

DRUG METABOLISM AND DISPOSITION

A Publication of the American Society for Pharmacology and Experimental Therapeutics

August 2010

Vol. 38, No. 8

CONTENTS

SHORT COMMUNICATION

- Relevance of Nonsynonymous CYP2C8 Polymorphisms to 13-*cis* Retinoic Acid and Paclitaxel Hydroxylation. *Sophie E. Rowbotham, Alan V. Boddy, Chris P. F. Redfern, Gareth J. Veal, and Ann K. Daly* **1261**

ARTICLES

- Formation Pathways of γ -Butyrolactone from the Furan Ring of Tegafur during Its Conversion to 5-Fluorouracil. *Ikuo Yamamiya, Kunihiko Yoshisue, Eiji Matsushima, and Sekio Nagayama* **1267**

- Species-Specific Metabolism of SGX523 by Aldehyde Oxidase and the Toxicological Implications. *Sharon Diamond, Jason Boer, Thomas P. Maduskuie, Jr., Nikoo Falahatpisheh, Yu Li, and Swamy Yeleswaram* **1277**

- Furanocoumarin Derivatives in Kampo Extract Medicines Inhibit Cytochrome P450 3A4 and P-Glycoprotein. *Kazunori Iwanaga, Manami Hayashi, Yukimi Hamahata, Makoto Miyazaki, Makio Shibano, Masahiko Taniguchi, Kimiye Baba, and Masawo Kakemi* **1286**

- Identification of Novel Metoclopramide Metabolites in Humans: In Vitro and In Vivo Studies. *Upen-dra A. Argikar, Javier Gomez, Din Ung, Henry P. Parkman, and Swati Nagar* **1295**

- Methadone: A Substrate and Mechanism-Based Inhibitor of CYP19 (Aromatase). *Wenjie Jessie Lu, Robert Bies, Landry K. Kamden, Zeruesenay Desta, and David A. Flockhart* **1308**

- The *N*-Oxide Metabolite Contributes to Bladder Selectivity Resulting from Oral Propiverine: Mus-

- carinic Receptor Binding and Pharmacokinetics. *Shizuo Yamada, Yoshihiko Ito, Yuko Taki, Masanao Seki, Masato Nanri, Fumiaki Yamashita, Kayo Morishita, Ikumi Komoto, and Ken-ichiro Yoshida* **1314**

- In Vitro-In Vivo Correlation for Intrinsic Clearance for Drugs Metabolized by Human Aldehyde Oxidase. *Michael Zientek, Ying Jiang, Kuresh Youdim, and R. Scott Obach* **1322**

- Metabolism of Flumatinib, a Novel Antineoplastic Tyrosine Kinase Inhibitor, in Chronic Myelogenous Leukemia Patients. *Aishen Gong, Xiaoyan Chen, Pan Deng, and Dafang Zhong* **1328**

- In Vitro to In Vivo Comparison of the Substrate Characteristics of Sorafenib Tosylate toward P-Glycoprotein. *M. J. Gnoth, S. Sandmann, K. Engel, and M. Radtke* **1341**

- Computational Prediction of Binding Affinity for CYP1A2-Ligand Complexes Using Empirical Free Energy Calculations. *Poongavanam Vasanathan, Lars Olsen, Flemming Steen Jørgensen, Nico P. E. Vermeulen, and Chris Oost-enbrink* **1347**

- Central Nervous System Penetration for Small Molecule Therapeutic Agents Does Not Increase in Multiple Sclerosis- and Alzheimer's Disease-Related Animal Models Despite Reported Blood-Brain Barrier Disruption. *Ziqiang Cheng, Jinqiang Zhang, Houfu Liu, Yi Li, Yonggang Zhao, and Eric Yang* **1355**

- In Silico Classification of Major Clearance Pathways of Drugs with Their Physicochemical Parameters. *Makiko Kusama, Kouta Toshimoto,*

Continued on next page

Contents (cont'd.)

Kazuya Maeda, Yuka Hirai, Satoki Imai, Koji Chiba, Yutaka Akiyama, and Yuichi Sugiyama . . . **1362**

Comparison of ATP-Binding Cassette Transporter Interactions with the Tyrosine Kinase Inhibitors Imatinib, Nilotinib, and Dasatinib. *Marius Dohse, Christian Scharenberg, Suneet Shukla, Robert W. Robey, Thorsten Volkmann, John F.*

Deeken, Cornelia Brendel, Suresh V. Ambudkar, Andreas Neubauer, and Susan E. Bates **1371**

☐ Metabolism of Ramelteon in Human Liver Microsomes and Correlation with the Effect of Fluvoxamine on Ramelteon Pharmacokinetics. *R. Scott Obach and Tim F. Ryder 1381*

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

About the cover: Distribution of drugs in the three-dimensional area and the rectangular boundaries for each pathway. See the article by Kusama et al. on page 1362 of this issue.