Contents

SPECIAL SECTION ON NEW AND EMERGING AREAS AND TECHNOLOGIES IN DRUG METABOLISM AND DISPOSITION, PART I

50TH ANNIVERSARY CELEBRATION COLLECTION

Special Section on New and Emerging Areas and Technologies in Drug Metabolism and Disposition, Part I–Editorial
Xiao-bo Zhong, Yurong Lai, and Xinxin Ding

NEAT1_2 and DAZAP1, Paraspeckle Components, Interact with PXR to Negatively Regulate CYP3A4 Induction
Rei Mitamura, Masataka Nakano, Motoki Isono, Kianu Kurosawa, Tatsuki Fukami, and Miki Nakajima

Novel Approaches to Characterize Individual Drug Metabolism and Advance Precision Medicine
Klarissa D. Jackson, Brahim Achour, Jonghwa Lee, Raeanne M. Geffert, Jessica L. Beers, and Bethany D. Latham

Fluorescence-Based High-Throughput Assays for Investigating Cytochrome P450 Enzyme-Mediated Drug–Drug Interactions
Rongjing He, Ziru Dai, Moshe Finel, Feng Zhang, Dongzhu Tu, Ling Yang, and Guangbo Ge

Recent Advances in Mass Spectrometry-Based Spatially Resolved Molecular Imaging of Drug Disposition and Metabolomics
Yu Chen, Ying Liu, Ximei Li, Yan He, Weiwei Li, Ying Peng, and Jiang Zheng

Identification of a Discrete Diglucuronide of GDC-0810 in Human Plasma after Oral Administration
Chenghong Zhang, Dian Su, Edna F. Choo, Lichuan Liu, Sudheer Bobba, Jamie D. Jorski, Quynh Ho, Jing Wang, Jane R. Kenny, S. Cyrus Khojasteh, and Donglu Zhang

Challenges and Opportunities in P450 Research on the Eye
Irina A. Pikuleva

Use of Traditional and Proteomic Methods in the Assessment of a Preclinical Model of Preeclampsia
Wanying Dai, Angela Pollinzi, and Micheline Piquette-Miller

The Important Role of Transporter Structures in Drug Disposition, Efficacy, and Toxicity
Tingting Fu, Su Zeng, Qingchuan Zheng, and Feng Zhu

Bioanalytical Assays for Pharmacokinetic and Biodistribution Study of Antibody-Drug Conjugates
Lei Yin, Aiyun Xu, Yumeng Zhao, and Jingkai Gu

ARTICLES

The Absolute Bioavailability and Absorption, Metabolism, and Excretion of Ipatasertib, a Potent and Highly Selective Protein Kinase B (Akt) Inhibitor
Ryan H. Takahashi, Vikram Malhi, Bianca M. Liederer, Sungjoon Cho, Yuzhong Deng, Brian Dean, James Nugteren, Edward Yost, Mohammad A. Al-Sayah, Rucha Sane, Smriti Kshirsagar, Shuguang Ma, and Luna Musib

Interaction of Human OATP1B1 with PDZK1 Is Required for Its Trafficking to the Hepatocyte Plasma Membrane
Pijun Wang, John W. Murray, and Allan W. Wolfrom

Supplemental material is available at dmd.aspetjournals.org.

About the cover: “Biomarkers of drug metabolism phenotype to facilitate precision dosing.” See the article by Jackson et al. (dx.doi.org/10.1124/dmd.122.001066).
In Vivo Metabolite Profiles of an N-Acetylgalactosamine-Conjugated Antisense Oligonucleotide AZD8233 Using Liquid Chromatography High-Resolution Mass Spectrometry: A Cross-Species Comparison in Animals and Humans
Xue-Qing Li, Marie Elebring, Anders Dahlén, and Lars Weidolf

Dissecting Parameters Contributing to the Underprediction of Aldehyde Oxidase-Mediated Metabolic Clearance of Drugs
Sandhya Subash, Dilip K. Singh, Deepak S. Ahire, S. Cyrus Khojasteh, Bernard P. Murray, Michael A. Zientek, Robert S. Jones, Priyanka Kulkarni, Bill J. Smith, Scott Heyward, Ciarán N. Cronin, and Bhagwat Prasad

Impact of Heterotropic Allosteric Modulation on the Time-Dependent Inhibition of Cytochrome P450 3A4
Luc R.A. Rougée, David W. Bedwell, Kasi Hansen, Trent L. Abraham, and Stephen D. Hall

Interpretation of Protein-Mediated Uptake of Statins by Hepatocytes Is Confounded by the Residual Statin-Protein Complex
Mengyue Yin, Kazuya Ishida, Xiaomin Liang, Yurong Lai, and Jashvant D. Unadkat

Analysis of the Bile Acid Composition in a Fibroblast Growth Factor 19-Expressing Liver-Humanized Mouse Model and Its Use for CYP3A4-Mediated Drug–Drug Interaction Studies

Utility of Minimal Physiologically Based Pharmacokinetic Models for Assessing Fractional Distribution, Oral Absorption, and Series-Compartment Models of Hepatic Clearance
Xiaonan Li and William J. Jusko

The Metabolism of Lufotrelvir, a Prodrug Investigated for the Treatment of SARS-COV2 in Humans Following Intravenous Administration
Narayan Cheruvu, Esther van Duijn, Pieter A. Spigt, Ioana M. Barbu, Sima S. Toussi, Klaas Schildknegt, Rhys M. Jones, and R. Scott Obach

Prediction of Human Pharmacokinetics of Phosphorodiamidate Morpholino Oligonucleotides in Duchenne Muscular Dystrophy Patients Using Viltolarsen
Shunji Imai, Yusuke Suda, Junpei Morii, Yoshihiro Sasaki, Tetsuhiro Yamada, and Kazutomi Kusano