

# CONTENTS OF VOLUME 205

No. 1, April 1978

Thromboxane A <sub>2</sub> Biosynthesis in the Ureter Obstructed Isolated Perfused Kidney of the Rabbit. AUBREY R. MORRISON, KOHEI NISHIKAWA AND PHILIP NEEDLEMAN	1
Kinetic Analysis of the Renal Handling of 2,2-Bis( <i>p</i> -Chlorophenyl) Acetic Acid by the Rat. JOHN B. PRITCHARD	9
Studies with a New Antifolate 2,4-Diamino-5-Adamantyl-6-Methylpyrimidine (DAMP): Tissue Distribution and Disposition of 2,4-Diamino-5-Adamantyl-6-Methylpyrimidine and Its Metabolite. SIGMUND F. ZAKRZEWSKI, CHANDRAKANT DAVE, LAWRENCE H. MEAD AND DANIEL S. DELUOMO	19
Effects of 1,10-Phenanthroline and Zinc Complex of 1,10-Phenanthroline on Nucleic Acid Synthesis in Mouse Liver and Spleen. CHI-HSIUNG CHANG, JOHN W. YARBRO, DAVID E. MANN, JR. AND RONALD F. GAUTIERI	27
Pregestational Administration of Morphine Sulfate to Female Mice: Long-Term Effects on the Development of Subsequent Progeny. GLADYS FRIEDLER	33
Position Sensitivity of De-efferented Muscle Spindles in Experimental Acrylamide Neuropathy. HERBERT E. LOWNDES, THOMAS BAKER, EUN-SOOK CHO AND BERNARD S. JORTNER	40
Effects of Verapamil on Excitation-Contraction Coupling in Frog Sartorius Muscle. ARDITH Y. BONDI	49
The Increase in Spontaneous Transmitter Release Produced by $\beta$ -Bungarotoxin and Its Modification by Inorganic Ions. MARC T. ALDERDICE AND ROBERT L. VOLLE	58
Inhibition of $\alpha$ -Bungarotoxin Binding to Rat and Mouse Diaphragms by Amphetamine and Related Nonquaternary Compounds. KENNETH A. SKAU AND MICHAEL C. GERALD	69
Involvement of Nicotinic and Muscarinic Receptors in Synaptic Transmission in Cat Superior Cervical Ganglion Reinnervated by Vagal Primary Afferent Axons. MOTOHATSU FUJIWARA, KAZUYOSHI KURAHASHI, NOBORU MIZUNO AND YASUHISA NAKAMURA	77
Effects of Theophylline and N <sup>6</sup> ,O <sup>2</sup> -Dibutyl Adenosine 3':5'-Monophosphate on Sympathetic Ganglionic Transmission in Rats. SONG Y. HSU AND ROBERT J. McISAAC	91
Purine Nucleoside and Nucleotide Interactions on Normal and Subsensitive <i>Alpha</i> Adrenoreceptor Responsiveness in Guinea-Pig vas Deferens. M. I. HOLCK AND B. H. MARKS	104
A Kinetic and Pharmacologic Analysis of 5-Hydroxytryptamine Transport by Human Platelets and Platelet Storage Granules: Comparison with Central Serotonergic Neurons. STEPHEN M. STAHL AND HERBERT Y. MELTZER	118
Dopamine Turnover in the Intact Rabbit Brain: Effect of Pentobarbital or Haloperidol. AMIRAM I. BARKAI	133
Rat Striatal Methionine-Enkephalin Content After Chronic Treatment with Cataleptogenic and Non-cataleptogenic Antischizophrenic Drugs. J. S. HONG, H.-Y. T. YANG, W. FRATTA AND E. COSTA	141
Centrally Mediated Release by Cocaine of Endogenous Epinephrine and Norepinephrine from the Sympathoadrenal Medullary System of Unanesthetized Rats. CHUANG C. CHIUH AND IRWIN J. KOPIN	148
Pharmacological Evaluation of New Calcium Antagonists: 2-Substituted 3-Dimethylamino-5,6-Methylenedioxyindenes. Effects on Adrenomedullary Catecholamine Secretion. MARY FAUST PIASCIK, RALF G. RAHWAN AND DONALD T. WITIAK	155
Responses of Heart Ornithine Decarboxylase and Adrenal Catecholamines to Methadone and Sympathetic Stimulants in Developing and Adult Rats. DONNA LYNN BAREIS AND THEODORE A. SLOTKIN	164
Epinephrine-Induced Automaticity of Canine Cardiac Purkinje Fibers and Its Relationship to the Adenylate Cyclase Adenosine 3',5'-Monophosphate System. PETER DANILO, JR., YVONNE VULLIEMOZ, MARIAGNES VEROSKY AND MICHAEL R. ROSEN	175
Reserpine-Induced Supersensitivity to the Chronotropic and Inotropic Effects of Calcium in Rabbit Atria. THOMAS E. TENNER, JR. AND OLIVER CARRIER, JR.	183
Effects of Droperidol on Depolarization-Induced Automaticity, Maximum Upstroke Velocity ( $V_{max}$ ) and the Kinetics of Recovery of $V_{max}$ in Guinea-Pig Ventricular Myocardium. A. O. GRANT, L. M. HONDEGHEM AND B. G. KATZUNG	193
Lidocaine Effects on Action Potentials of Purkinje Fibers from Neonatal and Adult Dogs. LUC MARY-RABINE AND MICHAEL R. ROSEN	204
The Effect of Clonidine on the Fastigial Pressor Response in Dogs. K. J. DORMER AND H. L. STONE	212
Effects of Locally and Systemically Infused Bradykinin on Transvascular Fluid and Protein Transfer in	

the Canine Forelimb. JAMES J. MACIEJKO, DOUGLAS L. MARCINIAK, EDWARD F. GERSABECK AND GEORGE J. GREGA	221
Effects of Naloxone on Schedule-Controlled Behavior in Morphine-Maintained Pigeons. ALICE M. YOUNG AND TRAVIS THOMPSON	236
Development of a Pulmonary Technique to Assess Inhaled Bronchoactive Agents in the Conscious Rhesus Monkey. ROBERT M. WEISSBERG, JOHN B. BRADSHAW AND GABRIEL L. GARAY	246
Announcement—Workshop in Pharmacokinetics	254

## No. 2, May 1978

Effects of Acute and Chronic Morphine Treatments on Calcium Localization and Binding in Brain. HIROAKI YAMAMOTO, R. ADRON HARRIS, HORACE H. LOH AND E. LEONG WAY	255
Effect of Morphine on the Fate of Newly Transported Tryptophan and 5-Hydroxytryptophan in Brain of Rats. ALICE A. LARSON AND A. E. TAKEMORI	265
<i>meta</i> Substituted N-Ethylamphetamine Self-Injection Responding in the Rhesus Monkey: Structure-Activity Relationships. RICHARD E. TESSEL AND JAMES H. WOODS	274
Differential Attenuation of Two Kinds of Conditioned Suppression by <i>d</i> -Amphetamine and Pentobarbital. KLAUS A. MICZEK AND DANIEL LUTTINGER	282
Discriminative Effects of Cyclazocine in the Squirrel Monkey. GERALD J. SCHAEFER AND STEPHEN G. HOLTZMAN	291
The Effects of Diazepam, Morphine and Lidocaine on Nociception in Rhesus Monkeys: A Signal Detection Analysis. CHARLES G. LINEBERRY AND ALBERT T. KULICS	302
Effects of Divalent Cations, Lanthanum, Cation Chelators and an Ionophore on Acetylcholine Antinociception. MARIANNE WIDMAN, DIANE ROSIN AND WILLIAM L. DEWEY	311
Effects of Organophosphate Insecticides on the Cholinergic Receptors of Frog Skeletal Muscle. MICHAEL S. DEKIN, H. R. GUY AND CHARLES EDWARDS	319
Neostigmine-Induced Alterations at the Mammalian Neuromuscular Junction. I. Muscle Contraction and Electrophysiology. T. N. TIEDT, E. X. ALBUQUERQUE, C. S. HUDSON AND J. E. RASH	326
Neostigmine-Induced Alterations at the Mammalian Neuromuscular Junction. II. Ultrastructure. C. S. HUDSON, J. E. RASH, T. N. TIEDT AND E. X. ALBUQUERQUE	340
Adrenergic Storage Vesicles in Rat Heart: Quantitation of Membrane-Bound and Membrane-Enclosed Dopamine $\beta$ -Hydroxylase. DAVID L. NELSON, T. KENDALL HARDEN AND PERRY B. MOLINOFF	357
Blood Pressure and Heart Rate Responses Produced by <i>d</i> -Amphetamine: Correlation With Blood Levels of Drug. LANCE L. SIMPSON	366
Effects of <i>dl</i> -Propranolol on Atrial and Ventricular Rates in Unanesthetized Atrioventricular Blocked Dogs. ROBERT D. REYNOLDS AND JOSEPH DiSALVO	374
Analysis of the Effect of Tyramine and Norepinephrine in Isolated Canine Cerebral and Mesenteric Arteries. NOBORU TODA, SHIGEHITO HAYASHI AND KEISUKE HATTORI	382
Mechanism of the Adverse Interaction Between Monoamine Oxidase Inhibitors and Amphetamine. LANCE L. SIMPSON	392
Rat Jugular Vein Relaxes to Norepinephrine, Phenylephrine and Histamine. MARLENE L. COHEN AND KATHRYN S. WILEY	400
Effects of Aprindine HCl on Slow Channel Action Potentials and Transient Depolarizations in Canine Purkinje Fibers. VICTOR ELHARRAR, JOHN C. BAILY, DAVID A. LATHROP AND DOUGLAS P. ZIPES	410
Interaction of Hydralazine and Hydrazone Derivatives With Contractile Mechanisms in Rabbit Aortic Smooth Muscle. A. J. MCLEAN, K. BARRON, P. DU SOUICH, K. D. HAEGELE, J. L. MCNAY, O. CARRIER AND A. BRIGGS	418
Enhanced Exocytotic Release of Norepinephrine Consequent to Nerve Stimulation by Low Concentrations of Cyclic Nucleotides in the Presence of Phenoxybenzamine. ALBERT E. LANGLEY AND NORMAN WEINER	426
Targets of Octopamine Action in the Lobster: Cyclic Nucleotide Changes and Physiological Effects in Hemolymph, Heart and Exoskeletal Muscle. B.-A. BATTELLE AND E. A. KRAVITZ	438
Calcium-Mediated Effects of Carbachol on Cation Pumping and Na Uptake in Rat Parotid Gland. JAMES W. PUTNEY, JR. AND RALPH J. PAROD	449
Digoxin Disposition Kinetics in Dogs Before and During Azotemia. KLAUS D. GIERKE, DONALD PERRIER, MICHAEL MAYERSOHN AND FRANK I. MARCUS	459
Effect of Sinusoidal Perfusion on Galactose Elimination Kinetics in Perfused Rat Liver. SUSANNE KEIDING AND ELENA CHIARANTINI	465
The Effect of Phenobarbital, Probenecid and Diethyl Maleate on the Pharmacokinetics and Biliary Excretion of Ethacrynic Acid in the Rat. J. D. WALLIN, G. CLIFTON AND N. KAPLOWITZ	471

Carrier-Mediated Transport of Ouabain in Isolated Hepatocytes. DAVID L. EATON AND CURTIS D. KLAASSEN	480
Practolol Metabolism. II. Metabolism in Human Subjects. P. R. REEVES, D. E. CASE, H. T. JEPSON, D. J. MCCORMICK, J. T. NICHOLS, R. H. FELIX, P. J. L. HOLT, F. J. ZACHARIAS AND R. W. FLUKE	489
A Radioimmunoassay for the Determination of Combined Amitriptyline and Nortriptyline Concentrations in Microliter Samples of Plasma. J. D. ROBINSON, D. RISBY, G. RILEY AND G. WYNNE AHERNE	499
Repression of Glial RNA Transcription During the Development of 6-Amino-nicotinamide (6-AN)-Induced Acute Gliopathy. H.-I. SARKANDER, E. KNOLL-KÖHLER AND J. CERVOS-NAVARRO	503
Erratum	515
Increased Clearance of Digoxin in Rabbits during Repeated Administration. HERMANN R. OCHS, GUNTHER BODEM, GERD BALES, DAVID J. GREENBLATT AND THOMAS W. SMITH	516

## No. 3, JUNE 1978

Tolerance and Cross-Tolerance to Cocaine and <i>d</i> -Amphetamine. WILLIAM L. WOOLVERTON, DAVID KANDEL AND CHARLES R. SCHUSTER	525
Development and Maintenance of Morphine Tolerance and Dependence in the Rat by Scheduled Access to Morphine Drinking Solutions. VANCE F. GELLERT AND STEPHEN G. HOLTZMAN	536
Central and Peripheral Actions of Morphine on Intestinal Transit. JOHN J. STEWART, NORMAN W. WEISBRODT AND THOMAS F. BURKS	547
Disposition of Morphine in Chronically Infused Rats; Relationship to Antinociception and Tolerance. GRAHAM A. PATRICK, WILLIAM L. DEWEY, FRANK P. HUGER, ELLEN D. DAVES AND LOUIS S. HARRIS	556
Loss of Inhibition in the Spinal Cord During Barbiturate Withdrawal. HOWARD C. ROSENBERG AND MICHIO OKAMOTO	563
The Effects of Cocaine HCl and a Quaternary Derivative of Cocaine, Cocaine Methiodide, on Isolated Guinea Pig and Rat Atria. R. C. TESSEL, C. B. SMITH, D. N. RUSS AND L. B. HOUGH	569
The Placental Transfer and Materno-Fetal Disposition of Methadone in Monkeys. C. M. DAVIS AND D. C. FENIMORE	577
Biochemical and Behavioral Alterations in Developing Rats Treated with 5,7-Dihydroxytryptamine. GEORGE R. BREESE, RICHARD A. VOGEL AND ROBERT A. MUELLER	587
An Improved Assay of 7-Ethoxycoumarin O-Deethylase Activity: Induction of Hepatic Enzyme Activity in C57BL/6J and DBA/2J Mice by Phenobarbital, 3-Methylcholanthrene and 2, 3, 7, 8-Tetrachlorodibenzo- <i>p</i> -Dioxin. WILLIAM F. GREENLEE AND ALAN POLAND	596
Effects of Patulin on the Kinetics of Substrate and Cationic Ligand Activation of Adenosine Triphosphatase in Mouse Brain. TIMOTHY D. PHILLIPS AND A. WALLACE HAYES	606
The Design of Pharmacological Experiments Using Unbiased Models of Agonist-Antagonist Interaction. D. W. VERE	617
(2-Benzoyl-ethyl)Trimethylammonium Chloride: A New, Selective and Stable Inhibitor of Human Placental Choline Acetyltransferase. PETER P. ROWELL, ARVIND K. CHATURVEDI AND B. V. RAMA SASTRY	624
Modulation by Prostaglandins of the Release of Acetylcholine and Noradrenaline in Guinea-Pig Isolated Ileum. ONDREJ KADLEC, KAREL MASEK AND ISIDOR ŠEĚERNA	635
<i>Beta</i> Adrenergic Blockade, Regional Left Ventricular Blood Flow and ST-Segment Elevation in Canine Experimental Myocardial Ischemia. ALAIN BERDEAUX, CARLOS PERES DE COSTA, MARIE GARNIER, JACQUES-ROBERT BOISSIER AND JEAN-FRANÇOIS GIUDICELLI	646
Interactions Between Digoxin and Brief Vagal Bursts Influencing Atrioventricular Conduction. DANIEL G. PACE AND PAUL MARTIN	657
Antiarrhythmic Effects of Tricyclic Antidepressant Drugs in Ouabain-Induced Arrhythmias in the Dog. R. DOUGLAS WILKERSON	666
Hemodynamic Effects of Systemic and Central Administration of $\alpha$ -Methyldopa. RALPH P. FORSYTH, PER BOLME, TAKASHI ISHIZAKI AND KENNETH L. MELMON	675
Further Studies on the Positive Inotropic Effect of the Polypeptide Anthopleurin-A From a Sea Anemone. SHOJI SHIBATA, T. IZUMI, D. G. SERIGUCHI AND T. R. NORTON	683
Contribution of Supracollicular Structures of the Brain to the Central Depression of Cardiovascular Function by Clonidine. A. S. TADEPALLI AND E. MILLS	693
Mass Spectrometric Measurement of Catecholamine Turnover in Rat Hypothalamus After Long Term L-Dopa Infusion. CURT R. FREED AND ROBERT C. MURPHY	702
Mechanism of Gastric Secretagogue Effect of Reserpine in Rats. I. YAMAGUCHI, J. HIROI, H. FUKE AND S. KUMADA	710
Paradoxical Effects of Cobaltous Chloride and Salts of Other Divalent Metals on Tissue Levels of Re-	

duced Glutathione and Microsomal Mixed-Function Oxidase Components. HENRY A. SASAME AND MICHAEL R. BOYD .....	718
The Effects of Exercise and Adrenaline Infusion Upon the Blood Levels of Propranolol and Antipyrine in the Horse. GARTH POWIS AND DAVID H. SNOW .....	725
Comparison of the Mechanism of Isoproterenol-Stimulated Glycogenolysis in Skeletal Muscle of Normal and Phosphorylase Kinase-Deficient Mice (I Strain). STEPHEN R. GROSS, KATHERINE BROMWELL AND ISABEL V. BAANANTE .....	732
Chemical Induction of <i>p</i> -Aminohippuric Acid Transport in Renal Cortical Slices From Adult and Immature Rabbits. W. KLUWE, K. M. McCORMACK AND J. B. HOOK .....	743
Liberation of Cyanide From $\alpha$ -Aminonitriles Relative to Amygdalin. MELDRUM B. WINSTEAD, CLEM A. CICCARELLI AND H. SAUL WINCHELL .....	751
The Development of New Iron-Chelating Drugs. II. R. W. GRADY, J. H. GRAZIANO, C. P. WHITE, A. JACOBS AND A. CERAMI .....	757
Index, Volume 205, April-June 1978 .....	767