Drug Metabolism and Disposition: the biological fate of chemicals

March/April 1993

CONTENTS


Disposition of the Flame Retardant 1,2-Bis(2,4,6-tri-bromophenoxy)ethane in Rats Following Administration in the Diet. AMIN A. NOMEIR, PETER M. MARLHAM, BURHAN I. GHANAYEM, AND MARJORY CHADWICK ................................................. 209

Nonlinear Pharmacokinetics of Cefadroxil in the Rat. MARIA CARMEN GARCÍA-CARBONELL, LUIS GRANERO, FRANCISCA TORRES-MOLINA, JUAN-CARLOS ARISTORENA, JESÚS CHESA-JIMÉNEZ, JOSÉ MARIA PLÁ-DELFINA, AND JOSÉ-ESTEBAN PERIS-RIBERA .................. 215


Metabolism and Disposition of a Thiazolobenzimidazole Active against HIV-1. SALAH M. EL DAREER, KATHLEEN F. TILLERY, LUCY M. ROSE, CLAUDE F. POSEY, ROBERT F. STRUCK, STEVEN W. STILLER, AND DONALD L. HILL ................................................. 231

Influence of Hepatic and Renal Failure on Pharmacokinetic Properties of the Novel Recombinant Plasminogen Activator BM 06.022 in Rats. ULRICH MARTIN, GISBERT SPONER, AND KLAUS STREIN ........... 236

Cytochrome P-450-Mediated Dehydrogenation of 2-N-Propyl-2(E)-pentenoic Acid, A Pharmacologically Active Metabolite of Valproic Acid, in Rat Liver Microsomal Preparations. KELEM KASSAHUN AND THOMAS A. BAILLIE ............. 242

Disposition of Zatotsetron, a Serotonin (5-HT) Receptor Antagonist, in Humans. PAULA M. FRANZ, EDWARD L. MATTIUZ, BARBARA L. HATCHER, KARL A. DESANTE, ALAN P. BREAU, JOHN L. OCOLOWITZ, DOUGLAS E. DORMAN, CHRISTOPHER R. SCHMID, MARK J. GOLDBERG, AND ALAN RUBIN . 249

Pharmacokinetics of Representative 3-Hydroxypyridin-4-ones in Rabbits: CP20 and CP94. ANDREA M. FREDENBURG, PETER J. WEDLUND, THOMAS L. SKINNER, LYAQUATIJI A. DAMANI, ROBERT C. HIDER, AND ROBERT A. YOKEL ................................................. 255

Microbial Models of Mammalian Metabolism: Furosemide Glucoside Formation Using the Fungus Cunninghamamella elegans. MEHRI HEZARI AND PATRICK J. DAVIS ................................................. 259

Cholesterol Sulfation in Human Liver: Catalysis by Dehydroepiandrosterone Sulfo-transferase. I. A. AKSOY, D. M. OTTENESS, AND R. M. WEINSHILBOUM ................................................. 268

Mutual Kinetic Interaction Between 5-Fluorouracil and Bromodeoxyuridine or Idoodeoxyuridine in Dogs. DAVID E. SMITH, DEAN E. BRENNER, CONRAD A. KNUTSEN, SUSAN J. DEREMLER, PATRICIA A. TERRIO, NORMA J. JOHNSON, PHILIP L. STETSON, AND WILLIAM D. ENSMINGER ................................................. 277

Disposition, Metabolism, and Pharmacodynamics of Labetalol in Adult Sheep. KRISHNASWAMY YELESWARAM, DAN W. RURAK, EDDIE KWAN, CAROLINE HALL, AHMAD DORODUHIAN, FRANK S. ABBOTT, AND JAMES E. AXELSON ....... 284

Inhibitory Effects of Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) on The Metabolism of 4-(Methylamino)-1-(3-pyridyl)-1-butanone (NNK) in Mouse Lung Explants. LINE BOUCHARD AND ANDRE CASTONGUAY ................................................. 293

NADPH and Oxygen Consumption in Isoflurane-Facilitated 2-Chloro-1,1-difluoroethane Metabolism in Rabbit Liver Microsomes. YING WANG AND MAX T. BAKER ................................................. 299

Effect of Propylene Glycol on the Disposition of Diamarine in the Rabbit. KAREN M. Walters, WILLIAM D. MASON, AND MOSTAFA Z. BADR ................................................. 305

Inhibition of the Enantioselective Oxidative Metabolism of Metoprolol by Verapamil in Human Liver Microsomes. MYUNGSOO KIM, PETER A. DAVIS, CONRAD A. KNUTSEN, JOSEPH T. BLOM, AND STEVEN J. CRIST ................................................. 311

Drugs (NSAIDs) on The Metabolism of 4-(Methylamino)-1-(3-pyridyl)-1-butanone (NNK) in Mouse Lung Explants. LINE BOUCHARD AND ANDRE CASTONGUAY ................................................. 293

NADPH and Oxygen Consumption in Isoflurane-Facilitated 2-Chloro-1,1-difluoroethane Metabolism in Rabbit Liver Microsomes. YING WANG AND MAX T. BAKER ................................................. 299

Effect of Propylene Glycol on the Disposition of Diamarine in the Rabbit. KAREN M. Walters, WILLIAM D. MASON, AND MOSTAFA Z. BADR ................................................. 305

Inhibition of the Enantioselective Oxidative Metabolism of Metoprolol by Verapamil in Human Liver Microsomes. MYUNGSOO KIM, PETER A. DAVIS, CONRAD A. KNUTSEN, JOSEPH T. BLOM, AND STEVEN J. CRIST ................................................. 311
Effect of Tobacco Smoke Condensate on the Metabolism of 4-(Methylnitrosamino)-1-(3-pyridyl)-1-butanone by Adult and Fetal Hamster Microsomes. Rossana Jorquera, Andre Castonguay, and Hildegarde M. Schuller .................................................. 318

Identification of Major Metabolites of the Catechol-O-methyltransferase Inhibitor Nitecapone in Rat and Dog. Tom Wikberg and Jyrki Taskinen .................................................. 325

Effects of Arsenite Treatment on NAD(P)H:Quinone Oxidoreductase Activity in Liver, Lung, Kidney, and Heart of the Rat: Comparison to Induction by the Polyaromatic Hydrocarbon, β-Naphthoflavone. K. Cameron Falkner, Gordon P. McCallum, and John R. Bend .................................................. 334

UDP-Glucuronosyltransferase Activity Toward Digi-
toxigenin Monodigotoxoside in Human Liver Mi-
crosomes. Bruno Lacarelle, Jean-Francois Rajaonarison, Jacques Catalin, Alain Durand, and Jean-Paul Cano .................................................. 338

Effect of P-450 Inducers on Biliary Excretion of Glu-
tathione and Its Hydrolysis Products: Correlation Between Hepatic γ-Glutamyltranspeptidase Activity and the Proportion of Glutathione Hydrolysis Products in Bile. Cherukury Madhu, David Y. Mitchell, and Curtis D. Klaassen .................................................. 342


Effects of Clarithromycin and Its Metabolites on the Mixed Function Oxidase System in Hepatic Micro-
somes of Rats. Shigeru Ohmori, Itsuko Ishii, Shin-ichiro Kuriya, Tomoyoshi Taniuchi, Tadaaki Rikihisa, Seiyu Hirose, Yoshio Kanakubo, and Mitsukazu Kitada .................................................. 358

Transplacental Pharmacokinetics and Maternal/Fetal Plasma Concentrations of Cocaine in Pregnant Macaques Near Term. Zbigniew Binienda, John R. Bailey, Helen M. Duhart, William Slikker, Jr., and Merle G. Paule .................................................. 364

Anomalous Accumulation and Decay of 2',3'-Dideoxyadenosine-5'-triphosphate in Human T-Cell Cultures Exposed to the Anti-HIV Drug 2',3'-Dideoxyinosine. Gurpreet Ahluwalia, David A. Cooney, Neil R. Hartman, Hiroaki Mitsuya, Robert Yarchoan, Arnold Fridland, Samuel Broder, and David G. Johns .................................................. 369

Biotransformation and Branchial Excretion of 17α-
Methyltestosterone in Trout. J. P. Cravedi, G. Delous, L. Debrauwer, and D. Prom .................................................. 377

Concentration-Dependent Inhibition of Halothane Bio-
transformation in the Guinea Pig. Richard C. Lind and A. Jay Gandolfi .................................................. 386

In Vitro Hepatic Biotransformation of Cocaine in Ma-

SHORT COMMUNICATIONS

Inhibition of Rat Liver Mitochondrial and Cytosolic Aldehyde Dehydrogenases by Crotonaldehyde. David Y. Mitchell and Dennis R. Petersen .................................................. 396

Naphthaldehydes as Reversible Inhibitors of Rat He-
patic Aryl Sulfotransferase IV (Tyrosine-Ester Sul-
fotransferase). Michael W. Duffel and Yuqun Zheng .................................................. 400