

# DRUG METABOLISM AND DISPOSITION

A Publication of the American Society for Pharmacology and Experimental Therapeutics

February 2014

Vol. 42, No. 2

## CONTENTS

### SHORT COMMUNICATIONS

- Cytochrome P450 mRNA Expression in the Rodent Brain: Species-, Sex-, and Region-Dependent Differences. *Marianna Stamou, Xianai Wu, Izabela Kania-Korwel, Hans-Joachim Lehmler, and Pamela J. Lein* . . . . . **239**

- Amlodipine Metabolism in Human Liver Microsomes and Roles of CYP3A4/5 in the Dihydropyridine Dehydrogenation. *Yanlin Zhu, Fen Wang, Quan Li, Mingshe Zhu, Alicia Du, Wei Tang, and Weiqing Chen* . . . . . **245**

### ARTICLES

- Identification of Carboxylesterase-Dependent Dabigatran Etxilate Hydrolysis. *S. Casey Laizure, Robert B. Parker, Vanessa L. Herring, and Zhe-Yi Hu* . . . . . **201**

- The Role of Lymphatic Transport on the Systemic Bioavailability of the Bcl-2 Protein Family Inhibitors Navitoclax (ABT-263) and ABT-199. *Edna F. Choo, Jason Boggs, Chunqiang Zhu, Joseph W. Lubach, Nathaniel D. Catron, Gary Jenkins, Andrew J. Souers, and Richard Voorman* . . . . . **207**

- CYP3A4-Mediated  $\alpha$ -Hydroxyaldehyde Formation in Saquinavir Metabolism. *Feng Li, Jie Lu, and Xiaochao Ma* . . . . . **213**

- Protein Restoration in Low-Birth-Weight Rat Offspring Derived from Maternal Low-Protein Diet Leads to Elevated Hepatic CYP3A and CYP2C11 Activity in Adulthood. *Gurjeev Sohi, Eric J. Barry, Thomas J. Velenosi, Bradley L. Urquhart, and Daniel B. Hardy* . . . . . **221**

- Alteration of the Function of the UDP-Glucuronosyltransferase 1A Subfamily by Cytochrome P450 3A4: Different Susceptibility for UGT Isoforms and UGT1A1/7 Variants. *Yuji*

- Ishii, Hiroki Koba, Kousuke Kinoshita, Toshiya Oizaki, Yuki Iwamoto, Shuso Takeda, Yuu Miyauchi, Yoshio Nishimura, Natsuki Egoshi, Futoshi Taura, Satoshi Morimoto, Shin'ichi Ikushiro, Kiyoshi Nagata, Yasushi Yamazoe, Peter I. Mackenzie, and Hideyuki Yamada* . . . . . **229**

- Impact of Endogenous Esterase Activity on In Vitro P-Glycoprotein Profiling of Dabigatran Etxilate in Caco-2 Monolayers. *Naoki Ishiguro, Wataru Kishimoto, Astrid Volz, Eva Ludwig-Schwellingner, Thomas Ebner, and Olaf Schaefer* . . . . . **250**

- In Vitro Predictability of Drug-Drug Interaction Likelihood of P-Glycoprotein-Mediated Efflux of Dabigatran Etxilate Based on  $[I]_2/IC_{50}$  Threshold. *Wataru Kishimoto, Naoki Ishiguro, Eva Ludwig-Schwellingner, Thomas Ebner, and Olaf Schaefer* . . . . . **257**

- Distinct Patterns of Aging Effects on the Expression and Activity of Carboxylesterases in Rat Liver and Intestine. *Kayoko Ohura, Katsumi Tasaka, Mitsuru Hashimoto, and Teruko Imai* . . . . . **264**

- Metabolism of Salvianolic Acid A and Antioxidant Activities of Its Methylated Metabolites. *Hui Xu, Yanli Li, Xin Che, Hongcui Tian, Huaying Fan, and Ke Liu* . . . . . **274**

- Enhanced Nicotine Metabolism in HIV-1-Positive Smokers Compared with HIV-Negative Smokers: Simultaneous Determination of Nicotine and its Four Metabolites in Their Plasma Using a Simple and Sensitive Electrospray Ionization Liquid Chromatography-Tandem Mass Spectrometry Technique. *Ravinder Earla, Anusha Ande, Carole McArthur, Anil Kumar, and Santosh Kumar* . . . . . **282**

- Increases in Levels of Epoxyeicosatrienoic and Dihydroxyeicosatrienoic Acids (EETs and DHETs) in Liver and Heart in Vivo by 2,3,7,8-Tetrachlorodibenzo-*p*-Dioxin (TCDD) and in Hepatic

Downloaded from dmd.aspetjournals.org at ASPET Journals on May 27, 2022

Continued on next page

EET:DHET Ratios by Cotreatment with TCDD  
and the Soluble Epoxide Hydrolase Inhibitor

AUDA. *Silvia Diani-Moore, Yuliang Ma, Steven  
S. Gross, and Arleen B. Rifkind* . . . . . **294**

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

*About the cover:* Cumulative lymphatic transport of drug (as a % of dose) in thoracic lymphcannulated dogs. See the article by Choo et al. ([dx.doi.org/10.1124/dmd.113.055053](https://doi.org/10.1124/dmd.113.055053)).