

DRUG METABOLISM AND DISPOSITION

A Publication of the American Society for Pharmacology and Experimental Therapeutics

July 2006

Vol. 34, No. 7

CONTENTS

ARTICLES

- Induction of Detoxifying Enzymes in Rodent White Adipose Tissue by Aryl Hydrocarbon Receptor Agonists and Antioxidants. KOUICHI YOSHINARI, NAO OKINO, TAKESHI SATO, JUNKO SUGATANI, AND MASAO MIWA **1081**
- Stereoselective Metabolism of Endosulfan by Human Liver Microsomes and Human Cytochrome P450 Isoforms. HWA-KYUNG LEE, JOON-KWAN MOON, CHUL-HEE CHANG, HOON CHOI, HEE-WON PARK, BYEOUNG-SOO PARK, HYE-SUK LEE, EUL-CHUL HWANG, YOUNG-DEUK LEE, KWANG-HYEON LIU, AND JEONG-HAN KIM **1090**
- Regulation of *CYP1A1* Gene Expression by the Antioxidant *tert*-Butylhydroquinone. THOMAS D. SCHREIBER, CHRISTOPH KÖHLE, FELICITAS BUCKLER, STEFAN SCHMOHL, ALBERT BRAEUNING, ALEXANDER SCHMIECHEN, MICHAEL SCHWARZ, AND PETER A. MÜNZEL **1096**
- Human UDP-Glucuronosyltransferase, UGT1A8, Glucuronidates Dihydrotestosterone to a Mono-glucuronide and Further to a Structurally Novel Diglucuronide. TAKAHIRO MURAI, NAOZUMI SAMATA, HARUO IWABUCHI, AND TOSHIHIKO IKEDA **1102**
- Predominant Contribution of OATP1B3 to the Hepatic Uptake of Telmisartan, an Angiotensin II Receptor Antagonist, in Humans. NAOKI ISHIGURO, KAZUYA MAEDA, WATARU KISHIMOTO, ASAMI SAITO, AKIKO HARADA, THOMAS EBNER, WILLY ROTH, TAKASHI IGARASHI, AND YUICHI SUGIYAMA **1109**
- The Role of the Polymorphic Efflux Transporter P-glycoprotein on the Brain Accumulation of *d*-Methylphenidate and *d*-Amphetamine. HAO-JIE ZHU, JUN-SHENG WANG, C. LINDSAY DEVANE, ROBIN L. WILLIARD, JENNIFER L. DONOVAN, LAWRENCE D. MIDDAGH, BRIAN B. GIBSON, KENNERLY S. PATRICK, AND JOHN S. MARKOWITZ **1116**
- Quantitative Determination of Aristolochic Acid-Derived DNA Adducts in Rats Using ³²P-Postlabeling/Polyacrylamide Gel Electrophoresis Analysis. HUAN DONG, NAOMI SUZUKI, MARIA C. TORRES, RADHA R. BONALA, FRANCIS JOHNSON, ARTHUR P. GROLLMAN, AND SHINYA SHIBUTANI **1122**
- The in Vivo and in Vitro Metabolic Profile of ^{99m}Tc-NC100668, a New Tracer for Imaging Venous Thromboembolism: Identification and Biodistribution of the Principal Radiolabeled Metabolite. DAVID EDWARDS, MARK BATTLE, ROCHELLE LEAR, GILL FARRAR, D. JON BARNETT, VANESSA GODDEN, CATHERINE COOMBES, ALEXANDRA OLIVEIRA, AND HÅKAN AHLSTRÖM **1128**
- Quinacrine Is Mainly Metabolized to Mono-Desethyl Quinacrine by CYP3A4/5 and Its Brain Accumulation Is Limited by P-glycoprotein. YONG HUANG, HIDEAKI OKOCHI, BARNABY C. H. MAY, GIUSEPPE LEGNAME, STANLEY B. PRUSINER, LESLIE Z. BENET, B. JOSEPH GUGLIELMO, AND EMIL T. LIN **1136**
- Neurotoxic Pyridinium Metabolites of Haloperidol Are Substrates of Human Organic Cation Transporters. HO-JIN KANG, SANG-SEOP LEE, CHUNG-HEE LEE, JU-CHEOL SHIM, HO JUNG SHIN, KWANG-HYEON LIU, MI-AE YOO, AND JAE-GOOK SHIN **1145**
- Identification of Human Hepatic Cytochrome P450 Enzymes Involved in the Metabolism of 8-Pre-nylnaringenin and Isoxanthohumul from Hops (*Humulus lupulus* L.). JIAN GUO, DEJAN NIKOLIC,

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.: \$339.00 for institutions and \$177.00 for non-ASPET members. Outside the U.S.: \$408.00 for institutions and \$246.00 for non-ASPET members. Single copy: \$35.00. 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 © 2006 by the American Society for Pharmacology and Experimental Therapeutics. All rights reserved. Printed in the U.S.A.

LUCAS R. CHADWICK, GUIDO F. PAULI, AND RICHARD B. VAN BREEMEN	1152	AND STEPHEN D. HALL	1208
Selective Effects of Nitric Oxide on the Disposition of Chlorzoxazone and Dextromethorphan in Isolated Perfused Rat Livers. RAGINI VUPPUGALLA AND REZA MEHVAR	1160	The Novel UGT1A9 Intronic I399 Polymorphism Appears as a Predictor of 7-Ethyl-10-Hydroxycamptothecin Glucuronidation Levels in the Liver. HUGO GIRARD, LYNE VILLENEUVE, MICHAEL H. COURT, LOUIS-CHARLES FORTIER, PATRICK CARON, QIN HAO, LISA L. VON MOLTKE, DAVID J. GREENBLATT, AND CHANTAL GUILLEMETTE	1220
Expression, Purification, and Characterization of Mouse Cyp2d22. AI-MING YU AND ROBERT L. HAINING	1167	Drug-Drug Interaction between Pitavastatin and Various Drugs via OATP1B1. MASARU HIRANO, KAZUYA MAEDA, YOSHIHISA SHITARA, AND YUICHI SUGIYAMA	1229
Pharmacokinetics of Atorvastatin and Its Hydroxy Metabolites in Rats and the Effects of Concomitant Rifampicin Single Doses: Relevance of First-Pass Effect from Hepatic Uptake Transporters, and Intestinal and Hepatic Metabolism. YVONNE Y. LAU, HIDEAKI OKOCHI, YONG HUANG, AND LESLIE Z. BENET	1175	[S] Glutathione S-Transferase Omega 1 and Omega 2 Pharmacogenomics. BAIDEHI MUKHERJEE, ORESTE E. SALAVAGGIONE, LINDA L. PELLEYMOUNTER, IRENE MOON, BRUCE W. ECKLOFF, DANIEL J. SCHAID, ERIC D. WIEBEN, AND RICHARD M. WEINSHILBOUM	1237
First-Pass Effects of Verapamil on the Intestinal Absorption and Liver Disposition of Fexofenadine in the Porcine Model. NICLAS PETRI, EBBA BERGMAN, PATRIK FORSELL, MIKAEL HEDELAND, ULF BONDESSON, LARS KNUTSON, AND HANS LENNERNAS	1182	Involvement of Transporters in the Hepatic Uptake and Biliary Excretion of Valsartan, a Selective Antagonist of the Angiotensin II AT1-Receptor, in Humans. WAKABA YAMASHIRO, KAZUYA MAEDA, MASAKAZU HIROUCHI, YASUHISA ADACHI, ZHUOHAN HU, , AND YUICHI SUGIYAMA	1247
Induction of Genes for Metabolism and Transport by <i>trans</i> -Stilbene Oxide in Livers of Sprague-Dawley and Wistar-Kyoto Rats. A. L. SLITT, N. J. CHERRINGTON, C. D. FISHER, M. NEGISHI, AND C. D. KLAASSEN	1190	Extrapolation of Preclinical Pharmacokinetics and Molecular Feature Analysis of "Discovery-Like" Molecules to Predict Human Pharmacokinetics. CHRISTOPHER A. EVANS, LARRY J. JOLIVETTE, RAKESH NAGILLA, AND KEITH W. WARD	1255
Factors Influencing Midazolam Hydroxylation Activity in Human Liver Microsomes. PING HE, MICHAEL H. COURT, DAVID J. GREENBLATT, AND LISA L. VON MOLTKE	1198	[S] Profiling the Hepatic Effects of Flutamide in Rats: A Microarray Comparison with Classical Aryl Hydrocarbon Receptor Ligands and Atypical CYP1A Inducers. KEVIN J. COE, SIDNEY D. NELSON, ROGER G. ULRICH, YUDONG HE, XUDONG DAI, OLIVIA CHENG, MICHELLE CAGUYONG, CHRIS J. ROBERTS, AND J. GREG SLATTER	1266
Stochastic Prediction of CYP3A-Mediated Inhibition of Midazolam Clearance by Ketoconazole. JENNY Y. CHIEN, AROONRUT LUCKSIRI, CHARLES S. ERNEST II, J. CHRISTOPHER GORSKI, STEVEN A. WRIGHTON,			

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

About the cover: Human GSTO1 (A) and GSTO2 (B) polymorphisms. See the article by Mukherjee et al. on page 1237 of this issue.