

DRUG METABOLISM AND DISPOSITION

A Publication of the American Society for Pharmacology and Experimental Therapeutics

September 2008

Vol. 36, No. 9

CONTENTS

SHORT COMMUNICATIONS

Androgen Regulation of Renal Uridine Diphosphoglucuronosyltransferase 1A1 in Rats. *Stephan T. Stern, Melanie N. Tallman, Kristini K. Miles, Joseph K. Ritter, and Philip C. Smith* **1737**

A Novel Bioactivation Pathway for 2-[2-(2,6-Dichlorophenyl) aminophenyl]ethanoic Acid (Diclofenac) Initiated by Cytochrome P450-Mediated Oxidative Decarboxylation. *Mark P. Grillo, Ji Ma, Yohannes Teffera, and Daniel J. Waldon* . **1740**

ARTICLES

Species Differences in UDP-Glucuronosyltransferase Activities in Mice and Rats. *Hirotaida Shiratani, Miki Katoh, Miki Nakajima, and Tsuyoshi Yokoi* . . **1745**

Metabolism, Distribution, and Excretion of a Next Generation Selective Estrogen Receptor Modulator, Lasofoxifene, in Rats and Monkeys. *Chandra Prakash, Kim A. Johnson, Clinton M. Schroeder, and Michael J. Potchoiba* **1753**

Covalent Binding and Tissue Distribution/Retention Assessment of Drugs Associated with Idiosyncratic Drug Toxicity. *Hideo Takakusa, Hiroshi Masumoto, Hideo Yukinaga, Chie Makino, Shintaro Nakayama, Osamu Okazaki, and Kenichi Sudo* **1770**

The Dihydroorotase Inhibitor 5-Aminoorotic Acid Inhibits the Metabolism in the Rat of the Cardio-protective Drug Dextrazoxane and Its One-Ring Open Metabolites. *Patricia E. Schroeder, Daywin Patel, and Brian B. Hasinoff* **1780**

Decreased Expression of Cytochromes P450 1A2, 2E1, and 3A4 and Drug Transporters Na⁺-Taurocholate-

Cotransporting Polypeptide, Organic Cation Transporter 1, and Organic Anion-Transporting Peptide-C Correlates with the Progression of Liver Fibrosis in Chronic Hepatitis C Patients. *Kenya Nakai, Hiromasa Tanaka, Kazuhiko Hanada, Hiroyasu Ogata, Fumitaka Suzuki, Hiromitsu Kumada, Atsuko Miyajima, Seiichi Ishida, Momoko Sunouchi, Wataru Habano, Yuichiro Kamikawa, Keiichi Kubota, Junji Kita, Shogo Ozawa, and Yasuo Ohno* **1786**

Metabolism and Transport of the Citrus Flavonoid Hesperetin in Caco-2 Cell Monolayers. *Walter Brand, Petronella A. I. van der Wel, Maarit J. Rein, Denis Barron, Gary Williamson, Peter J. van Bladeren, and Ivonne M. C. M. Rietjens* . . . **1794**

Cytochrome P450 2C11 5'-Flanking Region and Promoter Mediate in Vivo Suppression by 3-Methylcholanthrene. *Rana M. Sawaya and David S. Riddick* **1803**

Binding of Pimecrolimus and Tacrolimus to Skin and Plasma Proteins: Implications for Systemic Exposure after Topical Application. *H. Markus Weiss, Marcel Fresneau, Thomas Moenius, Anton Stuetz, and Andreas Billich* **1812**

Down-Regulation of the Carcinogen-Metabolizing Enzyme Cytochrome P450 1a1 by Vanadium. *Anwar Anwar-Mohamed and Ayman O. S. El-Kadi* **1819**

Identification of the Human Enzymes Involved in the Oxidative Metabolism of Dasatinib: An Effective Approach for Determining Metabolite Formation Kinetics. *Lifei Wang, Lisa J. Christopher, Donghui Cui, Wenying Li, Ramaswamy Iyer, W. Griffith Humphreys, and Donglu Zhang* . . . **1828**

Continued on next page

Drug Metabolism and Disposition (ISSN 0090-9556) is published monthly (one volume per year) by the American Society for Pharmacology and Experimental Therapeutics, 9650 Rockville Pike, Bethesda, MD 20814-3995; e-mail: info@aspet.org; Web site: http://www.aspet.org Periodicals postage paid at Bethesda, MD and at additional mailing offices. POSTMASTER: Send address changes to *Drug Metabolism and Disposition*, 9650 Rockville Pike, Bethesda, MD 20814-3995. Subscription rates: U.S.: \$374.00 for institutions and \$195.00 for non-ASPET members. Outside the U.S.: \$448.00 for institutions and \$269.00 for non-ASPET members. Single copy: \$36.00. GST Tax Number for Canadian subscribers: BN:13489 2330 RT. Indexed or abstracted by *Biochemistry & Biophysics Citation Index®*, *Biological Abstracts*, *BIOSIS Previews Database*, *BioSciences Information Service*, *Current Awareness in Biological Sciences*, *Current Contents®/Life Sciences*, *EMBASE/Excerpta Medica*, *Index Medicus*, *International Pharmaceutical Abstracts*, *Medical Documentation Service®*, *Reference Update®*, *Research Alert®*, *Science Citation Index®*, *SciSearch®*, and *SIIC Data Bases*. Copyright © 2008 by the American Society for Pharmacology and Experimental Therapeutics. All rights reserved. Printed in the U.S.A.

Utility of a Novel Oatp1b2 Knockout Mouse Model for Evaluating the Role of Oatp1b2 in the Hepatic Uptake of Model Compounds. <i>Cuiping Chen, Jeffery L. Stock, Xingrong Liu, Jilin Shi, Jeffrey W. Van Deusen, Debra A. DiMattia, Robert G. Dullea, and Sonia M. de Morais</i>	1840	<i>Michael W. Fried, Angela D. M. Kashuba, and Roy L. Hawke</i>	1909
Pharmacokinetics and Brain Penetration of Casopitant, a Potent and Selective Neurokinin-1 Receptor Antagonist, in the Ferret. <i>Elisabeth Minthorn, Thomas Mencken, Andrew G. King, Art Shu, David Rominger, Richard R. Gontarek, Chao Han, Ramesh Bambal, and Charles B. Davis</i>	1846	Cannabidiolic Acid as a Selective Cyclooxygenase-2 Inhibitory Component in Cannabis. <i>Shuso Takeda, Koichiro Misawa, Ikuo Yamamoto, and Kazuhito Watanabe</i>	1917
Biodistribution of Radiolabeled Ethanol in Rodents. <i>Andrew N. Gifford, Mel Pilar Espaillat, and S. John Gatley</i>	1853	Blood Monocyte-Derived Neohepatocytes as in Vitro Test System for Drug Metabolism. <i>S. Ehnert, A. K. Nussler, A. Lehmann, and S. Dooley</i>	1922
Placental Transfer and Fetal Elimination of Morphine-3- β -glucuronide in the Pregnant Baboon. <i>Marianne Garland, Kirsten M. Abildskov, Tung-wah Kiu, Salha S. Daniel, Piper Weldy, and Raymond I. Stark</i>	1859	☐ mRNA Distribution and Heterologous Expression of Orphan Cytochrome P450 20A1. <i>Katarina Stark, Zhong-Liu Wu, Cheryl J. Bartleson, and F. Peter Guengerich</i>	1930
Metabolism Distribution and Excretion of a Matrix Metalloproteinase-13 Inhibitor, 4-[4-(4-Fluorophenoxy)-benzenesulfonylamino]tetrahydropyran-4-carboxylic Acid Hydroxyamide (CP-544439), in Rats and Dogs: Assessment of the Metabolic Profile of CP-544439 in Plasma and Urine of Humans. <i>Deepak Dalvie, Theresa Cosker, Tracey Boyden, Sue Zhou, Clinton Schroeder, and Michael J. Potchoiba</i>	1869	Novel Binding Mode of the Acidic CYP2D6 Substrates Pactimibe and Its Metabolite R-125528. <i>Masakatsu Kotsuma, Hiroyuki Hanzawa, Yoriko Iwata, Kenji Takahashi, and Taro Tokui</i>	1938
Inherent Sexually Dimorphic Expression of Hepatic CYP2C12 Correlated with Repressed Activation of Growth Hormone-Regulated Signal Transduction in Male Rats. <i>Chellappagounder Thangavel and Bernard H. Shapiro</i>	1884	Effect of Endotoxin on the Expression of Placental Drug Transporters and Glyburide Disposition in Pregnant Rats. <i>Vanja Petrovic, Jing-Hung Wang, and Micheline Piquette-Miller</i>	1944
Identification of Enzymes Involved in the Metabolism of 17 α -Hydroxyprogesterone Caproate: An Effective Agent for Prevention of Preterm Birth. <i>Shringi Sharma, Junhai Ou, Stephen Strom, Don Mattison, Steve Caritis, and Raman Venkataraman</i>	1896	☐ Gemcitabine Pharmacogenomics: Deoxycytidine Kinase and Cytidylate Kinase Gene Resequencing and Functional Genomics. <i>Neslihan Aygun Kocabas, Pinar Aksoy, Linda L. Pellemounter, Irene Moon, Jeong-Seon Ryu, Judith A. Gilbert, Oreste Ezequel Salavaggione, Bruce W. Eckloff, Eric D. Wieben, Vivien Yee, Richard M. Weinshilboun, and Matthew M. Ames</i>	1951
Characterization of Substrate Specificity of Dog CYP1A2 Using CYP1A2-Deficient and Wild-Type Dog Liver Microsomes. <i>Masashi Mise, Takatori Hashizume, and Setsuko Komuro</i>	1903	Prominent Expression of Xenobiotic Efflux Transporters in Mouse Extraembryonic Fetal Membranes Compared with Placenta. <i>Lauren M. Aleksunes, Yue Cui, and Curtis D. Klaassen</i>	1960
The Pharmacokinetics of Silymarin Is Altered in Patients with Hepatitis C Virus and Nonalcoholic Fatty Liver Disease and Correlates with Plasma Caspase-3/7 Activity. <i>Sarah J. Schrieber, Zhiming Wen, Manoli Vourvahis, Philip C. Smith,</i>			

ACCELERATED COMMUNICATION

Prediction of Drug-Drug Interactions from in Vitro Induction Data: Application of the Relative Induction Score Approach Using Cryopreserved Human Hepatocytes. <i>Odette A. Fahmi, Sherri Boldt, Mary Kish, R. Scott Obach, and Larry M. Tremaine</i>	1971
---	-------------

ERRATUM

Correction to “A Combined Model for Predicting CYP3A4 Clinical Net Drug-Drug Interaction Based on CYP3A4 Inhibition, Inactivation, and Induction Determined in Vitro”.	1975
--	-------------

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

About the cover: Immunohistochemical detection of Bcrp in placentas of 24-h saline-treated (A–C) and endotoxin-treated (0.5 mg/kg) (D–F) rats. See article by Petrovic et al. on page 1944 of this issue.