CONTENTS OF VOLUME 177

No. 1, APRIL 1971

<i>,</i>	
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 Hydro-	
chloride. 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	40
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.	3 0
WILLIAMS, JOHN E. MAINES III AND JAMES E. PEARSON	69
Dissociation of Cardiac Inotropic and Transmembrane Action Potential Effects of	00
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.	100
F. H. SCHNEIDER	108
BARRY A. BERKOWITZ, JAMES H. TARVER AND SYDNEY SPECTOR	110
Analysis of Reserpine-Induced Supersensitivity in Aortic Strips of Rabbits. John	110
Taylor and Richard D. Green	127
The Effects of Cocaine, Norepinephrine and Ionic Stimulants on the Isolated, Super-	
fused Rat Vas Deferens: Antagonism by "Adrenergic Neuron Blockers" and Reser-	
pine. 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 in Vivo Formation of 6-	
Hydroxytryptamine in the Rabbit. Louis Lemberger, Julius Axelrod and	100
IRWIN J. KOPIN Effect of Decaborane on Histamine Formation in Mice. RICHARD W. SCHAYER AND	109
Margaret A. Reilly	177
Some Effects of Germine-3-Monoacetate (GMA) on Isolated Rat and Guinea-Pig	
Ileum. W. J. Goldman and A. Scriabine	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

iv contents

The Relation between Monoamines in Brain and the Anticonvulsant Action of In-	
hibitors 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 Corticos-	
terone and Somatotropin. Eddie Wei and John T. Wilson	227
The Metabolism of Hexobarbital in Mice and Methodology for Isolation and Quantita-	
tion of Its Metabolites in Vivo and in Vitro. 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	
	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	
Plasmodium berghei. Betty P. Vogh and Larry N. Gleason	301
The Effect of p-Chlorophenylalanine on Opiate-Induced Running, Analgesia, Toler-	
ance and Physical Dependence in Mice. D. L. CHENEY AND AVRAM GOLDSTEIN.	309
N- 0 M 1071	
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. Hon-	
ACE 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 4-14C-Diphenylhydantoin in Rat Brain. John W. Kemp	
AND DIXON M. WOODBURY	342
Spinal Excitatory and Depressant Effects of Sodium Diphenylthiohydantoinate.	
	350
Procaine, Pentobarbital and Halothane: Effects on the Mammalian Myoneural Junc-	
tion. 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 in Vitro. J. KYPSON AND G.	
HAIT	398
The Effect of L-Dopa on Chronotropic Responses to Cardioaccelerator Nerve Stimu-	230
lation in Dogs. E. WHITNACK, A. LEFF, S. MOHAMMED AND T. E. GAFFNEY	409
Effects of Lanthanum on 4Ca Movements and on Contractions Induced by Nor-	100
epinephrine, 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.	±10
ROBERT A. O'ROURKE, VERNON S. BISHOP, PETER A. KOT AND JOHN P. FERNAN-	
	400
DEZ	140

CONTENTS

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	
MAWHINNEY AND J. A. THOMAS	447
Allergic Encephalomyelitis (EAE). R. G. Babington and P. W. Wedeking Effect of Mescaline and Lysergic Acid Diethylamide on Flicker Discrimination in the	454
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 Effects of α-Methyl-meta-Tyrosine on Spontaneous and Caudate-Induced Electroencephalogram Activity and Regional Catecholamines in the Cat Brain. M. Kent	
SHELLENBERGER Decline in the Mean Integrated Electroencephalogram Voltage during Morphine Ab-	481
stinence in the Rat. NAIM KHAZAN AND BRENDA COLASANTI	491
Morphine-Induced Hyperalgesia in Rats Tested on the Hot Plate. Sabih Kayan,	
L. A. WOODS AND C. L. MITCHELL The Effect of Some Sedating Agents on Calorigenesis and Its Responses to 2,4-Dini-	
trophenol and L-Thyroxine in Rats. Frances P. Petritis and Frederic L. Hoch. Continued Studies in the Toxicology of Dimethyl Sulfoxide (DMSO). Don C. Wood,	514
FRANK S. WEBER AND MICHELE A. PALMQUIST	520
Rabbits. Don C. Wood, Norman V. Wirth, Frank S. Weber and Michele A.	* 00
PALMQUIST	528
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	54 6
System. Donald C. Davis, David H. Schroeder, Theodore E. Gram, Reginald	
L. REAGAN AND JAMES R. GILLETTE Daunorubicin Metabolism by Rat Tissue Preparations. Nicholas R. Bachur and	556
MALCOLM GEE	5 67
Daunorubicinol, a Major Metabolite of Daunorubicin: Isolation from Human Urine and Enzymatic Reactions. Nicholas R. Bachur	5 73
Nonmast-Cell Histamine Kinetics. IV. Interrelationships between Synthesis, Binding and Catabolism of *H-Histamine in Vivo. Howard L. Johnson	£70
Renal Effects of Uricosuric Agents in the Chimpanzee. G. M. FANELLI, JR., D. L.	019
	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
of Aortic Strips from Young and Old Rabbits. Short Shibata, K. Hattori, I.	
Sakurai, J. Mori and M. Fujiwara	621

vi CONTENTS

Interaction between Angiotensin and Bloodborne Exogenous Norepinephrine on the	
Cat Nictitating Membrane in Vivo. Peter Cervoni and Ernest Reit	633
Differential Effects of Prostaglandins E_1 , E_2 , $F_{1\alpha}$ and $F_{2\alpha}$ on Adrenergic Vasoconstric-	
tion 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