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


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

Microsomal Metabolism of Pyrrolizidine Alkaloids from Senecio jacobaea: Isolation and Quantification of 6,7-Dihydro-7-Hydroxy-1-Hydroxymethyl-5H-Pyrroline and N-Oxides by High Performance Liquid Chromatography. Howard S. Ramsdell, Bogdan Kedzierski, and Donald R. Buhler


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

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

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

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

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


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


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

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

Deacetylation of Diltiazem by Rat Liver. Elizabeth Leboeuf and Odette Grechi-Bélanger

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

SHORT COMMUNICATIONS

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

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

Effect of Surgery on Serum α1-Acid Glycoprotein Concentration and Serum Protein Binding of DL-Propanolol in Phenobarbital-Treated and Untreated Rats. Tsu-Han Lin, Yuichi Sugiyama, Yasufumi Sawada, Yasuyuki Suzuki, Tatsui Iga, and Manabu Hanano

Books Received

CONTENTS
Drug Metabolism and Disposition: the biological fate of chemicals

March/April 1987

Vol. 15, No. 2

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. BRASC, AND THOMAS N. TOZER 155

In Vitro Microsomal Metabolism of the Leukotriene Receptor Antagonist, 5-(2-Dodecylphenyl)-4, 6-dithianonanedioic 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-dithianonanedioic 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-aminoazobenzene by Isolated Perfused Rat Liver. AUDREY R. SAMUELS, LORENZ STOLLMAN, ALLAN W. W0LKEN, AND MADHU BHARGAVA 184

Uptake and Disposition of Putrescine, Spermidine, and Spermine by Rabbit Lungs. SHRINIVAS B. RAO AND HARIHARA 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-Dimethylaniline-N-oxide by a Cytosolic Flavin-containing Reductase. DOUGLAS L. SCHMUCKER AND ROSE K. WANG 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 221

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 SKELTON 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 Carboxyl Group and Cleavage of Furanc Ring. TSUTOMU KOBAYASHI, HIDEHIRO ANDO, JUKO SUGIHIRA, AND SHOICHI HARIGAYA 262

Continued on next page
Contents (cont’d.)

SHORT COMMUNICATIONS

Mitotane (1-(o-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

CONTENTS

Hepatic UDP-glucose and UDP-glucuronic Acid Synthesis Rates in Rats during a Reduced Energy State. RUSSELL L. DILLS, STANLEY R. HOWELL, AND CURTIS D. KLAASSEN 281

Metabolism and Distribution of 14C- and 35S-Labeled Carbon Disulfide in Immature Rats of Different Ages. ELIZABETH GREEN SNYDERWINE AND ANDREA HUNTER 289

In Vivo and in Vitro 1-Methylxanthine Metabolism in the Rat. Direct Evidence That the Dehydrogenase Form of Xanthine Oxidase Predominates in Intact Perfused Liver. LESTER A. REINKE, MITSUTAKA NAKAMURA, LANCE LOGAN, H. DIX CHRISTENSEN, AND JOHN M. CARNEY 295

Pharmacokinetic and Deuterium Isotope Effect Studies on the Metabolism of Formaldehyde and Formate to Carbon Dioxide in Rats. LARRY K. KEEFER, ANTHONY J. STREETER, LOUIS Y. LEUNG, WILLIAM C. PERRY, HENRY S.-W. HU, AND THOMAS A. BAILLIE 300

3,4-Dichlorobenzyloxyacetic Acid Is Extensively Metabolized to a Taurine Conjugate in Rats. RICHARD C. PEFFER, DONALD J. ABRAHAM, MICHAEL A. ZEMAITIS, LAN K. WONG, AND JOHN D. ALVIN 305


Disposition of 8-Methoxypсорalen in the Rat. Induction of Metabolism in Vivo and in Vitro and Identification of Urinary Metabolites by Thermospray Mass Spectrometry. DENNIS C. MAYS, STEPHEN G. HECHT, STEVE E. UNGER, CHRISTINE M. PACULA, JEANETTE M. CLIMIE, DALE E. SHARP, AND NICHOLAS GERBER 318

Effects of Cisplatin-induced Nephrotoxicity on Gentamicin Pharmacokinetics in Rats. MEHER S. ENGEINEER, GERALD P. BODEY, SR., ROBERT A. NEWMAN, AND DAH-HSI W. HO 329

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. GALLENBerg 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. SCHAFER-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. GERARD FABRE, PIERRE BERTAULT-PERES, ISABELLE FABRE, PATRICK MAUREL, SYLVAIN DEJEAN, 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, GERARD FABRE, SYLVAIN DEJEAN, JEAN-PAUL CANO, AND PATRICK MAUREL 391

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

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


Continued on next page
Contents (cont’d.)

Glutathione Conjugation of 1,2-Dibromo-1-phenylethane in Rats in Vivio. C. E. M. Zoetemelk, W. Van Hove, W. L. J. Van der Laan, B. Van Meerkeren-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. Iwata, 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
Contents

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

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

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

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

The Metabolism and Elimination of Pyrilamine Maleate in the Rat. DANIEL W. KELLY AND WILLIAM SLICKER, 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-glucuronosyltransferases. 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


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-aminoazobenzene 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 Monooxygenase Modifying Factors on the in Vitro Metabolism of Amiodarone by Rat and Rabbit. ROBERT A. YOUNG AND HARISHA M. MEHENDALE ............. 511

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

Effects of Genetic or Chemically Induced Diabetes on Imipramine Metabolism. Respective Involvement of Flavin Monooxygenase and Cytochrome P-450-dependent Monooxygenases. E. ROUET, A. LEMOINE, T. CRESTEIL, P. ROUET, AND J.P. LEROUX .......... 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 TOSHIRO 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 in Vivo. TOSHIRO YAMAGUCHI AND YUTAKA NAKAMURA .......... 535

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

The Metabolism of Roxatidine Acetate Hydrochloride. Liberation of Deuterium from the Piperidine Ring during Hydroxylolation. SEIIRO HONMA, SATOSHI IWAMURA, REIKO KOBAYASHI, YOSHIHIO KAWABE, AND KEN'YU SHIBATA .......... 551

6-Fluoro-2-methylspiro(chroman-4, 4'-imidazolidine)-2.5'-dione and Related Compounds as Inducers of Monooxygenase in Rat Liver Microsomes. TOHRU HIRIE, MITSUKAZU KITADA, HIIDEMI YOSHIOKA, YOSHIO KANAKUBO, AND TSUNEYO OUMI .......... 560


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
SHORT COMMUNICATIONS

The Metabolic Fate of Oxazepam in Mice. S. F. Sisenwine, C. O. Tio, A. L. Liu, and J. F. Politowski

Formation of the Taurine Conjugate of Benzoic Acid in Rainbow Trout, Salmo gairdneri. Alison B.

A Phenolic Metabolite of Phencyclidine: The Formation of a Pharmacologically Active Metabolite by Rat Liver Microsomes. Shigeru Ohta, Hiroshi Masumoto, Kaoru Takeuchi, and Masaaki Hirobe

Books Received

Announcement
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 .......................... 587

The Metabolism of the Abortifacient Terpene, (R)-(+) -Pulegone, to a Proximate Toxin, Menthofuran. W. PERRY GORDON, ALAIN C. HUITRIC, CYNTIA L. SETH, ROBERT H. MCCLANAHAN, and SIDNEY D. NELSON ................................. 589

The Disposition and Metabolism of 2',3'-Dideoxycytidine, an in Vitro Inhibitor of Human T-Lymphophotropic Virus Type III Infectivity, in Mice and Monkeys. JAMES A. KELLEY, CHARLES L. LITTERST, JERI S. ROTH, DAVID T. VESTICA, DAVID G. POPLACK, DAVID A. COONEY, MOHAN NANDKARNI, FRANK M. BALIS, SAMUEL BRODER, and DAVID G. JOHNS .............. 595

Influence of a Purified Diet and Route of Administration on the Metabolism and Disposition of Estradiol in B6C3F1 Mice. FLOYD R. FULLERTON, DAVID L. GREENMAN, and JOHN F. YOUNG ......................... 602

Distribution of trans-4-Hydroxy-2-hexenal and Tandem Mass Spectrometric Detection of Its Urinary Mercapturic Acid in the Rat. CARL K. WINTER, H. J. SEGALL, and A. DANIEL JONES ......................... 608

The Role of the Liver in Mediating the Acute Toxicity of the Pesticide Methyl Parathion in the Mouse. LESTER G. SULTATOS ........................................... 613

Ketorolac Tromethamine Absorption, Distribution, Metabolism, Excretion, and Pharmacokinetics in Animals and Humans. EDWARD J. MROSZCZAK, FRANK W. LEE, DANIEL COMBS, FRANK H. SARNQUIST, BEE-LIAN HUANG, ANNE T. WU, LASZLO G. TOKES, MICHAEL L. MADDUX, and DIANE K. CHO ........................................... 618

Pharmacokinetics and Pharmacodynamics of Physostigmine in the Rat after Intravenous Administration. SATU M. SOMANI and ABDUL KHALIQUE .......... 627

Oxidation of the Alcohol Dehydrogenase Inhibitor Pyrazole to 4-Hydroxypyrazole by Microsomes. Effect of Cytochrome P-450 Inducing Agents. DENNIS E. FEIERMAN and ARTHUR I. CEDERBAUM ........................................... 634

Disposition of the Monoclonal Antibody-Vinca Alkaloid Conjugate, KS1/4-DAVLB (LY256787), in Fischer 344 Rats and Rhesus Monkeys. MARSHALL E. SPEARMAN, R. MICHAEL GOODWIN, and DONALD KAU ........................................... 640

Mechanism-based Inhibition of Cytochrome P-450 by Heterocyclic Analogues of Phencyclidine. JOHN F. BRADY, JOON DOKKO, EMMA W. DI STEFANO, and ARTHUR K. CHO ........................................... 648

Relationship between the Murine Ah Phenotype and the Hepatic Uptake and Metabolism of 2,3,7,8-Tetrachlorodibenzo-p-dioxin. EMILY S. SHEN and JAMES R. OLSON ................................. 653

The in Vitro Activity, Radioimmunoassay Cross-reactivity, and Molecular Weight of Thirteen Rabbit Cyclosporine Metabolites. N. R. HARTMAN and I. JARDINE ........................................... 661

In Vivo and in Vitro Renal Metabolism and Excretion of Benzoxic Acid by a Marine Teleost, the Southern Flounder. MARGARET O. JAMES and JOHN B. PRITCHARD ........................................... 665

The Disposition of N-(4,6-Dimethyl-2-pyrimidinyl)benzenesulfonamide in the Rat. G. D. PAULSON and V. J. FEIL ........................................... 671

The Development of Hepatic Drug-metabolizing Enzyme Activity in the Neonatal Calf and Its Effect on Drug Disposition. SUSAN E. SHOF, WAYNE S. SCHWARK, CHARLES L. GUARD, and JOHN G. BABISH ........................................... 676

The Metabolism of 7-Ethylbenz[a]anthracene by Rat Liver Microsomal Preparations. S. MCKAY, P. B. FARMER, P. D. CARY, and P. L. GROVER ........................................... 682

Physiologically Based Pharmacokinetic Model for the Renal Clearance of Salicyluric Acid and the Interaction with Phenolsulfonphthalein in the Dog. FRANS G. M. RUSSEL, ALFONS C. WOUTERSE, and Cees A. M. VAN GINNEKEN ........................................... 695

Bioactivation of Tetrachloroethylene. Role of Glutathione S-Transferase-catalyzed Conjugation versus Cytochrome P-450-dependent Phospholipid Alkylation. WOLFGANG DEKANT, GISELA MARTENS, SPIRIDON VAMVAKAS, MANFRED METZLER, and DIETRICH HENSCHLER ........................................... 702

Glucuronidation in Vitro and in Vivo. Comparison of Intestinal and Hepatic Conjugation of Morphine, Naloxone, and Buprenorphine. M. MISTRY and J. BRIAN HOUSTON ........................................... 710

Direct Detection of New Flucytosine Metabolites in Human Biofluids by 19F Nuclear Magnetic Resonance. JEAN P. VIALANEIX, MARIE C. MALET-MARTINO, JEAN S. HOFFMANN, JACQUES PRIS, and ROBERT MARTINO ........................................... 718

Continued on next page
Influence of Gonadal Hormones upon Rat Hepatic Acetaminophen Sulfotransferases. ROBERT E. KANE AND LEE J. CHEN 725
Pharmacokinetics of Acetaminophen, Vancomycin, and Antipyrine in the Hanford Miniature Swine.

M. B. BAILIE, D. A. FEDEROWICZ, K. DOLCE, C. KAHN, B. A. MICO, AND M. S. LANDI 729

Effect of Cyclosporine on Hepatic Oxidative and Conjugative Metabolism in Rats. RAYMOND E. GALINSKY, DONALD P. ALEXANDER, AND MICHAEL R. FRANKLIN 731
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. REMMEL, KWAME AMOH, and MAHMOUD M. ABDEL-MONEIM 735

Metabolism and Disposition of Cyproheptadine and Desmethylcyproheptadine 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/Toxification Pathways. LANDIS K. GRIFFETH, GERALD M. ROSEN, AND ELMER J. RAUCKMAN 749

Metabolite Profile in Milk of Lactating Rats after Treatment with a Carcinogen, N-2-Fluorenylacetic acid. DANUTA MALEKA-GIGANTI, WELSONIA J. MAGAT, ANNETTE M. ADELLENN, AND RICHARD W. DECKER 760

Species-dependent Enantioselective Glucuronidation of Three 2-Arylpipionic Acids: Naproxen, Ibufen, and Benoxaprofen. MOHAMED EL MOUELHI, HANS W. RUELIS, CATHERINE FENSELAU, AND DEANIE M. DULIK 767


Disposition, Pharmacokinetics, and Metabolism of a Dermal Dose of [14C]2,5-Hexahedrin in Hens. ELIZABETH SUWITA, AMIN S. GODIFRED HERI, AND SAMER E. ELMONS 779

Monoxygenase-mediated Activation of Chlorotrimethane (TACE) in Covalent Bonding to Rat Hepatic Microsomal Proteins. MARLENE J. JUDES, WILLIAM H. BULLER, AND DAVID KUPFER 786

The Pharmacokinetics of Pentane, a By-product of Lipid Peroxidation. SANDRA R. B. ALLERHEILGEN, THOMAS M. LUDDEN, AND RAYMOND F. BURK 794

Co-oxidation of 2-Bromohydroquinone by Renal Prostaglandin Synthase. MODULATION OF PROSTAGLANDIN SYNTHESIS BY 2-BROMOHYDROQUINONE AND GLUTATHIONE. SERRINE S. LAU AND TERENCE J. MONKS 801

N-Oxidation of N-Methyl Pyrrolidine Released in Vivo from Cefepime. S. THOMAS FORGUE, PRASAD KARI, AND RASHMI BARBHAIYA 808

Isolation and Characterization of 4'-Hydroxy T-2 Toxin, a New Metabolite of the Trichothecene Mycotoxin T-2. CATHERINE A. KNAPP, 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. HOSTERMAN, ELLIOTT W. MEAD, KATHLEEN M. SCHULKE, AND WADE G. LAUDENSCHLAGER 833

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

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 Sulforhodamine B and Desmethylcyproheptadine. LANDIS K. GRIFFETH, GERARD M. ROSEN, K. LU, AND RAYMOND F. BURK 857


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

Continued on next page
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phenolic Metabolites of Amitriptyline and Nortriptyline in Rat Bile. Ursula Breyer-Pfaff, A. Prox, H. Wachsmuth, and PeiPei Yao</td>
<td>882</td>
</tr>
<tr>
<td>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</td>
<td>897</td>
</tr>
<tr>
<td>Excretion and Biotransformation of Alfentanil and Sufentanil in Rats and Dogs. W. Meuldermans, J. Hendrickx, W. Lauwers, R. Hurkmans, E. Swysen, J. Thussen, Ph. Timmerman, R. Wostenborghs, and J. Heykants</td>
<td>905</td>
</tr>
<tr>
<td>Metabolism of (+)-trans-Δ4-Tetrahydrocannabinol in the Mouse in Vitro and in Vivo. D. J. Harvey and H. J. Marriage</td>
<td>914</td>
</tr>
</tbody>
</table>

**SHORT COMMUNICATIONS**

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification of the Etodolac Metabolite, 4-Ureidoetodolac, in Mouse, Rat, Dog, and Man. E. S. Ferdinandi, D. Cochran, and R. Gedamke</td>
<td>921</td>
</tr>
<tr>
<td>[1H]Chloramphenicol Metabolism in Human Volunteer: Oxamic Acid as a New Major Metabolite. D. E. Corpet and G. F. Bories</td>
<td>925</td>
</tr>
</tbody>
</table>

Author Index: Oxamic Acid as a New Major Metabolite. D. E. Corpet and G. F. Bories  | 928  |

Subject Index: Oxamic Acid as a New Major Metabolite. D. E. Corpet and G. F. Bories  | 930  |