CONTENTS OF VOLUME 172

NO. 1, MARCH 1970

The Effects of pH Gradients on the Action of Procaine and Lidocaine in Intact and Desheathed Sciatic Nerves. GEORGE E. STROBEL AND C. PAUL BIANCHI ............ 1

The Effects of pH Gradients on the Uptake and Distribution of C¹⁴-Procaine and Lidocaine in Intact and Desheathed Sciatic Nerve Trunks. GEORGE E. STROBEL AND C. PAUL BIANCHI ........................................... 18

Sites of Action of SKF 525-A in Nerve and Muscle. G. SUAREZ-KURTS AND C. PAUL BIANCHI .................................................. 33

The Neuromuscular Blocking Properties of the Antimalarial Agent, Bis[(Chloro-7'-Quinolyl-4'-)Amino-2'-Propyl]-1,4-Piperazine. T. R. CASTLES, E. LOTH, C. R. CRAWFORD AND C. C. LEE ................................. 44

Pharmacologic Blockade of Reflex Vasodilatation: Effects on Postulated Neurohumoral Mechanisms. ROBERT C. BOERTH, MICHAEL J. RYAN AND MICHAEL J. BRODY .................................................. 52

The Release of H⁺-Norepinephrine in Arterial Strips Studied by the Technique of Superfusion and Transmural Stimulation. CHE SU AND JOHN A. BEVAN .............. 62

Comparison of Differential Secretion of Adrenal Catecholamines by Splanchnic Nerve Stimulation and Cholinergic Agents. LARRY R. KLEVANS AND GERARD L. GEGERER. 69

The Effect of 3-TM 10 on the Pharmacological, Biochemical and Morphological Changes Induced by Denervation of the Nictitating Membrane of the Cat. S. PUCHINO, L. S. VAN ORDEN, III, P. R. DRASKOČET, S. Z. LANGER AND U. TRENDLEBURY . 77

Methoxamine as a Tool to Assess the Importance of Intraneuronal Uptake of l-Nor-epinephrine in the Cat's Nictitating Membrane. U. TRENDLEBURY, R. A. MAXWELL AND S. PUCHINO .................................................................................................................. 91

Guanethidine and Related Agents. I. Mechanism of the Selective Blockade of Adrenergic Neurons and Its Antagonism by Drugs. J. R. MITCHELL AND J. A. OATES. 100

Guanethidine and Related Agents. II. Metabolism by Hepatic Microsomes and Its Inhibition by Drugs. J. R. MITCHELL, J. H. CAVANAUGH, J. V. DINGELLE AND J. A. OATES. ........................................................................ 108

The Metabolism of C¹⁴-ICI 54,450 (Myalex) in Various Species—An in Vivo NIH Shift. DAVID M. FOULKES ........................................................................ 115

The Influence of Morphine on Magnesium Metabolism in Rats. MARC VACHON AND CLAUDE MARCHAND .......................................................... 122

Studies on the Distribution and Metabolism of Thiopental in Cattle, Sheep, Goats and Swine. R. P. SHARMA, C. M. STOWE AND A. L. GOOD ....................... 128

Dioxoisoquinoline-4-Carboxanilides, Novel Nonsteroidal Anti-Inflammatory Agents with a Species-Specific Effect on Basal Metabolism. EDWARD H. WISEMAN, EDWARD J. GRALLA, JOSEPHINE CHIAINI, JOSEPH R. MIGLIARDI AND YI-HAN CHANG .................................................................................................. 138

Measurement of the Analgesic Efficacy and Potency of Pentazocine by the D'Amour and Smith Method. WILLIAM D. GRAY, ARNOLD C. OSTBERG AND THOMAS J. SCUTO .................................................................................. 154

Development of Tolerance to and Physical Dependence on Barbiturates in Rhesus Monkeys. TOMOJI YANAGITA AND SABURO TAKARASHI ................................. 163

Jumping Activity Induced by Sodium 5-(1,3-Dimethylbutyl)-5-Ethyl Barbiturate.
I. The Role of the Sympathetic Nervous System. T. KOPPANYI, H. M. MALING, W. SAUL AND B. B. BRODIE ................................................................. 170

Effect of Cardiac Glycosides on Interaction of Ca²⁺ with Mitochondria. KWANG S. LEE, SA A. HONG AND D. H. KANG ......................................................... 180

The Effects of Six Cardiac Glycosides on the Transmembrane Potential and Contractile Characteristics of the Right Ventricle of Guinea Figs. M. ITO, P. B. HOLLANDER, B. H. MARKS AND S. DUTTA .............................................................................................. 188

Letters to the Editor ......................................................................................................................... Cover 2
The Role of Carbonic Anhydrase in Anion Secretion into Cerebrospinal Fluid. THOMAS H. MAREN AND LAWRENCE E. BRODER

Studies of the Effect of Bendroflumethiazide on Sodium Transport and Metabolism in the Toad Bladder. BARBARA MCDAGAL AND LAWRENCE P. SULLIVAN

Drugs Affecting Sodium Transport in Human Erythrocyte Ghosts. A. ASKARI AND S. N. RAO

Mechanism of the Renal Tubular Transport of Morphine and Morphine Ethereal Sulfate in the Chicken. WILLIAM M. WATROUS, DAVID G. MAY AND JAMES M. FUJimoto

The Actions of Tetraethylammonium Ions on Potassium Fluxes in Frog Sartorius Muscle. ROBERT L. VOLLE

Effect of Lidocaine on Conduction in Canine Purkinje Fibers and at the Ventricular Muscle-Purkinje Fiber Junction. J. THOMAS BIGGER AND WILLIAM J. MANDEL

Biphasic Effect of Nicotine on Action Potential Repolarization in Electrically Driven Guinea-Pig Atria. ACHILLES J. PAPPANO

The Symptathomimetic Effect of Gallamine on the Heart. BURNELL R. BROWN, JR. AND J. RICHARD COUT

Blockade of the Cardiac Action of Phenytoin by Bretylium or Cocaine. C. S. YOO AND W. C. LEE

The Effect of Bretylium on Amine Retention in Rat Heart. KENNETH R. KRAUS, IRWIN J. KOPIN AND VIRGINIA K. WEISE


An Evaluation of the Vasodilation Produced by Mephenetermine and Certain Other Sympathomimetic Amines. R. WILLIAM CALDWELL AND LEON I. GOLDBERG

The Antagonism of Phentolamine against Exogenously Administered and Endogenously Released Norepinephrine in Rabbit Aortic Strips. PEDRO R. URQUILLA, ROBERT E. STETZEL AND WILLIAM W. FLEMING

Interactions between Potentiating Agents of Adrenergic Amines in Rabbit Aortic Strips. JEROME A. LEVIN AND ROBERT F. FURCHGOTT

Release of Norepinephrine from Isolated Rat Iris by Field Stimulation. LARS-OVE FARNEBO AND BERTIL HAMBERGER

Effects of Metabolic Inhibitors on Norepinephrine Release from the Perfused Spleen of the Cat. S. M. KIRPEKAR, J. C. PRAT AND H. YAMAMOTO

Cholinergic Activities of Halogeno-Acetylcholines. C. Y. CHIOU AND B. V. RAMA SASTRY

Effects of Nicotine on Gastric Antral and Duodenal Contractile Activity in the Dog. G. M. CARLSON, R. W. RUDDON, C. C. HUG, JR. AND PAUL BASS

Analysis of the Site of Nicotine Action on Gastric Antral and Duodenal Contractile Activity. G. M. CARLSON, R. W. RUDDON, C. C. HUG, JR., S. K. SCHMIEGE AND PAUL BASS

The Actions of γ-Aminobutyric Acid and Related Amino Acids on Mammalian Autonomic Ganglia. WILLIAM C. DE GROAT

Effects of Some Benzodiazepines on Punished and Unpunished Behavior in the Figeon. W. WUTKIE AND R. T. KELLEHER

Potentiation and Inhibition of Some Central Actions of L(-)-Dopa by Decarboxylase Inhibitors. VICTOR J. LOTTI AND CURT C. PORTER

Daily Rhythm in the Accumulation of Brain Catecholamines Synthesized from Circulating H-Tyrosine. MICHAEL J. ZIGMOND AND RICHARD J. WURTMAN

Interactions of Anti-Inflammatory Drugs in Carrageenan-Induced Foot Edema of the Rat. KARL F. SWINGLE, THOMAS J. GRANT, LOWELL W. JAQUES AND DONALD C. KVAM

Index, Volume 172, March-April 1970