

## CONTENTS

### NUMBER 1, MAY, 1954

|  |     |
|--|-----|
| I. The Action of Anesthetic Agents on the Loss of Potassium from Isolated Guinea Pig Auricles. William C. Holland.....   | 1   |
| II. A Comparison of Hypnotic Agents. Louis Lasagna.....  | 9   |
| III. The Fate of Dibenzylamine in the Body and the Role of Fat in its Duration of Action. B. B. Brodie, Lewis Aronow and Julius Axelrod.....   | 21  |
| IV. Mode of Action of Antagonists to Curare. II. Anti-Curare Action of Hydroxyphenyltrialkylammonium Compounds in Avian Muscle. Edward W. Pelikan, Cedric M. Smith and Klaus R. Unna.....              | 30  |
| V. Pharmacological Properties of Some Antimetabolites of Serotonin Having Unusually High Activity on Isolated Tissues. E. Shaw and D. W. Woolley.....  | 43  |
| VI. The Effect of $\beta$ -Diethylaminoethyl-diphenylpropylacetate (SKF No. 525A) on the Anticonvulsant Properties of Antiepileptic Drugs. Ewart A. Swinyard, Jack A. Madsen and Louis S. Goodman..... | 54  |
| VII. Estimation of Morphine in Biological Materials. L. A. Woods, J. Cochin, E. G. Fornefeld and M. H. Seevers.....  | 64  |
| VIII. Plasma Levels, Urinary and Fecal Excretion of Morphine in Non-Tolerant and Tolerant Dogs. J. Cochin, J. Haggart, L. A. Woods and M. H. Seevers.....  | 74  |
| IX. Species Differences in the Respiratory and Cardiovascular Response to Serotonin (5-Hydroxytryptamine). J. A. Schneider and F. F. Yonkman.....  | 84  |
| X. Differences in Mode of Neuromuscular Blockade in a Series of Symmetric Bis-Quaternary Ammonium Salts. Stephen Thesleff and Klaus R. Unna.....   | 99  |
| XI. Blood Sulfhydryl Changes in Methemoglobinemia, a Possible Factor in Protective Effects of Nitrite and Paraminopropiophenone. Erwin P. Vollmer and Mary M. Carey.....                               | 114 |
| XII. The Actions of Barbiturates on the Contractions of Voluntary Muscle. Charles P. Kraatz and Melvyn I. Gluckman.....  | 120 |

### NUMBER 2, JUNE, 1954

|  |     |
|--|-----|
| XIII. The Effect of $\beta$ -Diethylaminoethyl-diphenylpropylacetate Hydrochloride (SKF No. 525-A) on Hexobarbital. Leonard Cook, John J. Toner and Edwin J. Fellows.....  | 131 |
| XIV. The <i>In Vivo</i> Liberation of Morphine from Codeine in Man. Gilbert J. Mannering, Arthur C. Dixon, Eugene M. Baker, III and Taiichi Asami.....   | 142 |
| XV. The Action of <i>Ornithogalum Umbellatum</i> on the Heart. Russell A. Waud.....  | 147 |
| XVI. Studies on the Pharmacology of N-Allylnormorphine. Charles A. Winter, Peter D. Orahovats, Lars Flataker, Edward G. Lehman and Jane T. Lehman.....   | 152 |
| XVII. The Influence of Pentobarbital on the Inotropic Responses of the Isolated Frog Heart to Epinephrine and Acetylcholine. Walter W. Baker.....  | 161 |
| XVIII. The Effect of the Intravenous Injection of DFP and Atropine on the Level of Free Acetylcholine in the Cerebral Cortex of the Rabbit. Moritz Michaelis, Jacob E. Finesinger, F. de Balbian Verster and R. W. Erickson..... | 169 |
| XIX. Ascorbic Acid in Aromatic Hydroxylation. III. Effect of Ascorbic Acid on Hydroxylation of Acetanilide, Aniline and Antipyrine <i>In Vivo</i> . Julius Axelrod, Sidney Udenfriend and Bernard B. Brodie.....                 | 176 |
| XX. Diethylbutanediol, a Convulsant Homologue of the Depressant, Diethylpropanediol. I. H. Slater, D. E. Leary and P. E. Dresel.....   | 182 |

|  |     |
|--|-----|
| XXI. The Interaction of Barbiturates with Serum Albumin and its Possible Relation to their Disposition and Pharmacological Actions. Leo R. Goldbaum and Paul K. Smith..... | 197 |
| XXII. The Distribution of a New Central Convulsant: 10-(2-Dimethylamino-propyl)-9-Acridone. S. E. Mayer and J. A. Bain.....  | 210 |
| XXIII. Anesthesia. XLIV. The Local Anesthetic Action of Hydroxy-Lidocaine Hydrochloride. John C. Krantz, Jr., Go Lu and W. Edward O'Malley..                               | 224 |
| XXIV. The Action of Decamethonium on the Isolated Rabbit Lumbrical Muscle. D. J. Jenden, K. Kamijo and D. B. Taylor.....   | 229 |
| XXV. Facilitation of Ganglionic Transmission Following Inhibition of Cholinesterase by DFP. Duncan A. Holaday, Kazuya Kamijo and George B. Koelle.....                     | 241 |

## NUMBER 3, JULY, 1954

|  |     |
|--|-----|
| XXVI. The Action of Some Enzyme Inhibitors on the Isolated Rabbit Auricle. E. A. Gardner and A. Farah.....   | 255 |
| XXVII. Dibenzamine Blockade in Strips of Rabbit Aorta and its Use in Differentiating Receptors. Robert F. Furchgott.....                             | 265 |
| XXVIII. The Diuretic Activity of Isocytosines. C. G. Van Arman.....  | 285 |
| XXIX. The Action of Mephesisin and Other Interneuron Depressants on the Brain Stem. Ellen Eva King and Klaus R. Unna.....                            | 293 |
| XXX. The Action of 3-Hydroxyphenyldimethylethylammonium (Tensilon) on Neuromuscular Transmission in the Frog. W. L. Nastuk and J. T. Alexander.....  | 302 |
| XXXI. Locus of Emetic Action of Morphine and Hydergine in Dogs. S. C. Wang and Vincent V. Glaviano.....  | 329 |
| XXXII. Effect of Adenosine Analogs on Isolated Intestine and Uterus. Enrico Mihich, Donald A. Clarke and Frederick S. Philips.....                   | 335 |
| XXXIII. Di-Ethyl Ether Analgesia: A Detailed Description of the First Stage of Ether Anesthesia in Man. Joseph F. Artusio, Jr.....                   | 343 |
| XXXIV. Action of Nicotine and of the "Ganglioplegiques Centraux" on the Electrical Activity of the Brain. V. G. Longo, G. P. Von Berger and D. Bovet | 349 |
| XXXV. The Effect of N-Allylnormorphine upon the Antidiuretic Action of Morphine. Charles A. Winter, C. Elizabeth Gaffney and Lars Flataker.....      | 360 |
| XXXVI. Pharmacology of Sixty-four Cardiac Glycosides and Aglycones. K. K. Chen and Francis G. Henderson.....   | 365 |

## NUMBER 4, AUGUST, 1954

|  |     |
|--|-----|
| XXXVII. The Determination of Probenecid (Benemid) in Body Fluids. Elizabeth K. Tillson, Grace S. Schuchardt, Jacqueline K. Fishman and Karl H. Beyer   | 385 |
| XXXVIII. Autonomic Blocking Compounds. III. The Ganglion Blocking and Parasympatholytic Actions of a Series of Quaternary Ammonium Derivatives Containing the Phenothiazine Nucleus. Martin M. Winbury, Donald L. Cook and W. E. Hambourger..... | 395 |
| XXXIX. The Effect of N-Allylnormorphine upon the Toxicity of Morphine. Charles M. Gruber, Jr.....  | 404 |
| XL. The Effect of N-Allylnormorphine in the Presence of Secobarbital. Charles M. Gruber, Jr.....   | 409 |
| XLI. The Determination and Physiological Disposition of Milontin (N-Methyl- $\alpha$ -Phenylsuccinimide). Anthony J. Glazko, Wesley A. Dill, Loretta M. Wolf and Charles A. Miller.....  | 413 |
| XLII. Phenobarbital: Studies of Elimination, Accumulation, Tolerance, and Dosage Schedules. Thomas C. Butler, Collins Mahaffee and William J. Waddell.....   | 425 |

|   |     |
|---|-----|
| XLIII. The Effect of Nalorphine on the Respiration of Dogs Anesthetized with Pentobarbital Sodium. Arturo Vivante, Frederick F. Kao and Julius Belford . . . . .  | 436 |
| XLIV. Drugs Preventing Motion Sickness at Sea. S. W. Handford, T. E. Cone, Jr., Herman I. Chinn and Paul K. Smith . . . . .   | 447 |
| XLV. The Action of Andromedotoxin on the Carotid Sinus in Dogs. Neil C. Moran, Marjorie E. Perkins and Arthur P. Richardson . . . . .   | 454 |
| XLVI. Veratridine Blockade of the Carotid Sinus Pressoreceptors. Neil C. Moran, Marjorie E. Perkins and Arthur P. Richardson . . . . .  | 459 |
| XLVII. The Pharmacologic Activity of the Optical Isomers of Isopropylarterenol (Isuprel) Compared with that of the Optically Inactive Analog (1-(3,4-Dihydroxyphenyl)-2-Isopropylaminoethane HCl. A. M. Lands, F. P. Luduena and B. F. Tullar . . . . . | 469 |
| XLVIII. Effects of Acetylcholine on Mechanical and Electrical Properties of Isolated Rabbit Auricle: Their Relationship to the Genesis of Arrhythmias. Theodore C. West, Leslie D. Turner and Ted A. Loomis . . . . .                                   | 475 |
| XLIX. Toxicity in Mice of New Secondary Nitrogen Mustards. Alexander M. Rutenburg, Lester Persky, Orrie M. Friedman and Arnold M. Seligman . . . . .  | 483 |
| L. Index . . . . .  | 489 |