

CONTENTS OF VOLUME 184

NO. 1, JANUARY 1973

Role of Brain Norepinephrine in Audiogenic Seizure in the Rat. PHILLIP C. JOBE, ALBERT L. PICCHIONI AND LINCOLN CHIN.....	1
Jumping in Mice Elicited by α -Naphthyloxyacetic Acid (α -NOAA). ALBERT WEISSMAN.....	11
Effects of Narcotic Analgesic Agonists and Antagonists on Rat Brain Acetylcholine. EDWARD F. DOMINO AND ANN WILSON.....	18
Formation and Fate of Histamine in Rat and Mouse Brain. RICHARD W. SCHAYER AND MARGARET A. REILLY.....	33
The Inhibition by Disodium Cromoglycate <i>in Vitro</i> of Anaphylactically Induced Histamine Release from Rat Peritoneal Mast Cells. E. J. KUSNER, B. DUBNICK AND D. J. HERZIG.....	41
Cholinergic Activities and Cholinesterase Hydrolysis of Acetylcholine. C. Y. CHIOU.....	47
Decreased Contractility and Norepinephrine Content of Guinea-Pig Seminal Vesicles after Chronic Treatment with Testosterone. S. GREENBERG, J. P. LONG, J. P. BURKE, B. CHAPNICK AND L. S. VAN ORDEN, III.....	56
Effects of L-Dopa Administration on the Concentrations of Dopa, Dopamine and Norepinephrine in Various Rat Tissues. J. A. ROMERO, L. D. LYTLE, L. A. ORDONEZ AND R. J. WURTMAN.....	67
The Release of Guanethidine and Bethanidine by Splenic Nerve Stimulation: A Quantitative Evaluation Showing Dissociation from Adrenergic Blockade. D. G. SHAND, D. H. MORGAN AND J. A. OATES.....	73
The Role of Calcium in "Nonspecific" Supersensitivity of Vascular Muscle. OLIVER CARRIER, JR. AND HELGA A. JUREVICS.....	81
Ultrastructure of Mitochondria in Atrial Muscle Associated with Depression and Supersensitivity Produced by Reserpine. T. IWAYAMA, W. W. FLEMING AND G. BURNSTOCK.....	95
The Role of Intracellular Calcium in Catecholamine Secretion from the Bovine Adrenal Medulla. RALF G. RAHWAN, J. L. BOROWITZ AND T. S. MIYA.....	106
Tetrahydroisoquinoline Alkaloids: Stimulated Secretion from the Adrenal Medulla. ROBERT S. GREENBERG AND GERALD COHEN.....	119
Catechol, a Facilitatory Drug That Demonstrates Only a Prejunctional Site of Action. J. P. GALLAGHER AND L. C. BLABER.....	129
Neuromuscular Effects of Morphine and Naloxone. GEORGE C. SOTEROPOULOS AND FRANK G. STANDAERT.....	136
Effects of Veratrum Alkaloids on Membrane Potential and Conductance of Squid and Crayfish Giant Axons. MASAHIRO OHTA, TOSHIO NARAHASHI AND RICHARD F. KEELER.....	143
Mechanism of Action of Propranolol on Squid Axon Membranes. CHAU H. WU AND TOSHIO NARAHASHI.....	155
Increased Sympathetic Activity in the Pathogenesis of Restraint Ulcer in Rats. BIJAN DJAHANGUIRI, HOWARD L. TAUBIN AND LEWIS LANDSBERG.....	163
Airway Constriction in Guinea Pigs: Interaction of Histamine and Autonomic Drugs. J. S. DOUGLAS, M. W. DENNIS, P. RIDGWAY AND A. BOUHUYS.....	169
Effect of Corticosteroid Treatment on Urinary Epinephrine Response to Induced Hypoglycemia in Asthmatic Children. HELEN G. MORRIS, GEORGIA DEROCHE AND MARTHA EARLE.....	180
The Influence of Reserpine on the Calcium-Induced Responses of Spontaneously Beating Isolated Rabbit Atria. HELGA A. JUREVICS AND OLIVER CARRIER, JR.....	189
Effect of 4,4'-Biphenylenebis-(2-Oxoethylene)-Bis-(2,2-Diethoxyethyl) Dimethylammonium Dibromide (DMAE) on Accumulation and Nicotine-Induced Release of Norepinephrine in the Heart. THOMAS C. WESTFALL AND MARY BRASTED.....	198
The Influence of Nitroglycerin and Dipyridamole on Pacing-Induced S-T Segment Depression in Unanesthetized, Atherosclerotic Rabbits. ROBERT J. LEE AND SHERRIN H. BAKY.....	205
The Antiarrhythmic Properties of UM-272, the Dimethyl Quaternary Derivative of Propranolol. DANIEL P. SCHUSTER, BENEDICT R. LUCCHESI, NANCY L. NOBEL, MICHAEL N. MIMNAUGH, RAYMOND E. COUNSELL AND FRANK J. KNIFFEN.....	213
Influence of Acetylcholine on Contractile Force and Cyclic Nucleotide Levels in the Isolated Perfused Rat Heart. WILLIAM J. GEORGE, ROBERT D. WILKERSON AND PHILIP J. KADOWITZ.....	228

Stimulation of Sodium Reabsorption by Dinitrophenol in the Dog Kidney. A. QUINTANILLA, P. R. LEWY, N. W. LEVIN AND R. H. KESSLER.	236
A Study on the Mechanism of Vasopressin Escape: Effects of Chronic Vasopressin and Overhydration on Renal Tissue Osmolality and Electrolytes in Dogs. W. Y. CHAN.	244
Kinetics of Anticoagulant Effect of Dicumarol in Rats. LEMUEL B. WINGARD, JR. AND GERHARD LEVY.	253
Studies on 1,1,1-Trichloro-2,2-Bis(<i>p</i> -Chlorophenyl)Ethane (DDT)-Induced Hyperthermia: Effects of Cold Exposure and Aminopyrine Injections. DOROTHY E. WOOLLEY.	261
A Sensitive Radiometric Assay of Aminopyrine N-Demethylation. ALAN P. POLAND AND DANIEL W. NEBERT.	269
Effect of β,β -Difluoro Substitution on the Disposition and Pharmacological Effects of 4-Chloroamphetamine in Rats. RAY W. FULLER, HAROLD D. SNODDY AND BRYAN B. MOLLOY.	278
Factors Affecting the Production and Accumulation of Uterine Luminal Fluid in the Rat. E. A. CONNER AND JACK W. MILLER.	285
The Distribution of Selected Substances into Rat Uterine Luminal Fluid. E. A. CONNER AND JACK W. MILLER.	291

NO. 2, FEBRUARY 1973

Increase in Sodium Permeability of Squid Axon Membranes by α -Dihydrograyanotoxin II. ISSEI SEYAMA AND TOSHIO NARAHASHI.	299
Characterization of Batrachotoxin-Induced Depolarization of the Squid Giant Axons. E. X. ALBUQUERQUE, I. SEYAMA AND T. NARAHASHI.	308
The Pharmacology of Batrachotoxin. V. A Comparative Study of Membrane Properties and the Effect of Batrachotoxin on Sartorius Muscles of the Frogs <i>Phyllobates aurotaenia</i> and <i>Rana pipiens</i> . E. X. ALBUQUERQUE, J. E. WARNICK, F. M. SANSONE AND J. DALY.	315
Effect of Catecholamine Analogs on Control of Actomyosin by Native Tropomyosin and Calcium: The Nature of the Negative Inotropic Receptor. CARL R. HONIG AND Y. SURENDRANATH REDDY.	330
Studies of the Presynaptic Effect of β -Bungarotoxin on Neuromuscular Transmission. C. C. CHANG, T. F. CHEN AND C. Y. LEE.	339
Inhibition of Adrenergic Neurotransmission by Parasympathomimetics in the Rabbit Ear Artery. ODD S. STEINSLAND, ROBERT F. FURCHGOTT AND S. M. KIRPEKAR.	346
Inhibition by Cadmium Ions of the Electrical Activity of Sinuatrial Nodal Pacemaker Fibers and Their Response to Norepinephrine. NOBORU TODA.	357
Vasoconstriction Produced by Hallucinogens on Isolated Human and Sheep Umbilical Vasculature. D. C. DYER AND D. W. GANT.	366
Similarities and Differences between Mescaline, Lysergic Acid Diethylamide-25 (LSD) and <i>d</i> -Amphetamine on Various Components of Fixed Interval Responding in the Rat. H. A. TILSON AND S. B. SPARBER.	376
The Effects of Chlorpromazine, Pentobarbital, Chlordiazepoxide and <i>d</i> -Amphetamine on Rates of Licking in the Rat. WILLIAM C. KNOWLER AND THOMAS E. UKENA.	385
Quantitative Aspects of Precipitated Abstinence in Morphine-Dependent Rats. EDDIE WEI, HORACE H. LOH AND E. LEONG WAY.	398
Morphine Pellet Implantation in Rats: Quantitative Assessment of Tolerance and Dependence. T. J. CICERO AND E. R. MEYER.	404
Biliary Excretion of Morphine-3-Glucuronide and Morphine-3-Ethereal Sulfate by Different Pathways in the Rat. RICHARD E. PETERSON AND JAMES M. FUJIMOTO.	409
The Effect of Cyproterone Acetate Pretreatment on the <i>in Vitro</i> Metabolism of Aniline, Hexobarbital and ^3H -Digitoxigenin. R. E. TALCOTT AND S. J. STOHS.	419
Identification by Gas Chromatography-Mass Spectrometry of Dihydrodigitoxin—A Metabolite of Digoxin in Man. E. WATSON, D. R. CLARK AND S. M. KALMAN.	424
Methimazole: Absorption, Metabolism and Excretion in the Albino Rat. D. S. SITAR AND D. P. THORNHILL.	432
Morphologic and Biochemical Changes in the Gut after Chronic Treatment with L-Dopa. LEONOR RIVERA-CALIMLIM, BRUCE H. BOSMANN, DAVID P. PENNEY AND LOUIS LASAGNA.	440
Measurement of Gastrointestinal Blood Loss in the Rat: The Effect of Aspirin, Phenylbutazone and Seclazone. JEROME EDELSON AND J. F. DOUGLAS.	449
Metabolism and Pharmacokinetics of a New Nonsteroid, Anti-Inflammatory Agent, 2-(3-Chloro- <i>o</i> -	

CONTENTS

v

Toluidino) Nicotinic Acid (Clonixin) in Rats, Dogs and Monkeys. B. KATCHEN, S. BUXBAUM, J. MEYER AND J. NING.....	453
Transport of Salicylic Acid by the Choroid Plexus <i>in Vitro</i> . ANTONIO V. LORENZO AND REYNOLD SPECTOR.....	465
Micropuncture Study of the Effect of Triflocin on Tubular Reabsorption in Rats. MICHAEL L. KAUKER.....	472
Strain Differences in Metabolism and Susceptibility to the Nephrotoxic Effects of Methoxyflurane in Rats. RICHARD I. MAZZE, MICHAEL J. COUSINS AND JON C. KOSEK.....	481
Placental Transfer and Tissue Distribution of Mescaline- ¹⁴ C in the Mouse. NANDKUMAR S. SHAH, A. E. NEELY, K. R. SHAH AND R. S. LAWRENCE.....	489
Tachyphylaxis of Guinea-Pig Ileum to Histamine and Furtrethonium. R. E. GOSSELIN AND R. S. GOSSELIN.....	494
Repeated Acquisition as a Behavioral Base Line for Studying Drug Effects. DONALD M. THOMPSON	506
The Reduction of Lidocaine Clearance by <i>dl</i> -Propranolol: An Example of Hemodynamic Drug Interaction. ROBERT A. BRANCH, DAVID G. SHAND, GRANT R. WILKINSON AND ALAN S. NIES.....	515

No. 3, MARCH 1973

Development of Tolerance in Pigeons to Behavioral Effects of a New Benzopyran Derivative. R. A. CAMPO.....	521
Operant Behavior in the Morphine-Dependent Rhesus Monkey. STEPHEN G. HOLTZMAN AND JULIAN E. VILLARREAL.....	528
Involvement of Nigro-Striatal Neurons in the <i>in Vivo</i> Release of Dopamine by Amphetamine, Amantadine and Tyramine. P. F. VON VOIGTLANDER AND K. E. MOORE.....	542
Activation of the Pathway from Locus Coeruleus to Rat Cerebellar Purkinje Neurons: Pharmacological Evidence of Noradrenergic Central Inhibition. B. J. HOFFER, G. R. SIGGINS, A. P. OLIVER AND F. E. BLOOM.....	553
The Rate of Formation of 3-Methoxy-4-Hydroxyphenylethyleneglycol Sulfate in Brain as an Estimate of the Rate of Formation of Norepinephrine. J. L. MEEK AND N. H. NEFF.....	570
Specific Inhibition by α -Methyltyrosine of Amphetamine-Induced Amine Release from Brain. S. J. ENNA, R. L. DORRIS AND P. A. SHORE.....	576
Effect of Sympathomimetic Drugs on Incorporation <i>in Vivo</i> of Intracisternally Injected ³³ P _i into Phospholipids of Rat Brain. R. O. FRIEDEL, J. R. JOHNSON AND S. M. SCHANBERG.....	583
Effects of Atropine, Tetrodotoxin and Lidocaine on Rebound Excitation of Guinea-Pig Small Intestine. J. D. WOOD AND D. R. MARSH.....	590
Effect of Propranolol on the Fast Inward Sodium Current in Frog Atrial Muscle. MERRILL TARR, EUGENE F. LUCKSTEAD, PATRICIA A. JUREWITZ AND HANS G. HAAS.....	599
The Effects of Lidocaine on Potassium Efflux from Various Tissues of Dog Heart. EMILIO KABELA.	611
Electrophysiologic Effects of Phenothiazines on Canine Cardiac Fibers. MAKOTO ARITA AND BORYS SURAWITZ.....	619
The Effect of Clonidine on Adrenergic Nerve Function in Vagotomized and Nonvagotomized Animals. M. J. ANTONACCIO AND R. D. ROBSON.....	631
Influence of Baroreceptor Reflexes on Cardiovascular Responses of the Dog to Acetylstrophanthidin. C. MICHAEL REING, HAROLD THIBODEAUX, RICHARD A. GILLIS AND PETER A. KOT.....	641
Study of the Mechanisms of the Modifying Actions of Hexamethonium on the Cardiovascular Response to Norepinephrine. JOHN NELSON EBLE, C. W. GOWDEY, ALLAN D. RUDZIK AND JOHN R. VANE.....	649
Regional Blood Flow Changes during Norepinephrine, Tyramine and Methoxamine Infusions in the Unanesthetized Rhesus Monkey. BARRY I. HOFFBRAND AND RALPH P. FORSYTH.....	656
Pharmacologic Properties of Minoxidil: A New Hypotensive Agent. DONALD W. DUCHARME, WALTER A. FREYBURGER, BOYD E. GRAHAM AND ROBERT G. CARLSON.....	662
Sch 10595, an Effective Dopamine- β -Hydroxylase Inhibitor and a Hypotensive Agent. C. A. KORDUBA, J. VEALS, A. WOHL, S. SYMCHOWICZ AND I. I. A. TABACHNICK.....	671
Intrarenal Prostaglandin Release Attenuates the Renal Vasoconstrictor Activity of Angiotensin. JAMES W. AIKEN AND JOHN R. VANE.....	678
Renal Hemodynamic and Natriuretic Effects of Furosemide and Hydrochlorothiazide in Dogs with Reduced Renal Blood Flow. JACK W. STRANDHOY, JAMES H. LUDENS AND HAROLD E. WILLIAMSON.....	688

Renal Tubular Conjugation and Excretion of Phenol and <i>p</i> -Nitrophenol in the Chicken: Differing Mechanisms of Renal Transfer. A. J. QUEBBEMANN AND M. W. ANDERS.....	695
Mechanism of Tolerance Development to Organic Nitrates. PHILIP NEEDLEMAN AND EUGENE M. JOHNSON, JR.....	709
The Hemodynamic Effects of <i>Beta</i> Adrenergic Blockade of the Flow-Dependent Hepatic Clearance of Propranolol. ALAN S. NIES, GWYN H. EVANS AND DAVID G. SHAND.....	716
Hepatic Excretory Function in the Newborn Rat. CURTIS D. KLAASSEN.....	721
Studies on an Unusual N-Dealkylation Reaction. II. Characteristics of the Enzyme System and a Proposed Pathway for the Reaction. JEROME J. KAMM AND ALICE SZUNA.....	729
Effect of Oxygen on Cyanide Intoxication. V. Physiologic Effects. GEORGE E. BURROWS, DAVID H. W. LIU AND JAMES L. WAY.....	739
Effect of Phenobarbital and SKF 525A on the Toxicity, Elimination and Metabolism of Cyclophosphamide in Newborn Mice. JAMES S. BUS, ROBERT D. SHORT AND JAMES E. GIBSON.....	749
Dynamics of Binding and Release of the Polymyxin Antibiotics by Tissues. WILLIAM A. CRAIG AND CALVIN M. KUNIN.....	757
Metabolism of Methylhistamine Formed through a New Pathway: Decarboxylation of L-3-Methylhistidine. JEAN-CHARLES SCHWARTZ, CHRISTIANE ROSE AND HENRI CAILLENS.....	766
Effect of Inhibitors of Protein and Ribonucleic Acid Synthesis on the Hyperbilirubinemia and Cholestasis Produced by α -Naphthylisothiocyanate. NINFA INDACOCHEA-REDMOND, HANSPETER WITSCHI AND GABRIEL L. PLAA.....	780
The Effect of Smoking on Serum Somatotropin, Immunoreactive Insulin and Blood Glucose Levels of Young Adult Males. HERSCHEL SANDBERG, LAURIAN ROMAN, JACQUELINE ZAVODNICK AND NORMAN KUPERS.....	787
Index, Volume 184, January-March 1973.....	793