

CONTENTS OF VOLUME 177

No. 1, APRIL 1971

Pharmacological Estimation of Drug-Receptor Dissociation Constants. Statistical Evaluation. I. Agonists. R. B. PARKER AND D. R. WAUD.....	1
Pharmacological Estimation of Drug-Receptor Dissociation Constants. Statistical Evaluation. II. Competitive Antagonists. D. R. WAUD AND R. B. PARKER.....	13
The Active Form of Pentobarbital in Squid Giant Axons. TOSHIO NARAHASHI, DONALD T. FRAZIER, TAKEHIKO DEGUCHI, CARL A. CLEAVES AND MILDRED C. ERNAU.....	25
Interference with Excitation by 5-Benzoyloxy-2-Iminohexahydropyrimidine Hydrochloride. M. Y. SPIEGELSTEIN AND C. Y. KAO.....	34
Negative Chronotropic Effects of McN A-343 and Nicotine in Isolated Guinea-Pig Atria: Insensitivity to Blockade by Tetrodotoxin. ACHILLES J. PAPPANO AND ROBERT A. REMBISH.....	40
Ganglionic Stimulation: Mechanism of the Positive Inotropic and Chronotropic Effects of Angiotensin. WILLIAM C. FARR AND GUNTER GRUPP.....	48
The Relative Effect of the Renal Pressor and Sympathetic Nervous Systems on Vascular Capacity during Hypotension. D. W. DUCHARME AND L. BECK.....	56
Direct and Systemic Effects of Guanethidine on Renal Function. RONALD L. WILLIAMS, JOHN E. MAINES III AND JAMES E. PEARSON.....	69
Dissociation of Cardiac Inotropic and Transmembrane Action Potential Effects of Ouabain. PETER J. DEMPSEY, ZENA T. MCCALLUM, KENNETH M. KENT AND THEODORE COOPER.....	78
Propranolol-Insensitive Effects of Epinephrine on Action Potential Repolarization in Electrically Driven Atria of the Guinea Pig. ACHILLES J. PAPPANO.....	85
Catecholamine Stores of the Isolated Rat Heart Perfused with Substrate-Free Medium. NARANJAN S. DHALLA, BUDH D. BHAGAT, PRAKASH V. SULAKHE AND ROBERT E. OLSON.....	96
A Possible Role of Microtubules in Catecholamine Release from the Adrenal Medulla: Effect of Colchicine, Vinca Alkaloids and Deuterium Oxide. ALAN M. POISNER AND JOSEPH BERNSTEIN.....	102
Acetaldehyde-Induced Catecholamine Secretion from the Cow Adrenal Medulla. F. H. SCHNEIDER.....	109
Norepinephrine in Blood Vessels: Concentration, Binding, Uptake and Depletion. BARRY A. BERKOWITZ, JAMES H. TARVER AND SYDNEY SPECTOR.....	119
Analysis of Reserpine-Induced Supersensitivity in Aortic Strips of Rabbits. JOHN TAYLOR AND RICHARD D. GREEN.....	127
The Effects of Cocaine, Norepinephrine and Ionic Stimulants on the Isolated, Superfused Rat Vas Deferens: Antagonism by "Adrenergic Neuron Blockers" and Reserpine. S. GREENBERG AND J. P. LONG.....	136
Inhibition of Norepinephrine Biosynthesis by Chlorpromazine in the Guinea-Pig Vas Deferens. DAVID G. JOHNSON, NGUYEN B. THOA AND IRWIN J. KOPIN.....	146
Subcellular Distribution and Aggregation of Bovine Adrenal Tyrosine Hydroxylase. ROBERT J. WURZBURGER AND JOSÉ M. MUSACCHIO.....	155
The Disposition and Metabolism of Tryptamine and the <i>in Vivo</i> Formation of 6-Hydroxytryptamine in the Rabbit. LOUIS LEMBERGER, JULIUS AXELROD AND IRWIN J. KOPIN.....	169
Effect of Decaborane on Histamine Formation in Mice. RICHARD W. SCHAYER AND MARGARET A. REILLY.....	177
Some Effects of Germine-3-Monoacetate (GMA) on Isolated Rat and Guinea-Pig Ileum. W. J. GOLDMAN AND A. SCHARBINE.....	181
The Effects of α -Methyltyrosine on Sleep and Brain Norepinephrine in Cats. CARL D. KING AND ROBERT E. JEWETT.....	188
Effects of Some Psychotropic Drugs on Dopamine Synthesis in the Rat Striatum. M. J. BESSON, A. CHERAMY AND J. GLOWINSKI.....	196

The Relation between Monoamines in Brain and the Anticonvulsant Action of Inhibitors of Carbonic Anhydrase. WILLIAM D. GRAY AND CHARLES E. RAUH...	206
The Structure-Activity Relationship of Tricyclic Amines. ERNST W. BAUR.....	219
Stress-Mediated Decrease in Liver Hexobarbital Metabolism: The Role of Corticosterone and Somatotropin. EDDIE WEI AND JOHN T. WILSON.....	227
The Metabolism of Hexobarbital in Mice and Methodology for Isolation and Quantitation of Its Metabolites <i>in Vivo</i> and <i>in Vitro</i> . NICHOLAS GERBER, ROBERT LYNN, ROBERT HOLCOMB, WILLIAM L. WELLER AND MILTON T. BUSH.....	234
The Effect of Hepatic Blood Flow on the Hepatic Removal Rate of Oxyphenbutazone in the Dog. T. L. WHITSETT, P. G. DAYTON AND J. L. MCNAY.....	246
Effect of Phenobarbital and SKF 525A on Placental Transfer of Cyclophosphamide in Mice. JAMES E. GIBSON AND BERNARD A. BECKER.....	256
On the Mechanisms of ¹⁴ C-Salicylic Acid Distribution in Rat Submaxillary Gland <i>in Vitro</i> . JAMES W. PUTNEY, JR. AND JOSEPH F. BORZELLECA.....	263
Metabolic Effects of Phenformin at Simulated High Altitude. SOUHEIR EL DEFRAWY AND JOSEPH P. BUCKLEY.....	276
Mechanism of Antilipolytic Effects of Cardiac Glycosides. DAI HYON YU, SHARON TRIESTER AND M. I. GLUCKMAN.....	284
Characterization of a Dipeptide Hydrolase (Kininase II: Angiotensin I Converting Enzyme). H. Y. T. YANG, E. G. ERDÖS AND Y. LEVIN.....	291
Action of 4,4'-Diformamidodiphenylsulfone (DFD) and Related Compounds on <i>Plasmodium berghei</i> . BETTY P. VOGH AND LARRY N. GLEASON.....	301
The Effect of <i>p</i> -Chlorophenylalanine on Opiate-Induced Running, Analgesia, Tolerance and Physical Dependence in Mice. D. L. CHENEY AND AVRAM GOLDSTEIN..	309

No. 2, MAY 1971

Pharmacologic Analysis of the Hypothermic Responses of the Morphine-Dependent Rhesus Monkey. STEPHEN G. HOLTZMAN AND JULIAN E. VILLARREAL.....	317
Effect of Dactinomycin on the Acute Toxicity and Brain Uptake of Morphine. HORACE H. LOH, FU-HSIUNG SHEN AND E. LEONG WAY.....	326
The Biologic Disposition of Pentazocine in the Rat. AZIZA M. EL-MAZATI AND E. LEONG WAY.....	332
Subcellular Distribution of 4- ¹⁴ C-Diphenylhydantoin in Rat Brain. JOHN W. KEMP AND DIXON M. WOODBURY.....	342
Spinal Excitatory and Depressant Effects of Sodium Diphenylthiohydantoinate. ARTHUR RAINES, YUNG J. SOHN AND BARRIE LEVITT.....	350
Procaine, Pentobarbital and Halothane: Effects on the Mammalian Myoneural Junction. ANIBAL GALINDO.....	360
Studies on the Nonspecific Blocking Action of Benzyltrimethylammonium Bromide (BTM). KENNETH DRETCHEN, F. P. J. DIECKE AND J. P. LONG.....	369
Nicotine-Induced Depolarization and Stimulation of Potassium Efflux in Striated Muscle. EDWARD G. HENDERSON AND JOHN C. HANCOCK.....	377
Further Evidence for a Sodium-Dependent, Optically Specific and Reserpine-Sensitive Amine Carrier Mechanism at the Adrenergic Neuron. M. F. SUGRUE AND P. A. SHORE.....	389
The Effects of Ouabain, Calcium and Potassium on the Transport and Incorporation of Some Amino Acids into Rabbit Atrial Tissue <i>in Vitro</i> . J. KYPSON AND G. HAIT.....	398
The Effect of L-Dopa on Chronotropic Responses to Cardioaccelerator Nerve Stimulation in Dogs. E. WHITNACK, A. LEFF, S. MOHAMMED AND T. E. GAFFNEY..	409
Effects of Lanthanum on ⁴⁵ Ca Movements and on Contractions Induced by Norepinephrine, Histamine and Potassium in Vascular Smooth Muscle. FRANK R. GOODMAN AND GEORGE B. WEISS.....	415
Hemodynamic Effects of Nitroglycerin and Amyl Nitrite in the Conscious Dog. ROBERT A. O'ROURKE, VERNON S. BISHOP, PETER A. KOT AND JOHN P. FERNANDEZ.....	426

The Pathophysiology of Barium: Hypokalemic and Cardiovascular Effects. OTTO ROZA AND LEONARD B. BERMAN.....	433
Some Aspects of the Reactions between Hydroxylamine and Hemoglobin Derivatives. RUSSELL D. CRANSTON AND ROGER P. SMITH.....	440
Uptake of Nonutilizable Sugars by Guinea-Pig Seminal Vesicles <i>in Vitro</i> . M. G. MAWHINNEY AND J. A. THOMAS.....	447
The Influence of Cinanserin and Selected Pharmacologic Agents on Experimental Allergic Encephalomyelitis (EAE). R. G. BABINGTON AND P. W. WEDEKING...	454
Effect of Mescaline and Lysergic Acid Diethylamide on Flicker Discrimination in the Rat. MARTIN D. SCHECHTER AND J. C. WINTER.....	461
The Metabolism of Ethynodiol Diacetate by Rat and Human Liver. R. I. FREUDENTHAL, C. E. COOK, J. FORTH, R. ROSENFELD AND MONROE E. WALL.....	468

No. 3, JUNE 1971

Effect of Psychotropic Drugs on Tryptophan Concentration in the Rat Brain. ALESSANDRO TAGLIAMONTE, PAOLA TAGLIAMONTE, JORGE PEREZ-CRUET, STEPHEN STERN AND GIAN L. GESSA.....	475
Effects of α -Methyl- <i>meta</i> -Tyrosine on Spontaneous and Caudate-Induced Electroencephalogram Activity and Regional Catecholamines in the Cat Brain. M. KENT SHELLENBERGER.....	481
Decline in the Mean Integrated Electroencephalogram Voltage during Morphine Abstinence in the Rat. NAIM KHAZAN AND BRENDA COLASANTI.....	491
Analgesic Activity and Central Nervous System Distribution of the Optical Isomers of Pentazocine in the Rat. BARRY A. BERKOWITZ AND E. LEONG WAY.....	500
Morphine-Induced Hyperalgesia in Rats Tested on the Hot Plate. SABIH KAYAN, L. A. WOODS AND C. L. MITCHELL.....	509
The Effect of Some Sedating Agents on Calorigenesis and Its Responses to 2,4-Dinitrophenol and L-Thyroxine in Rats. FRANCES P. PETRITIS AND FREDERIC L. HOCH.....	514
Continued Studies in the Toxicology of Dimethyl Sulfoxide (DMSO). DON C. WOOD, FRANK S. WEBER AND MICHELE A. PALMQUIST.....	520
Mechanism Considerations of Dimethyl Sulfoxide (DMSO)-Lenticular Changes in Rabbits. DON C. WOOD, NORMAN V. WIRTH, FRANK S. WEBER AND MICHELE A. PALMQUIST.....	528
Carbohydrate Metabolism in Normal and Hyperglycemic Animals Treated with 1-Methyl-4-(3-Methyl-5-Isoxazolyl)Pyridinium Chloride and Phenformin. D. A. BLICKENS AND S. J. RIGGI.....	536
Biotransformation of Diphenoxylate in Rat and Dog. A. KARIM, G. GARDEN AND W. TRAGER.....	546
A Comparison of the Effects of Halothane and CCl ₄ on the Hepatic Drug Metabolizing System. DONALD C. DAVIS, DAVID H. SCHROEDER, THEODORE E. GRAM, REGINALD L. REAGAN AND JAMES R. GILLETTE.....	556
Daunorubicin Metabolism by Rat Tissue Preparations. NICHOLAS R. BACHUR AND MALCOLM GEE.....	567
Daunorubicinol, a Major Metabolite of Daunorubicin: Isolation from Human Urine and Enzymatic Reactions. NICHOLAS R. BACHUR.....	573
Nonmast-Cell Histamine Kinetics. IV. Interrelationships between Synthesis, Binding and Catabolism of ³ H-Histamine <i>in Vivo</i> . HOWARD L. JOHNSON.....	579
Renal Effects of Uricosuric Agents in the Chimpanzee. G. M. FANELLI, JR., D. L. BOHN AND S. S. REILLY.....	591
The Metabolism of Circulating Norepinephrine by Human Subjects. JAMES W. MAAS AND D. HAROLD LANDIS.....	600
Entry of ³ H-Norepinephrine into the Arterial Wall. JOZEF TÖRÖK AND JOHN A. BEVAN.....	613
Adrenergic Innervation and Cocaine-Induced Potentiation of Adrenergic Responses of Aortic Strips from Young and Old Rabbits. SHOJI SHIBATA, K. HATTORI, I. SAKURAI, J. MORI AND M. FUJIWARA.....	621

Interaction between Angiotensin and Bloodborne Exogenous Norepinephrine on the Cat Nictitating Membrane <i>in Vivo</i> . PETER CERVONI AND ERNEST REIT	633
Differential Effects of Prostaglandins E_1 , E_2 , $F_{1\alpha}$ and $F_{2\alpha}$ on Adrenergic Vasoconstriction in the Dog Hindpaw. PHILIP J. KADOWITZ, CHARLES S. SWEET AND MICHAEL J. BRODY	641
Carotid Sinus Reflex Changes Produced by Digitalis. JOHN A. QUEST AND RICHARD A. GILLIS	650
Index, Volume 177, April-June 1971	663