CONTENTS

LETTERS TO THE EDITOR

The Role of Sulfate Conjugation in the Elimination Kinetics of Diflunisal in the Rat. R. VERBEEK ........................................... 267
Response to Letter to the Editor, "Diflunisal, A Unique Model Compound for Esters and Ester Glucuronidation". JIUNN H. LIN ........................................... 268

COMMENTS

The Effect of Hepatic Blood Flow on Formation of Metabolites. K. SANDY PANG AND GERARD J. MULDER ........................................... 270
Ethyl Carbamate Metabolism: In Vivo Inhibitors and In Vivo Enzymatic Systems. TOSHINORI YAMAMOTO, WILLIAM M. PIERCE, JR., HARREL E. HURST, DI CHEN, AND WILLIAM J. WADDELL ........................................... 276
Inhibition of Leucine Enkephalin Metabolism in Rat Blood, Plasma, and Tissues In Vitro by an Aminoboronic Acid Derivative. MUNIR A. HUSSAIN, SUSAN M. ROWE, ASHOK B. SHENVI, AND BRUCE J. AUNGST ........................................... 288
Nitroglycerin Metabolism in Subcellular Fractions of Rabbit Liver: Dose Dependency of Glycerol Dinitrate Formation and Possible Involvement of Multiple Isozymes of Glutathione S-Transferases. DAVID T.-W. LAU AND LESLIE Z. BENET ........................................... 292
Inhibition and Induction of Theophylline Metabolism by 8-Methoxypsoralen: In Vitro Study in Rats and Humans. GLEN APSELOFF, DALE R. SHEPARD, MARK A. CHAMBERS, SOPONE NAUOOT, DENNIS C. MAYS, AND NICHOLAS GERBER ........................................... 298
Bromobenzene Metabolism In Vivo and In Vitro: The Mechanism of 4-Bromocatechol Formation. NATALIE E. MILLER, DAVID THOMAS, AND RUTH E. BILLINGS ........................................... 304
Pathways of Gallopamil Metabolism: Regiochemistry and Enantioselectivity of the O-Demethylation Processes. ABDUL E. MUTILB AND WENDEL L. NELSON ........................................... 309

Tissue Distribution and Metabolic Disposition of Zidovudine in Rats. PAULO DE MIRANDA, THIMYSTA C. BURNETTE, AND STEVEN S. GOOD ........................................... 315
Isolation and Characterization of an Ester Glucuronide of Zidovudine, a Major Metabolite in Monkeys and Humans. STEVEN S. GOOD, CECILIA S. KOBLE, RONALD CROUCH, ROBERT L. JOHNSON, JANET L. RIDEOUT, AND PAULO DE MIRANDA ........................................... 321
Effect of Growth Hormone on Caffeine Metabolism in Hypophysectomized Rats. THIERRY BIENVENU, GERARD PONS, ELISABETH REY, MARIE-O DIL RICHARD, PHILIPPE D'ATHIS, MAURICE J. ARNAUD, AND GEORGES OLIVE ........................................... 327
Pathways of Gallopamil Metabolism: Regiochemistry and Enantioselectivity of the N-Dealkylation Processes. ABDUL E. MUTILB AND WENDEL L. NELSON ........................................... 331
Pharmacokinetics of Methylergometrine and Its Metabolite Methylergometrinic in the Rat. U. BREDBERG AND L. PAAIZOW ........................................... 338
The Hydrolysis-Activation of the Adriamycin Cardioprotective Agent ICRF-187 ((+)-1,2-Bis(3,5-dioxo- piperazinyl-1-yl)propane). BRIAN HASINOFF ........................................... 344
Oxidative Cleavage of the Pentyl Side-Chain of Cannabinoids: Identification of New Biotransformation Pathways in the Metabolism of 4'-Hydroy-D'-Tetrahydrocannabinol in the Mouse. D. J. HARVEY ........................................... 350
Tolbutamide Hydroxylation by Human, Rabbit, and Rat Liver Microsomes and By Purified Forms of Cytochrome P-450. MAURICE E. VERONESE, MICHAEL E. MCMANUS, PISAMAI LAUPATTARAKASEM, JOHN O. MINERS, AND DONALD J. BIRKET ........................................... 356
Mexiteline Metabolism In Vitro by Human Liver. F. BROLY, C. LIBERSA, AND M. LHERMITTE ........................................... 362
Glucuronidation of 3'-Azido-3'-Deoxythymidine by Rat and Human Microsomes. ERIKA M. CRETTON, D. VINCENT WATERHOU, RAE BEVAN, AND JEAN-PIERRE SOMMASOSSI ........................................... 369
Metabolism of Alachlor by Rat and Mouse Liver and Nasal Turbinate Tissues. PAUL C. C. FENG, ALAN G. WILSON, ROBERT H. MCCLANAHAN, JAMES E. PATANELLA, AND STEPHEN J. WRATTEN ........................................... 373

Continued on next page
The Effect of Primary Metabolites of the Xanthine-Related Nootropic Drug Ethimizol on Its Hepatic Extraction Ratio. Marian Kukan, Stefan Bezek, Tomas Trnovec, and Levon B. Piotrovskiy...378

SHORT COMMUNICATION

CDNA-Directed Expression of Rat P450s IIA1 and IIA2: Catalytic Activities Toward Steroids and Xenobiotics and Comparison with the Enzymes Purified from Liver. Toshifumi Aoyama, Kenneth Korzekwa, Tamihide Matsunaga, Ki-yoshi Nagata, James Gillette, Harry Y. Gelboin, and Frank J. Gonzalez.............383

Erratum ..................................................386