

## CONTENTS OF VOLUME 206

No. 1, July 1978

Regional and Subcellular Distribution and Some Factors in the Regulation of Reduced Pterins in Rat Brain. WILSON P. BULLARD, PETER B. GUTHRIE, PATRICK V. RUSSO AND ARNOLD J. MANDELL	4
Modulation of Acetylcholine Metabolism in the Hippocampal Cholinergic Pathway by Intraseptally Injected Substance P. D. MALTHE-SORENSEN, D. L. CHENEY AND E. COSTA	21
Evidence for a Role of Nigral $\gamma$ -Aminobutyric Acid and Substance P in the Haloperidol-Induced Activation of Striatal Tyrosine Hydroxylase. K. GALE, E. COSTA, G. TOFFANO, J.-S. HONG AND A. GUIDOTTI	29
The Relationship between Pharmacokinetics and Pharmacodynamic Action as Applied to <i>in Vivo</i> pA <sub>2</sub> : Application to the Analgesic Effect of Morphine. RONALD J. TALLARIDA, CONCETTA HARAKAL, JOEL MASLOW, ELLEN B. GELLER AND MARTIN W. ADLER	38
Antinociceptive Responses after Microinjection of Morphine or Lanthanum in Discrete Rat Brain Sites. EDGAR T. IWAMOTO, R. ADRON HARRIS, HORACE H. LOH AND E. LEONG WAY	46
Genetic Control of Opiate-Induced Locomotor Activity in Mice. BARBARA A. JUDSON AND AVRAM GOLDSTEIN	56
Carbon Monoxide- and Hypoxia-Induced Effects on Catecholamines in the Mature and Developing Rat Brain. M. BETH NEWBY, ROBERT J. ROBERTS AND RANBIR K. BHATNAGAR	61
Inhibition of Dopamine $\beta$ -Hydroxylase by 4-Hydroxypyrazole: Ethanol-Pyrazole Effects on Serum Dopamine $\beta$ -Hydroxylase <i>in Vivo</i> . J. D. HARRALSON, B. I. WOLFE AND F. C. BROWN	69
Interactions of Pyrazole and Ethanol on Norepinephrine Metabolism in Rat Brain. FOUNTAINE C. BROWN, JOHN ZAWAD AND J. D. HARRALSON	75
Modification of Electroshock Convulsive Responses and Thresholds in Neonatal Rats After Brain Monoamine Reduction. EDYTHE D. LONDON AND GARY G. BUTERBAUGH	81
The Role of Peripheral Catecholamines in Oxotremorine Tremor in the Rat and its Antagonism by <i>Beta</i> Adrenoceptor Blocking Agents. MARTA WEINSTOCK, ANTHONY P. ZAVADIL, ARNOLD J. ROSIN, CHUANG C. CHIUH AND IRWIN J. KOPIN	91
Relationship between Acetylcholinesterase Inhibition and the Development of a Myopathy. LYNN WECKER, TOMAZ KIAUTA AND WOLF-D. DETTBARN	97
Effects of Moderate Acidosis on Adrenergic Neurotransmission in Canine Saphenous Veins. T. J. VERBEUREN, W. J. JANSSENS AND P. M. VANHOUTTE	105
Inhibition of Sympathetic Nervous System by Histamine: Studies with H <sub>1</sub> - and H <sub>2</sub> -Receptor Antagonists. MUSTAFA F. LOKHANDWALA	115
The Cardiovascular Effects of the Antihypertensive Drug Debrisoquin: A Contribution to the Pharmacology of Chronic Treatment. I. One-Week Administration to Dogs. I. CAVERO, M. GEROLD, A. SANER AND G. HAEUSLER	123
Effect of Prostaglandin I <sub>2</sub> and Analogs on Platelet Aggregation and Smooth Muscle Contraction. B. H. CRANE, T. L. MAISH, Y. T. MADDOX, E. J. COREY, I. SZÉKELY AND P. W. RAMWELL	132
Antagonism of the Pulmonary Vasoconstrictor Response to Prostaglandin F <sub>2<math>\alpha</math></sub> by N-Dimethylamino Substitution of Prostaglandin F <sub>2<math>\alpha</math></sub> . THOMAS M. FITZPATRICK, ISRAEL ALTER, ELIAS J. COREY, PETER W. RAMWELL, JOHN C. ROSE AND PETER A. KOT	139
Uptake, Metabolism and Efflux of <i>l</i> - $\alpha$ -Acetylmethadol (LAAM) by Rat Lung Tissue. DERICK H. M. LAU AND GARY L. HENDERSON	143
Distribution of Clozapine in the Rat: Localization in Lung. THOMAS H. GARDINER, JERRY M. LEWIS AND PARKHURST A. SHORE	151
Determination of N,N-Dimethylindolealkylamines in Plasma, Blood and Urine Extracts by Radioimmunoassay and High Pressure Liquid Chromatography. LOUIS J. RICEBERG AND HELEN VAN VUNAKIS	158
Impaired Hepatic Drug Metabolism after Jejunoileal Bypass in Rats. D. J. TUMA, J. A. VANDERHOOF AND M. F. SORRELL	167
Hepatic Uptake of Propranolol. JULIUS H. ANDERSON, ROSALIND C. ANDERSON AND L. SUSAN IBEN	172
Uptake of Morphine and Nalorphine by Isolated Rat Hepatocytes. KIKUO IWAMOTO, DAVID L. EATON AND CURTIS D. KLAASSEN	181
Characterization of SC2644-Induced Choleresis in the Dog. Evidence for Canalicular Bicarbonate Secretion. JAMES L. BARNHART AND BURTON COMBES	190

Effects of Ethacrynic Acid and Furosemide on Respiration of Isolated Kidney Tubules: The Role of Ion Transport and the Source of Metabolic Energy. JULIA A. CUNARRO AND MICHAEL W. WEINER	198
The Effects of 2,4,6-Triaminopyrimidine (TAP) on Sodium and Potassium Excretion by the Rat Kidney: Comparison with Amiloride. ROGER H. BOWMAN, JONATHAN ARNOW AND I. M. WEINER	207
Covalent Binding of Metabolites of Acetaminophen to Kidney Protein and Depletion of Renal Glutathione. GILBERT H. MUDGE, MARK W. GEMBORYS AND GEOFFREY G. DUGGIN	218
$\gamma$ -Glutamyl Dopa: A Kidney-Specific Dopamine Precursor. SHERWIN WILK, HARUKO MIZOGUCHI AND MARIAN ORLOWSKI	227
Drug Interactions: Inhibition of Acetaminophen Glucuronidation by Drugs. W. BOLANOWSKA AND T. GESSNER	233

## No. 2, August 1978

Pharmacology of 6,7-Dihydroxy-2-Dimethylaminotetralin (TL-99). I. Cardiovascular Activity in the Dog and Cat. J. M. KITZEN, J. P. LONG AND J. G. CANNON	239
The Effects of Adrenergic Stimulation on Conductive and Resistive Segments of the Coronary Vascular Bed. GEORGE S. MALINDZAK, JR., EDWARD J. KOSINSKI, HAROLD D. GREEN AND GARLAND W. YARBOROUGH	248
Effect of Autonomic Neural Blockade on Verapamil-Induced Suppression of the Accelerated Ventricular Escape Beat in Ouabain-Treated Dogs. L. R. KLEVANS AND R. J. KELLY	259
Withdrawal of Clonidine: Effects of Varying Dosage or Duration of Treatment on Subsequent Blood Pressure and Heart Rate Responses. HELEN F. OATES, LYNETTE M. STOKER, JUDITH C. MONAGHAN AND GORDON S. STOKES	268
Histamine-Induced Negative Inotropism: Mediation by H <sub>1</sub> -Receptors. JAMES H. ZAVECZ AND ROBERTO LEVI	274
The Effect of Propranolol and Its Analogs on Ca <sup>++</sup> Transport by Sarcoplasmic Reticulum Vesicles. E. NOACK, M. KURZMACK, S. VERJOVSKI-ALMEIDA AND G. INESI	281
Electrically Induced Opiate-Like Inhibition of the Guinea-Pig Ileum: Cross-Tolerance to Morphine. MARGARITA M. PUIG, PEDRO GASCÓN AND JOSÉ M. MUSACCHIO	289
Naltrexone, Morphine and Cocaine Interactions in Mice and Rats. HAROLD BLUMBERG AND CLYDE IKEDA	303
Influence of Acute and Chronic Treatment with Desmethylimipramine on Catecholamine Effects in the Rat. ALAN FRAZER, MARILYN E. HESS, JOE MENDELS, BRADLEY GABLE, ELLEN KUNKEL AND ALLISON BENDER	311
Effect of Drug or Electrically Induced Tachyarrhythmias on the Release of Lactate Dehydrogenase (LDH) in Isolated Perfused Guinea-Pig Hearts. I. Comparison of the Effects Produced by Ouabain, Calcium, Epinephrine and Aconitine. RALPH TANZ AND LIONEL OPIE	320
Tachyphylaxis to <i>d</i> -Amphetamine: A Reexamination of the Phenomenon. LANCE L. SIMPSON	331
Specificity of a Rat Behavioral Model for Serotonin Receptor Activation. ROBERT S. SLOVITER, EUGENE G. DRUST AND JOHN D. CONNOR	339
Evidence That Serotonin Mediates Some Behavioral Effects of Amphetamine. ROBERT S. SLOVITER, EUGENE G. DRUST AND JOHN D. CONNOR	348
Effects of <i>d</i> -Amphetamine and Pentobarbital in Combination with Single or Repeated Daily Injections of Morphine in the Pigeon. JAMES B. SMITH	353
Glucocorticoid Effects on Spinal Cord Function. EDWARD D. HALL, THOMAS BAKER AND WALTER F. RIKER, JR.	361
Lead Blockade of Norepinephrine-Induced Inhibition of Cerebellar Purkinje Neurons. DAVID TAYLOR, JAMES NATHANSON, BARRY HOFFER, LARS OLSON AND ÅKE SEIGER	371
Evaluation of Oral Therapy of Mansonial Schistosomiasis in the Sudan Using Single and Multiple Doses of Hycanthon and Oxamniquine Drugs. M. MAGZOUB AND S. E. I. ADAM	382
Cytotoxic Activity of Mechlorethamine and Melphalan Against Cultured Tumor Cells: Potentiation by Caffeine. R. L. MERRIMAN AND N. E. SLADEK	388
Early Effects of Cobalt Chloride Treatment on Certain Blood Parameters and on Urine Composition. ELVIO GIOVANNINI, GIOVANNI B. PRINCIPATO, M. VITTORIA AMBROSINI, GIGLIOLA GRASSI AND MASSIMO DELL'AGATA	398
The Binding of [ <sup>3</sup> H]Diazepam to Rat Brain Homogenates. CARL R. MACKERER, RONALD L. KOCHMAN, BERT A. BIERSCHENK AND SCOTT S. BREMNER	405
Studies on the Inhibition of Na <sup>+</sup> Transport in Toad Bladder by the Ionophore A23187. JAMES H. LUDENS	414
The Mechanism of Chlorothiazide-Induced Carbohydrate Intolerance. BETH HOSKINS AND CHATWIN M. JACKSON, III	423

The Influence of Indomethacin on the Pharmacokinetics, Diuretic Response and Hemodynamics of Furosemide in the Dog. J. L. DATA, A. RANE, J. GERKENS, G. R. WILKINSON, A. S. NIES AND R. A. BRANCH	431
The Effect of Pregnancy on the Metabolism of [ <sup>14</sup> C]Phenytoin in the Isolated Perfused Rat Liver. MARY VORE, JOHN BAUER AND VIRGINIA PASCUCCI	439
Meperidine Pharmacokinetics in the Maternal-Fetal Unit. HAZEL H. SZETO, LEON I. MANN, AMRUTHA BHAKTHAVATHSALAN, MAIDA LIU AND CHARLES E. INTURRISI	448
Long-Term Reduction of Brain Serotonin by <i>p</i> -Chloroamphetamine: Effects of Inducers and Inhibitors of Drug Metabolism. LARRY R. STERANKA AND ELAINE SANDERS-BUSH	460
Hydrolysis and Metabolism of N-Benzoyl-L-Tyrosyl- <i>p</i> -Aminobenzoic Acid in Normal and Pancreatic Duct-Ligated Animals. CHIYUKI YAMATO AND KENSAKU KINOSHITA	468
Physiological Disposition and Biotransformation of <i>l</i> - $\alpha$ -[2- <sup>3</sup> H]Acetylmethadol (LAAM) in Acutely and Chronically Treated Monkeys. A. L. MISRA, S. J. MULÉ, R. BLOCH AND T. R. BATES	475
The Metabolic Disposition of Radiolabeled Enkephalins <i>in Vitro</i> and <i>in Situ</i> . F. B. Craves, P. Y. Law, C. A. Hunt and H. H. Loh	492
Seminal Excretion, Vaginal Absorption, Distribution and Whole Blood Kinetics of <i>d</i> -Methadone in the Rabbit. BRIAN N. SWANSON, WILLIAM P. GORDON, ROBERT K. LYNN AND NICHOLAS GERBER	507

### No. 3, September 1978

Studies on Bitolterol, Di- <i>p</i> -Toluate Ester of N- <i>tert</i> -Butylarterenol: A New Long-Acting Bronchodilator with Reduced Cardiovascular Effects. HIROAKI MINATOYA	515
The Basis of <i>Beta</i> Adrenergic Bronchodilation. M. ASHWINI KUMAR	528
The Cardiovascular Effects of the Antihypertensive Drug Debrisoquin: A Contribution to the Pharmacology of Chronic Treatment. II. Eight-Week Administration to Dogs. M. GEROLD, I. CAVERO, A. SANER AND G. HAEUSLER	535
The Cardiovascular Effects of the Antihypertensive Drug Debrisoquin: A Contribution to the Pharmacology of Chronic Treatment. III. Absence of Adrenergic Degeneration After 8-Week Administration to Dogs. A. SANER, H. P. LOREZ, R. KETTLER, M. GEROLD AND G. HAEUSLER	545
Endotoxin Shock in the Rabbit: The Effects of Prostaglandin and Arachidonic Acid Administration. JOHN T. FLYNN	555
A Study of the Effect of $\Delta^9$ -Tetrahydrocannabinol ( $\Delta^9$ -THC) on Mammalian Salivary Flow. WILLIAM R. MCCONNELL, WILLIAM L. DEWEY, LOUIS S. HARRIS AND JOSEPH F. BORZELLECA	567
Hepatotoxicity and Metabolism of Iproniazid and Isopropylhydrazine. SIDNEY D. NELSON, JERRY R. MITCHELL, WAYNE R. SNODGRASS AND JOHN A. TIMBRELL	574
Brain and Plasma Concentrations of Amphetamine Isomers in Mice. WILLIAM H. RIFFEE, THOMAS M. LUDDEN, RICHARD E. WILCOX AND MICHAEL C. GERALD	586
Carrier-Mediated Transport of the Organic Cation Procaine Amide Ethobromide by Isolated Rat Liver Parenchymal Cells. DAVID L. EATON AND CURTIS D. KLAASSEN	595
Pharmacokinetics of Carbamazepine-10,11-Epoxy before and after Autoinduction in Rhesus Monkeys. I. H. PATEL, R. H. LEVY AND W. F. TRAGER	607
Choleresis Associated with Metabolism and Biliary Excretion of Diethyl Maleate in the Rat and Dog. JAMES L. BARNHART AND BURTON COMBES	614
Comparing the Effects of Anileridine, Alphaprodine and Fentanyl on Schedule-Controlled Responding by Pigeons. J. DAVID LEANDER	624
Electroencephalographic and Behavioral Effects of <i>d</i> -Ala <sup>2</sup> -Methionine-Enkephalinamide and Morphine in the Rat. FRANK C. TORTELLA, J. EDWARD MORETON AND NAIM KHAZAN	636
Central Cholinergic and Noradrenergic Stimulation in Spontaneously Hypertensive Rats. WILLIAM E. HOFFMAN, PHILIP G. SCHMID AND M. IAN PHILLIPS	644
Age-Dependence of Inhibition of Rat Brain Synaptic Vesicle [ <sup>3</sup> H]Norepinephrine Uptake Caused by Administration of a Single Dose of Reserpine: Persistence of Inhibition in Adults but Not in Neonates. FREDERIC J. SEIDLER, WILLIAM L. WHITMORE AND THEODORE A. SLOTKIN	652
Pharmacological Studies on the Subcellular Site of Action of Botulinum Toxin Type A. LANCE L. SIMPSON	661
Postsynaptic Facilitatory Effects of Theophylline on Amphibian Neuromyal Transmission. K. KAIBARA AND A. G. KARZMAR	670
The Effect of Neuroleptics on Acetylcholine Concentration and Choline Uptake in Striatum: Implications for Regulation of Acetylcholine Metabolism. KATHLEEN A. SHERMAN, ISRAEL HANIN AND MICHAEL J. ZIGMOND	677
The Effects of Colloidal and Crystalloidal Fluids on Rattlesnake Venom Shock in the Rat. RICHARD C.	

SCHAEFFER, JR., RICHARD W. CARLSON, VINOD K. PURI, GREGG CALLAHAN, FINDLAY E. RUSSELL AND MAX H. WEIL	687
2,3-Dimercaptosuccinic Acid: A New Agent for the Treatment of Lead Poisoning. J. H. GRAZIANO, J. K. LEONG AND E. FRIEDHEIM	696
Handling of Triamterene by the Isolated Perfused Rat Kidney. SEN T. KAU	701
Hypercalcitoninism and C-Cell Hyperplasia in Rats with Goiters Produced by a Low Iodine Diet or Propylthiouracil. TAI-CHAN PENG, CARY W. COOPER, SANFORD C. GARNER AND EUGENE M. VOLPERT	710
Errata	718
Index, Volume 206, July-September 1978	719