

# DRUG METABOLISM AND DISPOSITION

A Publication of the American Society for Pharmacology and Experimental Therapeutics

June 2017

Vol. 45, No. 6

## CONTENTS

### ARTICLES

- Applying Stable Isotope Labeled Amino Acids in Micropatterned Hepatocyte Coculture to Directly Determine the Degradation Rate Constant for CYP3A4. *Ryan H. Takahashi, Sheerin K. Shahidi-Latham, Susan Wong, and Jae H. Chang* . . . . . **581**
- Prolactin Upregulates Female-Predominant *P450* Gene Expressions and Downregulates Male-Predominant Gene Expressions in Mouse Liver. *Yuya Sato, Yoshikatsu Kaneko, Takamasa Cho, Kei Goto, Tadashi Otsuka, Suguru Yamamoto, Shin Goto, Hiroki Maruyama, and Ichiei Narita* . . . . . **586**
- Increased Plasma Exposures of Conjugated Metabolites of Morinidazole in Renal Failure Patients: A Critical Role of Uremic Toxins. *Fandi Kong, Xiaoyan Pang, Kan Zhong, Zitao Guo, Xiuli Li, Dafang Zhong, and Xiaoyan Chen* . . . . . **593**
- Coproporphyrin-I: A Fluorescent, Endogenous Optimal Probe Substrate for ABCC2 (MRP2) Suitable for Vesicle-Based MRP2 Inhibition Assay. *Ravindranath Reddy Gilibili, Sagnik Chatterjee, Pravin Bagul, Kathleen W. Mosure, Bokka Venkata Murali, T. Thanga Mariappan, Sandhya Mandlekar, and Yurong Lai* . . . . . **604**
- In Vitro Interactions of Epacadostat and its Major Metabolites with Human Efflux and Uptake Transporters: Implications for Pharmacokinetics and Drug Interactions. *Qiang Zhang, Yan Zhang, Jason Boer, Jack G. Shi, Peidi Hu, Sharon Diamond, and Swamy Yeleswaram* . . . . . **612**
- High-Throughput and Reliable Isotope Label-free Approach for Profiling 24 Metabolic Enzymes in FVB Mice and Sex Differences. *Jiamei Chen, Lijun Zhu, Xiaoyan Li, Haihui Zheng, Tongmeng Yan, Cong Xie, Sijing Zeng, Jia Yu, Huangyu Jiang, Linlin Lu, Xiaoxiao Qi, Ying Wang, Ming Hu, and Zhongqiu Liu* . . . . . **624**
- Structural and Functional Evaluation of Clinically Relevant Inhibitors of Steroidogenic Cytochrome *P450 17A1*. *Elyse M. Petrunak, Steven A. Rogers, Jeffrey Aubé, and Emily E. Scott* . . . . . **635**
- Prediction of the Transporter-Mediated Drug-Drug Interaction Potential of Dabrafenib and Its Major Circulating Metabolites. *Harma Ellens, Marta Johnson, Sarah K. Lawrence, Cory Watson, Liangfu Chen, and Lauren E. Richards-Peterson* . . . . . **646**
- Phase II Conjugates of Urolithins Isolated from Human Urine and Potential Role of  $\beta$ -Glucuronidases in Their Disposition. *Jakub P. Piwowarski, Iwona Stanistawska, Sebastian Granica, Joanna Stefańska, and Anna K. Kiss* . . . . . **657**
- Global Proteomic Analysis of Human Liver Microsomes: Rapid Characterization and Quantification of Hepatic Drug-Metabolizing Enzymes. *Brahim Achour, Hajar Al Feteisi, Francesco Lanucara, Amin Rostami-Hodjegan, and Jill Barber* . . . . . **666**
- Metabolite Identification, Reaction Phenotyping, and Retrospective Drug-Drug Interaction Predictions of 17-Deacetylnorgestimate, the Active Component of the Oral Contraceptive Norgestimate. *Deepak Ahire, Sarmistha Sinha, Barry Brock, Ramaswamy Iyer, Sandhya Mandlekar, and Murali Subramanian* . . . . . **676**

Downloaded from [dmd.aspetjournals.org](http://dmd.aspetjournals.org) at ASPET Journals on February 29, 2024

Continued on next page

Quantitative Prediction of CYP3A4 Induction: Impact of Measured, Free, and Intracellular Perpetrator Concentrations from Human Hepatocyte Induction Studies on Drug-Drug Interaction Predictions. *Yongkai Sun, Paresh P. Chothe, Jennifer E. Sager, Hong Tsao, Amanda Moore, Leena Laitinen, and Niresh Hariparsad* . . . . . **692**

**SHORT COMMUNICATION**

Human Enterocytes as an In Vitro Model for the Evaluation of Intestinal Drug Metabolism: Characterization of Drug-Metabolizing Enzyme Activities of Cryopreserved Human Enterocytes from Twenty-Four Donors. *Ming-Chih David Ho, Nicholas Ring, Kirsten Amaral, Utkarsh Doshi, and Albert P. Li* . . . . . **686**

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

*About the cover:* Illustration of the hypothesized mechanisms of disposition of EPAC and its metabolites in humans by Zhang et al. ([dx.doi.org/10.1124/dmd.116.074609](https://doi.org/10.1124/dmd.116.074609)).