CONTENTS OF VOLUME 145

NO. 1, JULY 1964

Development and Loss of Tolerance to Morphine in the Rat after Single and Multiple Injections. JOSEPH COCHIN AND CONAN KORNETSKY ........................................... 1

The Importance of Steric Configuration in Certain Morphinemimetic Actions of Synthetic Analgetics. ROBERT M. VEATCH, TERRINE K. ADLER AND E. LEONG WAY ................................................ 11

The Influence of Morphine on Glucose Utilization in Cerebral Preparations of Rats. A. E. TAKEMORI .............................................................. 20

Comparison of New Analgetics in Barbiturate-Poisoned Animals. ALEXANDER POLAK AND FRED PLUM ......................................................... 27

Effects of Diphenylhydantoin on the Duration of Respiratory Activity during Anoxia. JUNE G. NAIMAN AND HARRY L. WILLIAMS .................................................... 34

Actions of Asarone on Behavior, Stress, and Hyperpyrexia, and Its Interaction with Central Stimulants. P. C. DANDIYA AND M. K. MENON .................................................. 42

The Effect of Forced Exercise on Body Temperature and Amphetamine Toxicity. MERVYN G. HARDING AND DONALD I. PETERSON .............................................. 47

Studies of K\textsuperscript{42} Movement between the Blood and the Cerebrospinal Fluid of Cats. FLOYD R. DOMER AND MICHAEL WHITCOMB ............................................. 52

The Effect of Tranquilizers on the Contractile Response of Cerebral Arteries. WILLIAM ROSENBLOUM AND BENJAMIN W. ZWEIFACH .................................................. 58

A Proposed Mechanism for the Depressor Effect of Dopamine in the Anesthetized Dog. JOHN NELSON EBLE ................................................................................. 64

Studies on the Cardiovascular Effects of Synthetic Eledoisin. JIRO NAKANO .......................................................... 71

Mechanism of the Positive Inotropic Action of Purine Nucleosides in Isolated Atria. IRA ROSENBLOUM AND A. A. STEIN ......................................................... 78

A Nonsympathomimetic Effect of Cyclopentamine and \textsuperscript{\beta}-Mercaptoethylamine in the Rabbit Ileum. J. L. SCHMIDT AND W. W. FLEMING ......................................................... 83

The Effects of Adrenergic Blocking Agents and Theophylline on 3',5'-AMP Induced Hyperglycemia. GRETAAJO NORTHROP AND R. E. PARKS, JR. ..................................................... 87

Carbon Tetrachloride Hepatotoxicity: The Direct Action of CCl\textsubscript{4} on the Liver. MURRAY HEIMBERG, MARY LOUISE WATKINS AND ROSLYN TOOKER ................. 92

Studies on the Absorption, Metabolism and Excretion of Methyldopa and Other Catechols and Their Influence on Amino Acid Transport in Rats. J. A. YOUNG AND K. D. G. EDWARDS ................................................................. 102

Oxidation of Quinoline by Rabbit Liver. SYLVAN M. SAX AND HARRY J. LYNCH .......................................................... 113


Effects of Thyroidectomy and Thyroxine on the Renal Uptake of PAH and TBA. CARMELO G. NEPOMUCENO AND J. MAXWELL LITTLE ..................................................... 130

NO. 2, AUGUST 1964

Studies on Epinephrine and 3',5'-AMP Induced Hyperglycemia Employing the Isolated Perfused Rat Liver Preparation. GRETAAJO NORTHROP AND R. E. PARKS, JR. .......................................................... 135

The Action of Sympathomimetic Amines and Adrenergic Blocking Agents on Tissue Phosphorylase Activity. HANEM I. EL. S. ALI, ABILIO ANTONIO AND NIELS HAUGAARD .......................................................... 142

The Norepinephrine Stores of Isolated Atria of Guinea Pigs Pretreated with Reserpine. U. TRENDLENBURG AND J. R. CROUT .......................................................... 151

The Effects of Various Drugs on Calcium Exchange in the Isolated Guinea-Pig Left Auricle. ALBERT GROSSMAN AND ROBERT F. FURCHGOTT ..................................................... 162

Similarities in the Ganglionic Actions of Calcium Ions and Atropine. CHIFUYU TAKE-SHIGE AND ROBERT L. VOLLE .......................................................... 173

The Renal Vascular Response to Hemorrhage. JOHN C. MCGIFF .......................................................... 181

Studies on the Rate of Runout of N-Methylthiovanadate from Dog Renal Slices. A. FARAH AND M. FRAZER .......................................................... 187
Hemolysis by Holothurin A, Digitonin, and Quillaia Saponin: Estimates of the Required Cellular Lysin uptakes and Free Lysin Concentrations. C. D. THRON

The Metabolism of Digoxin in Normal Subjects. FRANK I. MARCUS, GOVIND J. KAPADIA AND GEETA G. KAPADIA

Intracellular Distribution of Digoxin-H\(^2\) in the Hearts of Rats and Dogs Demonstrated by Autoradiography and Its Relationship to Changes in Myocardial Contractile Force. LOYAL L. CONRAD AND DONALD J. BAXTER

The Uptake of Thallium by Rabbit Erythrocytes. P. J. GEHRING AND P. B. HAMMOND

The Relative Activity of Lathyrogenic Agents Examined in Organ Cultures of Embryonic Chick Tibiotarsi: Example of an Assay Using Paired Organs in an Incomplete Block Design. J. D. BIGGERS AND H. F. SCHRYVER

The Metabolism of Chlorphenesin Carbamate. DONALD R. BUHLER

Metabolic Fate of \(\beta\)-(3,4,5-Trimethoxyphenyl)-Ethylamine (Mescaline) in Humans: Isolation and Identification of 3,4,5-Trimethoxyphenylacetic Acid. K. D. CHARLAMPOUS, ANTONIO ORENGO, K. E. WALKER AND JOHN KINROSS-WRIGHT

A Sensitive Fluorometric Assay for Morphine in Plasma and Brain. HARVEY KUPFERBERG, ALAN BURKHALTER AND E. LEONG WAY

The Penetration of 2-PAM-C\(^{14}\) into Brain and the Effect of Cholinesterase Inhibitors on Its Transport. H. FIREMARK, C. F. BARLOW AND L. J. ROTH

No. 3, September 1964

The Action of Sodium Pentobarbital on the S-A Nodal Activity of the Mammalian Heart. HANSJURG SCHAER

Studies on Veratrum Alkaloids. XXXVII. Chronotropic Cardiac Action and Toxicity of N-Alkyl Derivatives of Veratramine. D. F. HAWKINS, F. C. UHLE AND O. KRAYER

The Action of Nethalide upon Experimentally Induced Cardiac Arrhythmias. BENEDICT R. LUCCHESI

The Mechanism of the Vasodepressor Response to Tyramine in Dogs. D. R. VAN DERIPE AND J. B. KARN, JR.

Dose-Dependent Differences in Catecholamine Action on Heart and Periphery. H. H. BENDIXEN, P. F. OSGOOD, K. V. HALL AND M. B. LAVER

Interaction between Norepinephrine and Dichloroisoproterenol during Adrenergic Blockade of the Isolated Perfused Rat Heart. BETTY J. WILLIAMS AND STEVEN E. MAYER

Nicotine and Renal Hypertension in the Rat. DUANE G. WENZEL, ANTON TIP WAT-TANPONGSHI AND DONALD VEDRAJ

Effects of Tetraethylammonium Chloride on Electrical Activities of Frog Sympathetic Ganglion Cells. W. K. RIKER

The Distribution of Dopamine and Dopa in Various Animals and a Method for Their Determination in Diverse Biological Material. AARON H. ANTON AND DAVID F. SAYRE

Effects of Chlorpromazine on the Metabolism of \(\alpha\)-2-C\(^{14}\)-Dopa in the Rat. K. F. GEY AND A. PLETSCHER

Chlorinated Aryalkylamines Affecting the Cerebral Metabolism of 5-Hydroxytryptamine. A. PLETSCHER, G. BARBOLINI, H. BRUDERER, W. P. BURKARD AND K. F. GEY

Distribution in Plasma, Uptake by the Heart and Excretion of Ouabain-H\(^2\) in Human Subjects. B. H. MARKS, S. DUTTA, J. GAUTHIER AND D. ELLIOTT

Quantification of Normal and Adrenal Steroid Affected Calcium Metabolism in the Young Dog. EDWARD R. GARRETT, RICHARD L. JOHNSTON AND ELLIOTT J. COLLINS

Behavioral Effects of a Cholinergic Stimulant in Combination with Various Psychotherapeutic Agents. M. E. GOLDBERG AND H. E. JOHNSON

The Influence of Chlorpromazine on Physical and Chemical Mechanisms of Temperature Regulation in the Rat. JAMES KOLLAS AND ROBERT W. BULLARD

Pentaborane: Relationship between Inhaled Lethal and Incapacitating Dosages in
CONTENTS

Animals. Maurice H. Weeks, David G. Burke, Emery E. Basset, Joseph R. Johnson and Milton K. Christensen. .................................................. 382
The Effect of 2,2'-Phosphincodilactic Acid on the Absorption of Tetracyclines with Notes on Pharmacology and Toxicity. G. Tonelli, L. Alfano and E. Takesue. 386
Evaluation in Man of the Effects of an Anticholinergic Agent on Gastric Emptying by a Quantitative X-Ray Method. G. Sacchetti, F. B. Nicolis and L. Roncoroni. 393
Index, Volume 145, July–September, 1964 ........................................ 399