the Oral Absorption of the Hedgehog Pathway Inhibitor GDC-0449 in Dogs: An Investigation Using Preclinical Studies and Physiologically Based Pharmacokinetic Modeling.** Harvey Wong, Frank-Peter Theil, Yong Cui, James C. Marsters, Jr., S. Cyrus Khojasteh, Laurent Vernillet, Hank La, Xiling Song, Hong Wang, Eric J. Morinello, Yuzhong Deng, and Cornelis E. C. A. Hop .......................... 1029

**Significant Increase in Phenacetin Oxidation on L382V Substitution in Human Cytochrome P450 1A2.** Qingbiao Huang and Grazyna D. Szklarz ........ 1039

**In Vivo Responses of the Human and Murine Pregnane X Receptor to Dexamethasone in Mice.** Nico Scheer, Jillian Ross, Yury Kapelyukh, Anja Rode, and C. Roland Wolf .......................... 1046

**Vectorial Transport of Nucleoside Analogs from the Apical to the Basolateral Membrane in Double-Transfected Cells Expressing the Human Concentrative Nucleoside Transporter hCNT3 and the Export Pump ABCC4.** Maria Rius, Daniela Keller, Manuela Brom, Johanna Hummel-Eisenbeiss, Frank Lyko, and Dietrich Keppler ........... 1054

**Transporter Studies with the 3-O-Sulfate Conjugate of 17α-Ethinylestradiol: Assessment of Human Kidney Drug Transporters.** Yong-Hae Han, Dennis Busler, Yang Hong, Yuan Tian, Cliff Chen, and A. David Rodrigues .......................... 1064

**Transporter Studies with the 3-O-Sulfate Conjugate of 17α-Ethinylestradiol: Assessment of Human Liver Drug Transporters.** Yong-Hae Han, Dennis Busler, Yang Hong, Yuan Tian, Cliff Chen, and A. David Rodrigues .......................... 1072

**Characterization of HKI-272 Covalent Binding to Human Serum Albumin.** Jianyao Wang, Xiao Xian Li-Chan, Jim Atherton, Lin Deng, Robert Espina, Linning Yu, Peter Horwatt, Steven Ross, Susan Lockhead, Syed Ahmad, Appavu Chandrasekaran, Aram Oganesian, JoAnn Scatina, Abdul Mutlib, and Rasmy Talaat .......................... 1083

**Confidence Assessment of the Simcyp Time-Based Approach and a Static Mathematical Model in Predict-
ing Clinical Drug-Drug Interactions for Mechanism-Based CYP3A Inhibitors. Ying-Hong Wang ... 1094

Differential Roles of Phase I and Phase II Enzymes in 3,4-Methylenedioxyamphetamine-Induced Cytotoxicity. Irene Antolino-Lobo, Jan Meulenbelt, Sandra M. Nijmeijer, Peter Scherpenisse, Martin van den Berg, and Majorie B. M. van Duursen ... 1105

In Vitro-In Vivo Correlation and Translation to the Clinical Outcome for Cj-13,610, a Novel Inhibitor of 5-Lipooxygenase. J. Matthew Hutzel, Collette D. Linder, Roger J. Melton, John Vincent, and J. Scott Daniels ... 1113

Energy Restriction Does Not Compensate for the Reduced Expression of Hepatic Drug-Processing Genes in Mice with Aging. Yu-Kun Jennifer Zhang, Kurt W. Saupe, and Curtis D. Klaassen ... 1122

Regioselective Glucuronidation of Tanshinone Ila after Quinone Reduction: Identification of Human UDP-Glucuronosyltransferases, Species Differences, and Interaction Potential. Qiong Wang, Haiping Hao, Xuanxuan Zhu, Guo Yu, Li Lai, Yitong Liu, Yuxin Wang, Shan Jiang, and Guangji Wang ... 1132

Identification of the Human UDP-Glucuronosyltransferases Involved in the Glucuronidation of Combrastatin A-4. Silvio Aprile, Erika Del Grosso, and Giorgio Groso ... 1141

Prediction of Human Intestinal First-Pass Metabolism of 25 CYP3A Substrates from In Vitro Clearance and Permeability Data. Michael Gertz, Anthony Harrison, J. Brian Houston, and Aleksandra Galetin ... 1147

Use of the Øie-Tozer Model in Understanding Mechanisms and Determinants of Drug Distribution. Nigel J. Waters and Franco Lombardo ... 1159

Metabolism of Fostamatinib, the Oral Methylene Phosphate Prodrug of the Spleen Tyrosine Kinase Inhibitor R406 in Humans: Contribution of Hepatic and Gut Bacterial Processes to the Overall Biotransformation. David J. Sweeney, Weiqun Li, Jeffrey Clough, Somasekhar Bhamidipati, Rajinder Singh, Gary Park, Muhammad Balam, Elliott Grossbard, and David T.-W. Lau ... 1166

The Nuclear Receptors Constitutive Active/Androstan Receptor and Pregnane X Receptor Activate the Cyp2c55 Gene in Mouse Liver. Yoshihiro Konno, Hiroki Kamino, Rick Moore, Fred Lih, Kenneth B. Tomer, Darryl C. Zeldin, Joyce A. Goldstein, and Masahiko Negishi ... 1177

[Supplemental material is available online at http://dmd.aspetjournals.org.]

Contents (cont’d.)

Contribution of Rat Pulmonary Metabolism to the Elimination of Lidocaine, Midazolam, and Nifedipine. Makoto Aoki, Kazuho Okudaiera, Makoto Haga, Ryuichiro Nishigaki, and Masahiro Hayashi ... 1183

Metabolism and Disposition of $^{14}$C-BMS-690514 after Oral Administration to Rats, Rabbits, and Dogs. Haizheng Hong, Hong Su, Haojun Sun, Alban Allentoff, Hokeo V. Ekhat, Theodore Chando, Janet Caceres-Cortes, Vikram Roongta, Ramaswamy A. Iyer, W. Griffith Humphreys, and Lisa J. Christopher ... 1189

Identification of the Human Enzymes Responsible for the Enzymatic Hydrolysis of Aclidinium Bromide. Joan Alberi, Audrey Martinet, Sònia Sentelles, and Miquel Salva ... 1202

Role of UDP-Glucuronosyltransferase Isoforms in 13-cis Retinoic Acid Metabolism in Humans. Sophie E. Rowbotham, Nicola A. Illingworth, Ann K. Daly, Gareth J. Veal, and Alan V. Boddy ... 1211

Efavirenz Primary and Secondary Metabolism In Vitro and In Vivo: Identification of Novel Metabolic Pathways and Cytochrome P450 2A6 as the Principal Catalyst of Efavirenz 7-Hydroxylation. Evan T. Ogbum, David R. Jones, Andrea R. Masters, Cong Xu, Yingying Guo, and Zeruensay Desta ... 1218

Quantitative Prediction of Intestinal Metabolism in Humans from a Simplified Intestinal Availability Model and Empirical Scaling Factor. Keitaro Kado, Takaaki Akabane, Kenji Tabata, Katsuhiko Gato, Shigeyuki Terashita, and Toshio Teramura ... 1230

Cytochrome P450-Mediated Bioactivation of the Epidermal Growth Factor Receptor Inhibitor Erlotinib to a Reactive Electrophile. Xiaohai Li, Theodore M. Kamenecka, and Michael D. Cameron ... 1238

Shared Regulation of UGT1A7 by Hepatocyte Nuclear Factor (HNF) 1a and HNF4a. Ursula Ehmmer, Sandra Kalthoff, Tim O. Lankisch, Nicole Freiberg, Michael P. Manns, and Christian P. Strassburg ... 1246

ERRATA

Correction to “5'-Aminocarbonyl Phosphonates as New Zidovudine Depot Forms: Antiviral Properties, Intracellular Transformations, and Pharmacokinetic Parameters” ... 1258

Correction to “Quantifying the Metabolic Activation of Nevirapine in Patients by Integrated Applications of NMR and Mass Spectrometries” ... 1259

About the cover: Simplified scheme describing EE2 disposition after oral administration with focus on transport of EE2-Sul. See the article by Han et al. on page 1064 of this issue.