

## CONTENTS OF VOLUME 163

No. 1, SEPTEMBER 1968

Disposition of Phenylephrine in Vascular Tissue, Determined by the Oil-Immersion Technique. STANLEY KALSNER AND MARK NICKERSON.....	1
Mode of the Bronchodilator Action of Phentolamine. P. M. LISH, S. I. ROBBINS AND K. W. DUNGAN.....	11
Effects of Chlorpromazine, Phenoxybenzamine, Dibenamine and Calcium on Electrical and Mechanical Responses to Potassium in Guinea-Pig <i>Taenia Coli</i> . JERRY M. FRANKENHEIM AND SHOJI SHIBATA.....	17
Oral Effectiveness of <i>Beta</i> Adrenergic Antagonists in Preventing Epinephrine-Induced Metabolic Responses. J. H. BROWN, D. A. RIGGILO AND K. W. DUNGAN.....	25
Relaxant Effect of Cyclic Adenosine 3',5'-Monophosphate on the Isolated Rabbit Ileum. TAY S. KIM, JULIUS SHULMAN AND ROBERT A. LEVINE.....	36
On the Site of Action of Nicotine on Contracture in Frog <i>Sartorius</i> Muscle. GEORGE B. WEISS.....	43
The Production of Stimulus-Bound Repetition by Neostigmine in Sympathetic Ganglion Cells. WILLIAM K. RIKER AND SERGIO GUERRERO.....	54
Observations on Drug-Induced Activation of Cholinceptive Sites in a Sympathetic Ganglion. GERARD L. GEBBER AND DAVID W. SNYDER.....	64
Enhanced Stimulant Effects of <i>d</i> -Amphetamine in Rats Treated Chronically with Reserpine. JON M. STOLK AND RICHARD H. RECH.....	75
Blockade of L-Dopa Reversal of Reserpine-Induced Conditioned Avoidance Response Suppression by Disulfiram. LEWIS S. SEIDEN AND D. DOUGLAS PETERSON.....	84
A Comparison of the Absorption, Distribution and Metabolism of Reserpine in Infant and Adult Rats. R. A. MUELLER AND F. E. SHIDEMAN.....	91
Effects of Inhibition of Monoamine Oxidase on the Actions and Interactions of Norepinephrine, Tyramine and Other Drugs on Guinea-Pig Left Atrium. ROBERT F. FURCHGOTT AND PEDRO SANCHEZ GARCIA.....	98
Metabolic Requirements for the Uptake and Storage of Norepinephrine by the Isolated Left Atrium of the Guinea Pig. ARUN R. WAKADE AND ROBERT F. FURCHGOTT.....	123
Effect of the Chelating Agents, EDTA, 2,2'-Bipyridine, 8-Hydroxyquinoline and Pyrophosphoric Acid, on Norepinephrine Uptake by Rabbit Aorta. OVE A. NEDERGAARD, AUGUSTIN VAGNE AND JOHN A. BEVAN.....	136
<i>In Vivo</i> Studies of the Metabolism of Norepinephrine in the Central Nervous System. JAMES W. MAAS AND D. HAROLD LANDIS.....	147
Effects of Stress on the Metabolism of Norepinephrine, Dopamine and Serotonin in the Central Nervous System of the Rat. I. Modifications of Norepinephrine Turnover. ANNE-MARIE THIERRY, FRANCE JAVOY, JACQUES GLOWINSKI AND SEYMOUR S. KETY.....	163
Some Interactions between Sympathomimetic Amines and Amine-Depleting Agents on the Schedule-Controlled Behavior of the Pigeon and the Squirrel Monkey. D. E. McMILLAN.....	172
An Investigation of the Structural Requirements for Dopamine-Like Renal Vasodilation: Phenylethylamines and Apomorphine. LEON I. GOLDBERG, P. FRANÇOIS SONNEVILLE AND JOHN L. McNAY.....	188
Digital Computer Simulation of the Nephron: The Action of Osmotic Diuretics. GERALD A. KIEN AND ESMAIL KOUSHANPOUR.....	198
The Diuretic Activity of Ethacrynic Acid in Rats. G. R. ZINS, R. A. WALK, R. Z. GUSSIN AND C. R. ROSS.....	210
Mechanism of Monomethylhydrazine Excretion by the Mammalian Kidney. FREDRIC L. COE, ROBERT W. HOWE AND JAMES A. GOETTING.....	216
Renal and Hepatic Transport of Food Dyes. AGAMEMNON DESPOPOULOS.....	222
Daily Rhythmic Variation in Hepatic Drug Metabolism in the Rat and Mouse. FREDERICK M. RADZIALOWSKI AND WILLIAM F. BOUSQUET.....	229

Acylphenothiazine Antiinflammatory Agents with Steroid-Like Activity. I. 2-Chloro-10-( $\beta$ -Dimethylaminopropionyl)-Phenothiazine-5-Oxide Hydrochloride. ALFRED R. MAASS, GENEVIEVE SOSNOWSKI, VIRGIL D. WIEBELHAUS AND JOSEPH WEINSTOCK.....	239
The Effect of Steam Inhalation of Volatile Oils on the Output and Composition of Respiratory Tract Fluid. E. M. BOYD AND E. P. SHEPPARD.....	250
No. 2, OCTOBER 1968	
The Influence of Denervation and of Decentralization on the <i>Alpha</i> and <i>Beta</i> Effects of Isoproterenol on the Nictitating Membrane of the Pithed Cat. S. PLUCHINO AND U. TRENDELENBURG.....	257
Impulse Transmission <i>Via</i> Nicotinic and Muscarinic Pathways in the Stellate Ganglion of the Dog. W. FLACKE AND R. A. GILLIS.....	266
Actions of Anticholinesterase Agents upon Ganglionic Transmission in the Dog. R. A. GILLIS, W. FLACKE, J. M. GARFIELD AND M. H. ALPER.....	277
Atropine Excitation of Esophageal Smooth Muscle. J. CHRISTENSEN AND G. F. LUND.....	287
Decrease in Effectiveness of Phenoxybenzamine after Chronic Denervation and Chronic Decentralization of the Nictitating Membrane of the Pithed Cat. S. Z. LANGER AND U. TRENDELENBURG.....	290
Cardiac Effects of Some Simple Aliphatic Aldehydes. THOMAS N. JAMES AND EDWARD S. BEAR.....	300
Steric Aspects of Adrenergic Drugs. XI. Interactions of Dibenamine and <i>Beta</i> Adrenergic Blockers. P. N. PATIL, A. TYE, C. MAY, S. HETEVY AND S. MIYAGI.....	309
Pattern of Renal Vasoconstriction and Transmitter Release during Sympathetic Stimulation in Presence of Angiotensin and Cocaine. BEN G. ZIMMERMAN AND JANICE GISSLEN.....	320
Effects of Vagal and Sympathetic Nerve Stimulation on the Isolated Atria of the Cat. Y. MISU AND S. M. KIRPEKAR.....	330
Autonomic Innervation of Cat Atria. Y. MISU AND S. M. KIRPEKAR.....	343
Effect of Nicotine on Capillary Flow and Terminal Vascular Capacity of the Heart in Normal Dogs and in Animals with Restricted Coronary Circulation. GIANCARLO CORSINI, PRITPAL S. PURI, PEDRO V. M. DURAN AND RICHARD J. BING.....	353
A Study of the Alteration in Receptor Activity of the Rat Fundal Strip by Urea. JEROME H. FLEISCH AND S. EHRENPREIS.....	362
The Action of Protriptyline on Adrenergic Mechanisms in Rabbit, Primate and Human Eyes. MAURICE E. LANGHAM AND DINA DENRICH CARMEL.....	368
A Simple, Sensitive Method for the Assay of Adenyl Cyclase. GOPAL KRISHNA, BENJAMIN WEISS AND BERNARD B. BRODIE.....	379
A Simple and Sensitive Fluorescence Assay for Monoamine Oxidase and Diamine Oxidase. SOLOMON H. SNYDER AND EDITH D. HENDLEY.....	386
The Effect of Local Anesthetic and pH on Sodium and Potassium Flux in Human Red Cells. NIKAAN B. ANDERSEN.....	393
The Effects of Purine Nucleosides on Sodium Transport and Lactate Production in Human Erythrocyte Ghosts. A. ASKARI AND S. N. RAO.....	407
Alteration of the Microsomal Hemoprotein by 3-Methylcholanthrene: Effects of Ethionine and Actinomycin D. A. P. ALVARES, G. SCHILLING, W. LEVIN AND R. KUNTZMAN.....	417
Stimulation of the Midbrain Raphe: Effect on Serotonin Metabolism. MICHAEL H. SHEARD AND GEORGE K. AGHAJANIAN.....	425
The Anticonvulsant Action of Carbon Dioxide: Interaction with Reserpine and Inhibitors of Carbonic Anhydrase. WILLIAM D. GRAY AND CHARLES E. RAUH.....	431
Locus of Central Depressant Action of Diazepam. ANDREW C. PRZYBYLA AND S. C. WANG.....	439
A Comparative Study in the Cat of the Respiratory Effects of Morphine Injected Intravenously and into the Cerebrospinal Fluid. J. FLÓREZ, L. E. MCCARTHY AND H. L. BORISON.....	448

CONTENTS

v

Enhancement of Renal Blood Flow by Furosemide. JAMES H. LUDENS, JERRY B. HOOK, MICHAEL J. BRODY AND HAROLD E. WILLIAMSON .....	456
The Reversible and Irreversible Inhibition of N <sup>1</sup> -Methylnicotinamide Uptake into Rat Kidney Cortex Slices. ALAN M. REYNARD.....	461
Experimental Pain Produced by the Submaximum Effort Tourniquet Technique: Further Evidence of Validity. GENE M. SMITH, EDWARD LOWENSTEIN, JAMES H. HUBBARD AND HENRY K. BEECHER.....	468
Index, Volume 163, September-October 1968.....	475