CONTENTS

Bromobenzene Metabolism in the Rat and Guinea Pig. K. Lertratanangkoon and M. G. Hornig ................................................................. 1


The Series-Compartment Model for Hepatic Elimination. Murray R. Gray and Y. K. Tam ................................................................. 27

Microsomal Metabolism of Pyrrolizidine Alkaloids from Senecio jacobaeae: Isolation and Quantification of 6,7-Dihydro-7-Hydroxy-1-Hydroxymethylsulfurpyrrolizine and N-Oxides by High Performance Liquid Chromatography. Howard S. Ramsdell, Bogdan Kedzierski, and Donald R. Buhler ................................................................. 32


Studies on the Pharmacokinetics and Metabolism of 4-Chlorodiphenyl Ether in Rats. Y. C. Chui, R. F. Addison, and F. C. P. Law ................................................................. 44

Effect of Diffusional Barriers on Drug and Metabolite Kinetics. Ines A. M. de Lannoy and K. Sandy Pang ........................................................................................................ 51

Cytochrome P-450 Isozymes 2 and 5 in Rabbit Lung and Liver: Comparisons of Structure and Inducibility. Zahra Parandoosh, Valerie S. Fujita, Minor J. Coon, and Richard M. Philpot .... 59

Extrahepatic Expression of N-Acetyltransferase Genotype in the Inbred Hamster. David W. Hein, Ward G. Kirlin, Frederick Ogolla, and Alma Trinidad ........................................................................ 68

Metabolism of the β-Carbolines, Harmine and Harmol, by Liver Microsomes from Phenobarbital- and 3-Methylcholanthrene-Treated Mice: Identification and Quantitation of Two Novel Harmin Metabolites. D. J. Tweedie and M. D. Burke .... 74


Comparative Metabolism and Disposition of 1-Chloro- and 3-Chloro-2-methylpropene in Rats and Mice. Burhan I. Ghanyem and Leo T. Burke ...... 91


Disposition and Biotransformation of Quinpirole, a New D-2 Dopamine Agonist Antihypertensive Agent, in Mice, Rats, Dogs, and Monkeys. N. G. Gallick Whitaker and T. D. Lindstrom .... 107

Characterization of the Induction of Cytosolic and Microsomal Epoxide Hydrolases by 2-Ethylhexanoic Acid in Mouse Liver. Bo Lundgren, Johan Meijer, and Joseph W. DePierre ..................................................... 114

Deacetylation of Diltiazem by Rat Liver. Elizabeth LeBouef and Odette Grech-Belanger .............. 122

Plasma Concentration-Response Relationship for Cimetidine Inhibition of Drug Metabolism in the Rat. Adedayo Adedoyin, Leon Aarons, and J. Brian Houston .......... 127

SHORT COMMUNICATIONS

Comparison of Adenosine 3'-Phosphate 5'-Phosphosulfate Concentrations in Tissues from Different Laboratory Animals. Elzbieta A. Brezznicka, George A. Hazelton, and Curtis D. Klaassen .... 133

Influence of Age on Intrinsic Clearance of Bupivacaine and Its Reduction by Cimetidine in Elderly Male Rats. Gary A. Thompson, Jane A. Myers, Patricia A. Turner, Dennis E. Coyle, Wolfgang A. Ritschel, and Donald D. Denson ..................................................... 136

Effect of Surgery on Serum α-Ar-Acid Glycoprotein Concentration and Serum Protein Binding of di-Propranolol in Phenobarbital-Treated and Untreated Rats. Tsu-Han Lin, Yuichi Sugiyama, Yasufumi Sawada, Yasuyuki Suzuki, Tatsui Iga, and Manabu Hanano ........................................................................................................ 138

Books Received ................................................................................................................................. 141

Drug Metabolism and Disposition: the biological fate of chemicals

January/February 1987

Vol. 15, No. 1

DRUG METABOLISM & DISPOSITION (ISSN 0090-9556) is published bimonthly by the American Society for Pharmacology and Experimental Therapeutics, 428 E. Preston St., Baltimore MD 21202. Second class postage paid at Baltimore, MD and at additional mailing offices. Postmaster send address changes (Form 3579) to the Williams & Wilkins Co., 428 E. Preston St., Baltimore MD 21202. Price per volume: USA individual rate $60; all other countries $70 surface mail, USA institutional rate $95; all other countries $105 surface mail and $95 to $105 air mail depending upon location, single copy $15.00 ($17.00 foreign). Prices subject to change. Copyright © 1987 by the American Society for Pharmacology and Experimental Therapeutics.
Drug Metabolism and Disposition: the biological fate of chemicals

March/April 1987

CONTENTS

Relationship between Sulfotransferase Activity and Susceptibility to Acetaminophen-induced Liver Necrosis in the Hamster. MARION G. MILLER and DAVID J. JOLLOW .................................................. 143

Dose-dependent Pharmacokinetics of Ibuprofen in the Rat. A. SHAH and D. JUNG ........................................... 151

Nonenzymatic Bioreduction in Rat Liver and Kidney of Nitroxy1 Spin Labels. Potential Contrast Agents in Magnetic Resonance Imaging. Ulf G. ERIKSON, ROBERT C. BRASCH, and THOMAS N. TOZER ................................................................. 155

In Vitro Microsomal Metabolism of the Leukotriene Receptor Antagonist, 5-(2-Dodecylphenyl)-4,6-dithiannonanediolic Acid (SK&F 102,081). JOHN F. NEWTON, KENNETH M. STRAUB, RICHARD H. DEWEY, CARL D. PERCHONOCK, THOMAS B. LEONARD, MARY E. MCCARTHY, JOHN G. GLEASON, and REGINA D. ECKARDT .................................................. 161

In Vivo Metabolism of the Leukotriene Receptor Antagonist, 5-(2-Dodecylphenyl)-4,6-dithiannonanediolic Acid (SK&F 102,081) in the Guinea Pig. JOHN F. NEWTON, KENNETH M. STRAUB, GEORGE Y. KUO, CARL D. PERCHONOCK, MARY E. MCCARTHY, JOHN G. GLEASON, and ROBERT K. LYNN .................................................. 168

Alterations in Biliary Excretory Function by Streptozotocin-induced Diabetes. JOHN B. WATKINS III and THOMAS P. DYKSTRA ................................................................. 177

Uptake, Metabolism, and Secretion of 3'-Methyl-N,N-dimethyl-4-aminooazobenzene by Isolated Perfused Rat Liver. AUDREY R. SAMUELS, LORENZ M. MILLER, AND MADHU K. THEIL-SKELTON .................................................. 184

Uptake and Disposition of Putrescine, Spermidine, and Spermine by Rabbit Lungs. SHRINIVAS B. RAO and HARISHA M. MEHENDALE ................................................................. 189

Conversion of Melphalan to 4-(Glutathionyl)phenylalanine. A Novel Mechanism for Conjugation by Glutathione-S-transferases. DEANNE M. DULIK and CATHERINE FENSELAU .................................................. 195

Conversion of N,N-Dimethylalanine to N,N-Dimethylalanine-N-oxide by a Cytosolic Flavin-containing Enzyme from Trypanosoma cruzi. MOISES AGOSIN and GERALD T. ANKLEY .................................................. 200

Pharmacokinetic Interaction between Thalidomide and Chloramphenicol in Rats. M. BUSBY and L. J. LESKO .................................................. 204

The Pharmacokinetics of All-trans-retinoic Acid and N-(2-Hydroxyethyl)retinamide in Mice as Determined with a Sensitive and Convenient Procedure. Solid-phase Extraction and Reverse-phase High Performance Liquid Chromatography. D. MUNSELL, MCPHILLIPS, JACK R. KALIN, and D. L. HILL .................................................. 207

Urinary Excretion Kinetics of Famotidine in Rats. JUINN H. LIN, LAYNE E. LOS, EDGAR H. ULM, and DANIEL E. DUGGAN ................................................................. 212

In Vivo and in Vitro Biotransformation of Theobromine by Phenobarbital- and 3-Methylcholanthrene-inducible Cytochrome P-450 Monoxygenases in Rat Liver. Role of Thiol Compounds. CAROL A. SHIVELY and ELLIOT S. VESELL ................................................................. 217

Effects of Aging on the Properties of Rhesus Monkey Liver Microsomal NADPH-Cytochrome c (P-450) Reductase. DOUGLAS L. SCHMUCKER and ROSE K. WANG ................................................................. 225


Biotransformation of Caffeine, Paraxanthine, Theophylline, and Theobromine by Polycyclic Aromatic Hydrocarbon-inducible Cytochrome(s) P-450 in Human Liver Microsomes. MONICA E. CAMPBELL, DENIS M. GRANT, TADANOBU INABA, and WERNER KALOW ................................................................. 237

Pharmacokinetics of Tetrabenazine and Its Major Metabolite in Man and Rat. Bioavailability and Dose Dependency Studies. REZA MEHVAR, FAKHREDDIN JAMALI, MICHAEL W. B. WATSON, and DAVID SKELETSON ................................................................. 250


Metabolism of Ethyl 2-(4-Chlorophenyl)-5-(2-furyl)-oxazole-4-acetate, a New Hypolipidemic Agent, in the Rat, Rabbit, and Dog. Glucuronidation of Carbony Group and Cleavage of Furan Ring. TSU-TOMU KOBAYASHI, HIDEHIRO ANDO, ROBERT J. BRAHMS, and HARUHIRO ARITA ................................................................. 262

Continued on next page
Contents (cont'd.)

Short Communications

Mitotane (1-(α-Chlorophenyl)-1-(p-chlorophenyl)-2,2-
dichloroethane) Metabolism in Perfusion Studies
with Dog Adrenal Glands. J. E. Sinsheimer and
Corinne J. Freeman ........................................ 267

Comparison of Hepatic and Renal Metabolism of Acetaminophen in Male and Female Miniature
Swine. James O. Peggins, Timothy F. McMahon,
William P. Beierschmitt, and Myron Weiner 270

In Vivo Inhibition of Phenacetin Oxidation by Suicide
Substrate 1-Aminobenzotriazole. Bruce A. Mico,
Debra Ann Federowicz, Eric Burak, and
James E. Swagzdis ........................................... 274

Pharmacogenetic Association between the Formation
of 4-Hydroxymephenytoin and a New Metabolite of S-Mephenytoin in Man. P. J. Wedlund,
B. J. Sweetman, G. R. Wilkinson, and R. A.
Branch ...................................................... 277
Induction and Inhibition of Rat Hepatic Drug Metabolism by N-Substituted Imidazole Drugs. JOSEPH K. RITTER AND MICHAEL R. FRANKLIN .......................... 335

Influence of Cytochrome b5 on the Stoichiometry of the Different Oxidative Reactions Catalyzed by Liver Microsomal Cytochrome P-450. INGELA JANSSON AND JOHN B. SCHENKMAN .............. 344


The Oxidation of Acrolein by Rat Liver Aldehyde Dehydrogenases. Relation to Allyl Alcohol Hepatotoxicity. LORA E. RIKANS .................. 356

The Disposition and Elimination of Two Sequential Doses of 2,4,5,2',4',5'-Hexachlorobiphenyl. LORI A. GALLENGER AND MARY JO VODICNIK ............ 363

Absorption, Distribution, Metabolism, and Excretion of 1,2-Dihydro-2,2,4-trimethylquinoline in the Male F344 Rat. Y. M. IOANNOU, L. T. BURKA, J. M. SANDERS, M. P. MOORMAN, AND H. B. MATTHEWS ........................................ 367

Pharmacokinetics of Griseofulvin in Blood and Skin Suction Blister Fluid of Rats. M. SCHÄFER-KORTIN ......................................... 374

Tissue Distribution, Disposition, and Metabolism of Cyclosporine in Rats. O. WAGNER, E. SCHREIER, F. HEITZ, AND G. MAURER .............. 377

Metabolism of Cyclosporin A. I. Study in Freshly Isolated Rabbit Hepatocytes. GÉRARD FABRE, PIERRE BERTAULT-PERES, ISABELLE FABRE, PATRICK MAUREL, SYLVAINE JUST, AND JEAN-PAUL CANO .......... 384

Metabolism of Cyclosporin A. II. Implication of the Macrolide Antibiotic Inducible Cytochrome P-450 3c from Rabbit Liver Microsomes. PIERRE BERTAULT-PERES, CLAUDE BONFILS, GÉRARD FABRE, SYLVAINE JUST, JEAN-PAUL CANO, AND PATRICK MAUREL .............................. 391

Urinary Metabolites in Busulfan in the Rat. MOUSTAPHA HASSAN AND HANS EHRRSON .................................................. 399

Liver Metabolism of Budesonide in Rat, Mouse, and Man. Comparative Aspects. S. EDSBÄCKER, P. ANDERSSON, C. LINDBERG, J. PAULSON, A. RYRFELDT, AND A. THALEN ................. 403


Continued on next page

DRUG METABOLISM AND DISPOSITION (ISSN 0090-9556) is published bimonthly by the American Society for Pharmacology and Experimental Therapeutics, 428 E. Preston St., Baltimore MD 21202. Second class postage paid at Baltimore, MD and at additional mailing offices. Postmaster send address changes (Form 3579) to the Williams & Wilkins Co., 428 E. Preston St., Baltimore MD 21202. Price per volume: USA individual rate $60; all other countries $70 surface mail and $95 to $105 air mail depending upon location, single copy $15.00 ($17.00 foreign). Prices subject to change. Copyright © 1987 by the American Society for Pharmacology and Experimental Therapeutics.
Contents (cont'd.)

Glutathione Conjugation of 1,2-Dibromo-1-phenylethane in Rats in Vivo. C. E. M. Zoetemelk, W. Van Hove, W. L. J. Van der Laan, B. Van Mee teren-Wälchli, A. Van der Gen, and D. D. Breimer ........................................... 418

N-Hydroxymethyl Metabolites of 450191-S, a 1H-1,2,4-Triazolyl Benzophenone Derivative, in Dog Plasma. M. Koike, R. Norikura, S. Futaguchi, T. Yamaguchi, K. Sugeno, K. Iwatan i, Y. Ikenishi, and Y. Nakagawa ........................................... 426

SHORT COMMUNICATIONS

Plasma Concentration Profiles of Human Recombinant Interleukin-2 (HrIL-2) in the Rat following Administration by Various Systemic Routes. W. A. Colburn, J. Hakimi, and I. Bekersky ................. 429

Dose- and Time-dependent Effect of Levamisole on the Elimination of Antipyrine in the Rat. Craig K. Svensson and Li-Ling Liu ...................... 432

Announcements ................................................................................. 435
Drug Metabolism and Disposition: the biological fate of chemicals

July/August 1987 Vol. 15, No. 4

CONTENTS

Commentary: Renal Transport Processes and Glutathione Conjugate-mediated Nephrotoxicity. TERENCE J. MONKS AND SERINE S. LAU ........................................... 437

Species Differences in Disposition of Benz[a]pyrene. ERIC H. WEAVER AND DAVID R. BEVAN ................................................................. 442

Uptake, Toxicity, and Distribution of Benz[a]pyrene and Monoxygenase Induction in the Topminnows Poecilia monacha and Poeciliopsis lucida. KATHRYN A. GODARD, R. JACK SCHULTZ, AND JOHN J. STEGEMAN .................................................. 449

Determination of Metabolite Pharmacokinetics for Orally Administered Produgs. GREGORY M. KOCHAK AND ASHOK RAKHIT ........................................... 456

The Metabolism and Elimination of Pyrilamine Malate in the Rat. DANIEL W. KELLY AND WILLIAM SLIKKER, JR .................................................. 460

N-Debenzylation of Pyrilamine and Tripelennamine in the Rat. A New Metabolic Pathway. S. Y. YEH ........................................................................... 466

Species-dependent Glucuronidation of Drugs by Immobilized Rabbit, Rhesus Monkey, and Human UDP-glucuronyltransferases. DEANNE M. DULIK AND CATHERINE FENSELAU ................... 473

Metabolism and Disposition of Ethylene Glycol Monobutyl Ether (2-Butoxyethanol) in Rats. BURHAN I. GHANAYEM, LEO T. BURKA, J. M. SANDERS, AND H. B. MATTHEWS .................................................. 478

Phencyclidine Iminium Ion. NADPH-dependent Metabolism, Covalent Binding to Macromolecules, and Inactivation of Cytochrome(s) P-450. M. K. P. HOAG, A. J. TREVOR, A. KALIR, AND N. CASTAGNOLI, JR .................................................. 485

Stereoselectivity of Naphthalene Epoxidation by Mouse, Rat, and Hamster Pulmonary, Hepatic, and Renal Microsomal Enzymes. A. R. BUCKPIT, N. CASTAGNOLI, JR., S. D. NELSON, A. D. JONES, AND L. S. BAHNSON .................................................. 491

Comparative Defluorination and Cytochrome P-450 Loss by the Microsomal Metabolism of Fluoro- and Fluorochloroethenes. MAX T. BAKER, JAMES N. BATES, AND SUSAN V. LEFF .................................................. 499

Noncovalent Binding of 3'-Methyl-N,N-dimethyl-4-aminooazobenzene and Its Metabolites to Liver Cytosolic Proteins and Its Role in Their Nuclear Translocation. KRISHNAPURA SRINIVASAN, WALTER G. LEVINE, AND MADHU M. BHARGAVA .................................................. 504

Effect of Cytochrome P-450 and Flavin-containing monoxygenase Modifying Factors on the in Vitro Metabolism of Amiodarone by Rat and Rabbit. ROBERT A. YOUNG AND HARIPRA M. MEHENDALE .................................................. 511

An Investigation of the Antigenic Determinants on Chloroperoxidase and Purified Rat Liver Microsomal Cytochrome P-450b. RAMENDRA N. PANDAY, STEVEN C. KUEMMERLE, AND PAUL F. HONNENBERG ....................................................................... 518

Effects of Genetic or Chemically Induced Diabetes on Imipramine Metabolism. Respective Involvement of Flavin Monoxygenase and Cytochrome P-450-dependent Monoxygenases. E. ROUER, A. LEMOINE, T. CRESTEIL, P. ROUET, AND J.P. LEROU .................................................................. 524

Stereoselective Metabolism of 2-Phenylpropionic Acid in Rat. I. In Vitro Studies on the Stereoselective Isomerization and Glucuronidation of 2-Phenylpropionic Acid. YUTAKA NAKAMURA AND TOSHIO YAMAGUCHI .................................................. 529

Stereoselective Metabolism of 2-Phenylpropionic Acid in Rat. II. Studies on the Organs Responsible for the Optical Isomerization of 2-Phenylpropionic Acid in Rat. TOSHIO YAMAGUCHI AND YUTAKA NAKAMURA .................................................. 535

Physiologically Based Pharmacokinetics of Radioiodinated Human β-Endorphin in Rats. An Application of the Capillary Membrane-limited Model. HITOSHI SATO, YUICHI SUGIYAMA, YASUFUMI SAWADA, TATSUJI IGA, AND MANABU HANANO .................................................. 540

The Metabolism of Roxatidine Acetate Hydrochloride. Liberation of Deuterium from the Piperidine Ring during Hydroxylation. SEIJIRO HONMA, SATOSHI IWAMURA, REIKO KOBAYASHI, YOSHIO KAWABE, AND KENyu SHIBATA .................................................................. 551

6-Fluoro-2-methylspiro(chroman-4, 4'-imidazolidine)-2,5' -dione and Related Compounds as Inducers of Monoxygenase in Rat Liver Microsomes. TOHRU HORIE, MITSUKAZU KITADA, HIDEHUMI YOSHIOKA, YOSHIKAZU KANAKUBO, AND TUNEOKI OMURA .... 560

Disposition of Nafimidone in Rats. D. J. M. GRAHAM, K. M. HAMA, S. A. SMITH, L. KURZ, M. D. CHAPLIN, AND D. J. HALL .................................................................. 571

Inhibition and Induction of Hepatic Drug Metabolism in Rats and Mice by Nafimidone and Its Major Metabolite Nafimidone Alcohol. W. R. RUSH, S. A. SMITH, J. H. MULVEY, D. J. M. GRAHAM, AND M. D. CHAPLIN .................................................. 571

Continued on next page
Drug Metabolism and Disposition:
the biological fate of chemicals

September/October 1987
Vol. 15, No. 5

CONTENTS

Letter to the Editor: Criteria for the Acceptability of Experimental Evidence for the Enantiomeric Composition of Xenobiotics and Their Metabolites. JOHN CALDWELL AND BERNARD TESTA . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . ...
### Contents (cont'd.)

**SHORT COMMUNICATIONS**

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influence of Gonadal Hormones upon Rat Hepatic Acetaminophen Sulfotransferases</td>
<td>M. B. Bailie, D. A. Federowicz, K. Dolce, C. Kahn, B. A. Mico, and M. S. Landi</td>
<td>729</td>
</tr>
<tr>
<td>Pharmacokinetics of Acetaminophen, Vancomycin, and Antipyrine in the Hanford Miniature Swine</td>
<td>R. Franklin</td>
<td>731</td>
</tr>
<tr>
<td>Effect of Cyclosporine on Hepatic Oxidative and Conjugative Metabolism in Rats</td>
<td>R. Kane and L. Chen</td>
<td>725</td>
</tr>
</tbody>
</table>
Drug Metabolism and Disposition: the biological fate of chemicals

November/December 1987 Vol. 15, No. 6

CONTENTS

The Disposition and Pharmacokinetics of Ketoconazole in the Rat. RORY P. REMME, KWAEM AMOH, AND MAHMUD M. ABDEL-MONEIM .................. 735

Metabolism and Disposition of Cyproheptadine and Desmethylycloproheptadine in Pregnant and Fetal Rats. SAMSON A. CHOW AND LAWRENCE J. FISCHER ............................................. 740

Effects of Model Traumatic Injury on Hepatic Drug Metabolism in the Rat. VI. Major Detoxification/Toxicification Pathways. LANDIS K. GRIFFETH, GERALD M. ROSEN, AND ELMER J. RAUCKMAN ........... 749

Metabolite Profile in Milk of Lactating Rats after Treatment with a Carcinogen, N2-Fluorenylacetamide. DANUTA MALEKA-GIGANTI, WELSONIA J. MAGAT, ANNETTE M. ADELHANN, AND RICHARD W. DECKER .............................. 760

Species-dependent Enantioselective Glucuronidation of Three 2-Arylpionic Acids: Naproxen, Ibufrofen, and Benoxaprofen. MOHAMED EL MOUELHI, HANS W. RUELIUS, CATHERINE FESENELAU, AND DEANNE M. DULIK .................................. 767

Pharmacokinetics and Metabolism of the Antitumor Drug Amonafide (NSC-308847) in Humans. THOMAS B. BURK, J. L. FENTIMAN, W. L. NIXON, AND JAMES R. HALPERT .......... 773

Disposition, Pharmacokinetics, and Metabolism of a Dermal Dose of [14C]2,5-Hexanedione in Hens. ELIZABETH SUWITA, AMIN S. SERRINE AND RASHMI BARBHAIYA .......... 786

Pharmacokinetics of Cytochrome P-450 by the Chloramphenicol Analog N-(4,6-dimethyl-2-pyrimidinyl)benzene-N-[U-14C]sulfanamide in Swine. G. D. PAULSON AND V. J. FEIL ........................................... 804

Mechanism-based Inactivation of the Major β-Naphthoflavone-inducible Isozyme of Rat Liver Cytochrome P-450 by the Chloramphenicol Analog N-(2-p-Nitrophenethyl)dichloroacetamide. NATALIE E. MILLER AND JAMES R. HALPERT .......... 846

Selective Inactivation by Chloramphenicol of the Major Phenobarbital-inducible Isozyme of Dog Liver Cytochrome P-450. PAUL J. CIACCIO, DAVID B. DUIGNAN, AND JAMES R. HALPERT ............... 852

Conversion of Bromobenzene to 3-Bromophenol. A Route to 3- and 4-Bromophenol through Sulfur-Series Intermediates Derived from the 3,4-Oxide. K. LEKTRATANANGKOORN, E. C. HORNING, AND M. G. HORNING ............................................................... 857

Isolation and Characterization of 4'-Hydroxy T-2 Toxin, a New Metabolite of the Trichothecene Mycotoxin T-2. CATHERINE A. KNUPP, DAVID G. CORLEY, MICHAEL S. TEMPESTA, AND STEVEN P. SWANSON ............................................................. 816

Metabolism and Excretion of Dinitrobenzenes by Male Fischer-344 Rats. DEBRA D. NYSTROM AND DOUGLAS E. RICKERT .................. 821

Cryopreservation of Rat and Dog Hepatocytes for Studies of Xenobiotic Metabolism and Activation. G. POWIS, K. S. SANTONE, D. C. MELDER, L. THOMAS, D. J. MOORE, AND T. J. WILKE ..................... 826

Oxidative Metabolism of Butylated Hydroxytoluene by Hepatic and Pulmonary Microsomes from Rats and Mice. JOHN A. THOMPSON, ALVIN M. MALKINSON, MICHAEL D. WAND, SUSAN L. MASTOVICH, ELLIOTT W. MEAD, KATHLEEN M. SCHULLEK, AND WADE G. LAUDENSCHLAGER .......... 833

Evidence for Diazotization of 14C-Sulfamethazine 4-Amino-N-(4,6-dimethyl-2-pyrimidinyl)benzene-[U-14C]sulfanamide in Swine. G. D. PAULSON AND V. J. FEIL ........................................... 841

Mechanism of Metabolic Cleavage of a Furan Ring. TSUTOMU KOBAYASHI, JUKO SUGIHARA, AND TSUTOMU KOBAYASHI .................. 877

Continued on next page
Contents (cont'd.)

Phenolic Metabolites of Amitriptyline and Nortriptyline in Rat Bile. Ursula Breyer-Paff, A. Prox, H. Wachsmuth, and Peipei Yao .................. 882


19F NMR Analysis of the Carbamate Reaction of α-Fluoro-β-alanine (FBAL), the Major Catabolite of Fluoropyrimidines. Application to FBAL Carbamate Determination in Body Fluids of Patients Treated with 5'-Deoxy-5-fluorouridine. R. Martino, M. C. Malet-Martino, C. Vialaneix, A. Lopez, and M. Bon .................. 897

Excretion and Biotransformation of Alfentanil and Sufentanil in Rats and Dogs. W. Meuldermans, J. Hendrickx, W. Lauwers, R. Hurkmans, E. Swysen, J. Thuisen, Ph. Timmerman, R. Woes滕borghs, and J. Heykants .................. 905

Metabolism of (+)-trans-Δ⁴-Tetrahydrocannabinol in the Mouse in Vitro and in Vivo. D. J. Harvey and H. J. Marriage .................. 914

SHORT COMMUNICATIONS

Identification of the Etodolac Metabolite, 4-Ureidoetodolac, in Mouse, Rat, Dog, and Man. E. S. Ferdinandi, D. Cochran, and R. Gedamke .... 921

[3H]Chloramphenicol Metabolism in Human Volunteer: Oxamic Acid as a New Major Metabolite. D. E. Corpet and G. F. Borjes .... 925

Author Index .................. 928

Subject Index .................. 930