

## CONTENTS

NUMBER 1, JANUARY, 1952

I. The Biological Liberation of Morphine from Codeine in the Rat. T. K. Adler and F. H. Shaw.....	1
II. The Effect of Prolonged Morphine Administration on the In Vivo and In Vitro Conjugation of Morphine by Rats. Howard L. Zauder.....	11
III. Adenine Intoxication in Relation to In Vivo Formation and Deposition of 2,8-Dioxyadenine in Renal Tubules. Frederick S. Philips, John B. Thiersch and Aaron Bendich.....	20
IV. Renal Action of Mercurial Diuretics as Affected by Sodium Load. A. Farah, T. S. Cobbey, Jr. and W. Mook.....	31
V. Local Anesthetic Activity, Toxicity and Irritancy of 2-Alkoxy Analogs of Procaine and Tetracaine. F. P. Luduena and James O. Hoppe.....	40
VI. Chronic Tolerance Studies on $\beta$ -Diethylaminoethyl Xanthene-9-Carboxylate Methobromide (Banthine). Homer B. Freese, W. E. Hambourger, Lyle D. Calvin and D. M. Green.....	54
VII. Chronic Oral Toxicity Tests of Methoxychlor (2,2-Di-(P-Methoxyphenyl)-1,1,1-Trichlorethane) in Rats and Dogs. Harold C. Hodge, Elliott A. Maynard and H. J. Blanchet, Jr.....	60
VIII. Respiratory Effects of Potent Hypotensive Derivatives of Veratrum. Lois Mosey and A. Kaplan.....	67
IX. The Emetic Properties of Veratrum Derivatives. Edward D. Swiss.....	76
X. Prolongation of the Anticoagulant Action of Heparin with Procaine and Butacaine Conjugates. Ted A. Loomis, J. E. Jessep and R. E. Beyer..	87
XI. Metabolism of S <sup>35</sup> Thiopental (Pentothal). J. D. Taylor, R. K. Richards and D. L. Tabern.....	93
XII. Effects of Innervation and Drugs upon Direct Membrane Potentials of Embryonic Chick Myocardium. E. Fingl, L. A. Woodbury and H. H. Hecht.....	103

NUMBER 2, FEBRUARY, 1952

XIII. The Effect of Sodium Pentobarbital on the Toxicity of Certain Antihistamines. E. Leong Way and Woodrow C. Herbert.....	115
XIV. Hydrolysis of Local Anesthetics by Human Serum Cholinesterase. Werner Kalow.....	122
XV. The Reliability and Validity of Tooth Pulp Algesimetry. Stanley C. Harris and Leo E. Blockus.....	135
XVI. Early Respiratory Depression by Curare and Curare-Potassium Antagonism. T. H. Li, B. R. Jacobs, D. M. Aviado, Jr. and C. F. Schmidt.....	149
XVII. The Absorption of Nicotine in Tobacco Smoking. L. A. Greenberg, David Lester and H. W. Haggard.....	162
XVIII. The Mode of Action of $\alpha$ -Phenyl $\gamma$ -(2-Pyridyl)-Propyl Ketone. Irwin H. Slater, John F. O'Leary and Daniel E. Leary.....	168
XIX. Production of Injury to the Central Nervous System of the Chick Embryo by Lead Salts. David A. Karnofsky and Lois P. Ridgway.....	176
XX. A Stationary Manometric Respirometer for Isolated Rat Diaphragm allowing Simultaneous Direct Registration of Mechanical Activity. Observations with Sodium Azide and Dinitrophenol. James R. Weeks and Maynard B. Chenoweth.....	187
XXI. Toxicological Studies of Orthophenylphenol (Dowicide 1). Harold C.	



Hodge, Elliott A. Maynard, Harvey J. Blanchet, Jr., Howard C. Spencer and Verald K. Rowe.....	202
XXII. The Reflex Respiratory and Circulatory Actions of Some Cinchoninic Acid Derivatives and a Number of Unrelated Compounds. Harry A. Walker, Susanne Wilson, Carolyn Farrar and Arthur P. Richardson .....	211
XXIII. The Effect of Ouabain on the Respiration of Isometrically Contracting Rat Auricle. Vaughn R. Ransom and Ted A. Loomis.....	219
XXIV. Diphenhydramine Hydrochloride, U. S. P. XIV, and Respiratory Tract Fluid. Shirley M. R. Bidwell and Eldon M. Boyd.....	224
XXV. The Anticonvulsant Activity of Carbamate Esters of Certain 2,2-Disub- stituted-1,3 Propanediols. F. M. Berger.....	229
XXVI. Metabolic Disturbances Produced by Some Fluoro-Fatty Acids: Relation to the Pharmacologic Activity of These Compounds. Alexander Kandel and Maynard B. Chenoweth.....	234
XXVII. Tolerance to Fluoroacetate and Fluorobutyrate in Rats. Alexander Kandel and Maynard B. Chenoweth.....	248

## NUMBER 3, MARCH, 1952

XXVIII. A Comparative Study of the Pharmacology of Certain Cryptopine Alka- loids. Gordon A. Alles and Charles H. Ellis.....	253
XXIX. Actions of Adenosine Triphosphate on the Isolated Cat Atrium and Their Antagonism by Acetylcholine. L. Acierno, F. Burno, F. Burstein and J. R. DiPalma.....	264
XXX. Antispasmodic Effects and Toxicity of N-Ethyl-3-Piperidyl-Diphenylace- tate Hydrochloride (JB-305) with Special Reference to its Action on the Sphincter of Oddi of the Dog. James Y. P. Chen and Harry Beckman..	269
XXXI. The Effect of Some Compounds Related to Histamine on Gastric Acid Secretion. M. I. Grossman, Charlotte Robertson and C. E. Rosiere....	277
XXXII. Spasmolytic Action of Bicyclic Basic Alcohol Esters. Lowell O. Randall, Wilbur M. Benson and Paul L. Stefko.....	284
XXXIII. Electroencephalographic Analysis of Side Effects of Spasmolytic Drugs. William Schallek and Thomas H. F. Smith.....	291
XXXIV. Metabolic Demethylation of 3-Methyl-5-Ethyl-5-Phenyl Hydantoin (Me- santoin). Thomas C. Butler.....	299
XXXV. Effect of Liver Injury and Nephrectomy on the Anticonvulsant Activity of Clinically Useful Hydantoins. Ewart A. Swinyard, Lawrence C. Wea- ver and Louis S. Goodman.....	309
XXXVI. The Action of Salts of Zirconium and Other Metals on Plutonium and Yttrium Distribution and Excretion. Marcia R. White and Jack Schubert	317
XXXVII. The Determination of the Solubility of Cyclopropane in Fats and Oils with the Use of the Warburg Apparatus. Arnold G. Blumberg, Bert N. La Du, Jr., Gerson T. Lesser and J. Murray Steele .....	325
XXXVIII. Renal Hemodynamic and Blood Pressure Response to N-Phenoxyiso- propyl-N-Benzyl- $\beta$ -Chlorethylamine (SKF 688A). John H. Moyer and Carroll A. Handley.....	329
XXXIX. The Action of Acetyl-Strophanthidin on Heart Muscle. A. M. Wedd and H. A. Blair.....	334
XL. The Action of Alloxan, Iodoacetate and $\rho$ -Chloromercuribenzoate on Car- bohydrate Metabolism of the Isolated Rat Diaphragm in the Absence and Presence of Insulin. David E. Haft and I. Arthur Mirsky .....	340
XLI. Gastro-Intestinal Absorption of Ions. I. Agents Diminishing Absorption of Strontium. Norman S. MacDonald, Ralph E. Nusbaum, Florita Ezmir- lian, Richard C. Barbera, George V. Alexander, Patricia Spain and Donald E. Rounds.....	348

## CONTENTS

v

- XLII. The Functional Importance of the Quaternary Nitrogen Atoms in 1,2,3-Tris-(Diethylaminoethoxy)-Benzene Triethiodide (Flaxedil): A Study in Structure-Activity Relationships. Edward W. Pelikan and Klaus R. Unna..... 354  
XLIII. Blockade of Epinephrine-Induced Hyperglycemia. Stewart C. Harvey, C. Y. Wang and Mark Nickerson..... 363

## NUMBER 4, APRIL, 1952

- XLIV. The Metabolism of N-C<sup>14</sup>H<sub>3</sub> Labeled Meperidine. Nikolas P. Plotnikoff, Henry W. Elliott and E. Leong Way..... 377  
XLV. A Comparison of the Central and Peripheral Effects of Atropine, Scopolamine and Some Synthetic Atropine-Like Compounds. Frederick H. Meyers and Benedict E. Abreu..... 387  
XLVI. Role of Gastrointestinal Innervation in Digitalis Emesis. Herbert L. Borison..... 396  
XLVII. Experimental Diabetes Produced by 8-Hydroxyquinoline. Mary A. Root and K. K. Chen..... 404  
XLVIII. The Ability of Ergotoxine to Modify the Contractile Action of Ergonovine on the Isolated Uterus. Grace B. Miller and Edwin J. de Beer..... 412  
XLIX. The Effects of Four Antiheparin Dyes on the Isolated Hearts of the Frog, Guinea Pig and Rabbit. James L. Leitch and Thomas J. Haley..... 416  
L. The Pharmacology of Ipecac. Jack L. Radomski, E. C. Hagan, Henry N. Fuyat and Arthur A. Nelson..... 421  
LI. The In Vitro Metabolism of Thiopental by a Fortified, Cell-Free Tissue Preparation of the Rat. Thelma C. Gould and F. E. Shideman..... 427  
LII. Graphical Estimation of Relative Potency from Quantal Responses. D. J. Finney..... 440  
LIII. Strophanthin-G on Coronary Sinus Outflow. Theodore R. Sherrod..... 445  
LIV. Observations on the Metabolic Disposition of Chloramphenicol (Chloromycetin) in the Rat. Anthony J. Glazko, Wesley A. Dill and Loretta M. Wolf..... 452  
LV. The Metabolism of Uranium<sup>233</sup> in Mice. Walter E. Kisieleski, William G. Faraghan, William P. Norris and James S. Arnold..... 459  
LVI. The Central Depressant Properties of o-Toloxypropyl Carbamates. F. M. Berger..... 468  
LVII. The Cardiovascular Actions of 1-(3-Aminophenyl)-2-Aminoethanol and Related Compounds. A. M. Lands..... 474  
LVIII. Index..... 479