

CONTENTS

NUMBER 1, JANUARY, 1929

| | |
|--|----|
| I. The Comparative Action of Hypertonic Solution of the Chlorates and Chlorides of Potassium, Sodium, Calcium and Magnesium. By John L. Ulrich and Vladimir A. Shternov..... | 1 |
| II. The Survival of the Circulation in the Frog Web after Cardectomy. By O. W. Barlow..... | 17 |
| III. The Binding Power of Serum for Alkaloids and the Inhibition of this Effect by Homologous Alcohols. A Contribution to the Theory of Narcosis. By R. Beutner and E. Hyden..... | 25 |
| IV. Studies concerning the Value of a Solution of Glucose in Maintaining the Acid-Base Equilibrium of the Blood in Pregnant Animals. II. The Effect of a Period of Chloroform Anesthesia in Pregnant Animals. The Lack of Protection Conferred by a Solution of Glucose. By Wm. deB. MacNider..... | 31 |
| V. The Effects of Drugs on the Secretion of Uric Acid in the Fowl. By O. S. Gibbs..... | 49 |
| VI. An Accurate Constant-Rate Injection Apparatus. By O. S. Gibbs..... | 63 |
| VII. Susceptibility of Adrenalectomized Rats to Morphine Intoxication. By Eaton M. MacKay and Lois Lockard MacKay..... | 67 |
| VIII. Action of Certain Heterocyclic Compounds on the Autonomic Nervous System. By Reid Hunt and R. R. Renshaw..... | 75 |

NUMBER 2, FEBRUARY, 1929

| | |
|--|-----|
| IX. Some Effects of Derivatives of Betaine Amide and of Choline Ethers on the Autonomic Nervous System. By Reid Hunt and R. R. Renshaw..... | 99 |
| X. Changes in the Tonicity of Smooth Muscle Produced by Toxins of <i>Ascaris Lumbricoides</i> . By Chester A. Herrick and Frederick E. Emery..... | 129 |
| XI. Quantitative Measurements on the Dilatation of Pial Blood Vessels after the Administration of Nitrites in Dogs. By Chauncey D. Leake, A. G. Kammer and J. B. Hitz..... | 143 |
| XII. The Employment of Strontium Thioacetate as an Antidote in Poisoning by Mercuric Chloride. By Chas. C. Haskell and J. C. Forbes..... | 147 |
| XIII. Some Relative Physiological Properties of Certain New 5,5-Dialkyl and 1-Aryl-5,5-Dialkyl Barbituric Acids. By Axel M. Hjort and Arthur W. Dox..... | 155 |
| XIV. The Effect of Peptone upon the Hepatic Veins in the Dog. By J. P. Simonds and W. W. Brandes..... | 165 |
| XV. On the Use of Magnesium as an Aid in Anesthesia. By Isaac Neuwirth and George B. Wallace..... | 171 |
| XVI. Sterilizing Action of Repeated, Fractional Doses of Arsphenamine in Experimental Syphilis. By Carl Voegtlin..... | 189 |

NUMBER 3, MARCH, 1929

| | |
|---|-----|
| XXVII. The Influence of Chemical and Other Agents upon the Toxicity and Antigenic Power of Ricin. II. The Detoxification of Ricin by Means of Various Agencies. By Emmett B. Carmichael..... | 193 |
| XXVIII. The Influence of Chemical and Other Agents upon the Toxicity and Antigenic Power of Ricin. III. The Production of Immunity by Means of Ricin and Detoxified Ricin. By Emmett B. Carmichael..... | 223 |
| XIX. The Action of Chlorine on Men Poisoned by Toxic Smokes. By Duncan C. Walton and W. A. Eldridge..... | 241 |
| XX. The Mechanism of Morphine Habituation. By Robert A. Hatcher and Harry Gold..... | 257 |
| XXI. Concerning the Antipyretic Properties of Benzyl Benzoate. By David I. Macht and Harriet P. Leach..... | 281 |
| XXII. The Action of Adrenalin on the Respiratory Center, with Remarks upon the Treatment of Severe Respiratory Depression. By Carl F. Schmidt..... | 297 |
| XXIII. The Effect of Salicylate Administration on the Acetone Body Content of the Blood. By Harold B. Myers and Charles Ferguson..... | 313 |

NUMBER 4, APRIL, 1929

| | |
|---|-----|
| XXIV. The Action of Some Tertiary Amines Related to Ephedrine. By F. R. Curtis..... | 321 |
| XXV. The Sympathomimetic Action of Ephedrine. By F. R. Curtis..... | 333 |
| XXVI. The Pharmacology and Toxicology of Some New Organo Mercury Compounds. By Seymour J. Cohen..... | 343 |
| XXVII. The Effect of Methylguanidine upon the Blood Pressure of Adrenalectomized Dogs. By Ralph H. Major and C. J. Weber..... | 351 |
| XXVIII. On Morphine Habituation: Tolerance to the Stimulant Action of Morphine. By Harry Gold..... | 355 |
| XXIX. A New Method of Estimating the Potency of Digitalis: Pigeon-emesis. By P. J. Hanzlik..... | 363 |
| XXX. Results with the Pigeon-emesis Method of Estimating the Probable Therapeutic Dose of Digitalis. By P. J. Hanzlik and A. B. Stockton..... | 393 |
| XXXI. The Treatment of Experimental Tuberculosis with Organic Gold and Copper Compounds. Part I. Ethylenethiocarbamide Derivatives. By W. E. Dixon and J. C. Hoyle..... | 509 |
| XXXII. The Relation of Arsenicals to the Glutathione Content of Animal Tissues. By Herman Brown and John A. Kolmer..... | 417 |
| XXXIII. Antipyretic Action and Toxicity of Combinations of Magnesium with Phenol Cinchoninic Acid. By H. G. Barbour and J. E. Winter..... | 425 |
| XXXIV. Studies in Absorption and Excretion of Magnesium. By W. F. Taylor and J. E. Winter..... | 435 |
| XXXV. A Comparative Study of New Ether Derivatives of Barbituric Acid. By Frank P. Underhill and Oscar R. Johnson..... | 441 |
| XXXVI. The Effect of Intravenous Injections of Colloidal Lead upon the Circulatory System. By Walter J. Dilling..... | 449 |
| XXXVII. Index..... | 463 |

ILLUSTRATIONS

| | |
|---|-----|
| Cat IX, ♀, weight 2320 grams. m/7 KCl (Fig. I)..... | 4 |
| — VIII, ♂, weight 2350 grams. m/7 KClO ₃ (Fig. II)..... | 4 |
| Rabbit III, weight 2350 grams. m/7 KClO ₃ . Small amount (5 cc.) of solution injected (Fig. III)..... | 5 |
| Cat XII, ♀, 1685 grams. NaClO ₃ 1 M solution (Fig. IV)..... | 9 |
| Effects of drugs on the secretion of uric acid in the fowl (Fig. 1)..... | 51 |
| Effects of an injection of 500 mgm. of uric acid on the blood content, urinary and uric acid excretion (Fig. 2)..... | 54 |
| Negative effects of atropine on the urinary excretion (Fig. 3)..... | 56 |
| — effects of pilocarpine (Fig. 4)..... | 56 |
| Effects of a small dose of atophan on the excretion of uric acid, water, and the blood content, followed by recovery (Fig. 5)..... | 60 |
| An accurate constant-rate injection apparatus (Figs. 1 to 3)..... | 64 |
| Susceptibility of adrenalectomized rats to morphine intoxication (Fig. 1)..... | 72 |
| A, reaction of the jejunum of the rat to 0.1 cc. ascaris extract in 200 cc. Locke's solution; B, similar preparation but with protein-free extract (Fig. 1)..... | 132 |
| Reaction produced on the jejunum of the rat by adding respectively 0.1, 0.4 and 1.6 cc. of ascaris extract (200 cc. Locke's solution) (Fig. 2)..... | 134 |
| — of jejunum of the rat to 5 cc. of the body fluid of ascaris in 200 cc. Locke's solution (Fig. 3)..... | 137 |
| Apparatus for mechanically recording alterations in outflow from and volume of the liver during perfusion (Fig. 1)..... | 166 |
| Effect upon the volume of and the rate of flow through the liver when Witte's peptone is added to perfusion fluid entering by way of the portal vein (Figs. 2a and 2b)..... | 168 |
| — upon the volume of the rate of flow through the liver when Witte's peptone is added to perfusion fluid entering by way of the hepatic veins (Figs. 3a and 3b)..... | 169 |
| Photographs I and II show the effect of passing ultraviolet light through the filters (Fig. 1)..... | 215 |
| Photograph of apparatus used to contain the ricin solutions and the filter solutions in the ultraviolet light experiments (Fig. 2)..... | 217 |
| Perfusion of frog's hind-legs by Laewen-Trendelenburg method (Fig. 1)..... | 292 |
| — of frog's hind-legs with benzyl alcohol (1:10,000) (Fig. 2)..... | 292 |
| — of rabbit's ear by Krafkoff's method (Fig. 3)..... | 293 |
| Respiratory depressant effect of adrenalin injected into a vein or into a vertebral artery (Fig. 1)..... | 299 |
| Effect of continued intravenous injection of adrenalin (Fig. 2)..... | 300 |
| — of adrenalin in cerebral perfusion experiment (Fig. 3)..... | 301 |
| — of adrenalin on respiration before and after vagotomy (Fig. 4)..... | 303 |
| — of adrenalin in cerebral perfusion experiment on animal with nearly isolated cerebral circulation (Fig. 5)..... | 305 |

| | |
|--|-----|
| Stimulation of breathing by adrenalin (Fig. 6)..... | 308 |
| Restoration of breathing by adrenalin (Fig. 7)..... | 308 |
| Cat, chloralose, artificial respiration, carotid blood pressure (Fig. 1)..... | 323 |
| — brain and medulla destroyed, A. R., carotid blood pressure (Fig. 2)..... | 323 |
| — brain and medulla destroyed, A. R., carotid blood pressure (Fig. 3)..... | 324 |
| —, chloralose, carotid blood pressure (Fig. 4)..... | 324 |
| —, chloralose, carotid blood pressure (Fig. 5)..... | 325 |
| Strip of non-pregnant cat's uterus (Fig. 6)..... | 326 |
| — of non-pregnant cat's uterus relaxed by adrenalin (Fig. 7)..... | 327 |
| — of non-pregnant rabbit uterus (Fig. 8)..... | 328 |
| Cat, brain and medulla destroyed, A. R. (Fig. 9)..... | 330 |
| Two strips of non-pregnant cat's uterus arranged as for ergot standardization (Fig. 1)..... | 334 |
| Strip of non-pregnant rabbit's uterus (Fig. 2)..... | 334 |
| — of non-pregnant cat's uterus (Figs. 3a and 3b)..... | 335 |
| — of non-pregnant cat's uterus (Figs. 4, 5a and 5b)..... | 336 |
| Whole horn of virgin guinea-pig's uterus (Figs. 6a and 6b)..... | 338 |
| Cat, ether chloralose, vagi cut (Figs. 7a and 7b)..... | 339 |
| Effect of intravenous injection of 10 cc. of 4 per cent solution of butyl mercuric thio glycollate of sodium (Fig. 1)..... | 347 |
| Preliminary injection of methylguanidine without effect (Fig. 1)..... | 352 |
| Marked elevation in blood pressure produced by methylguanidine sulphate in an adrenalectomized dog (Fig. 2)..... | 353 |
| Changes in pulse rate of pigeons receiving minimum emetic doses of tincture digitalis purpurea intravenously (Fig. 1)..... | 375 |
| Margin of safety in ordinary tinctures of digitalis according to the ratios of emetic to fatal doses in pigeons (Fig. 2)..... | 388 |
| Alcohol control (Fig. 1)..... | 396 |
| Effects of tincture digitalis lutea 14 (Fig. 2)..... | 396 |
| — of tincture digitalis purpurea 20 (Fig. 3)..... | 398 |
| — of tincture digitalis purpurea 20 (Fig. 4)..... | 399 |
| — of tincture digitalis lutea 14 (Fig. 5)..... | 399 |
| — of tincture digitalis purpurea 26 (Fig. 6)..... | 400 |
| — of tincture digitalis purpurea 13a (Fig. 7)..... | 401 |
| — of tincture digitalis lutea 14 (Figs. 8 and 9)..... | 402 |
| — of tincture digitalis purpurea 13a after atropine (Fig. 10)..... | 403 |
| — of tincture digitalis purpurea 13a after atropine (Fig. 11)..... | 404 |
| Antipyretic effects in fevered rabbits of various doses of the sodium and magnesium salts of phenyl cinchoninic acid (Fig. 1)..... | 472 |
| — effects in fevered rabbits of repeated injections respectively of Mg and Na salts of phenyl cinchoninic acid (Fig. 2)..... | 428 |
| — effects in fevered rabbits of subcutaneous injections of Mg-p. c. a. alone and in combination with MgCl ₂ (Fig. 3)..... | 429 |
| — effects in fevered rabbits of repeated subcutaneous injections of Mg salt and p. c. a. alone and in combination with MgCl ₂ (Fig. 4)..... | 430 |
| — effects in fevered dogs of oral administration of p. c. a. in combination with MgO (Fig. 5)..... | 433 |

| | |
|--|-----|
| Effect in a fevered dog of oral administration of $MgCl_2$ upon body temperature and serum magnesium (Fig. 1)..... | 436 |
| — in a fevered dog of hypodermic administration of $MgCl_2$ upon body temperature and serum magnesium (Fig. 2)..... | 436 |
| Frog's heart. Effect of partly colloidal lead iodide (Figs. 1 and 2)..... | 450 |
| Cat, pulse and blood pressure. Effect of intravenous injections of 5 cc. of 1 per cent lead nitrate solution (Fig. 3)..... | 451 |
| —, respiration, pulse and blood pressure (Figs. 4 and 5)..... | 453 |
| —, ventricle, auricle and blood pressure (Fig. 6)..... | 454 |
| —, ventricle, auricle and blood pressure (Fig. 7)..... | 455 |
| —, ventricle, auricle and blood pressure (Fig. 8)..... | 456 |
| —, ventricle, auricle and blood pressure (Figs. 9 and 10)..... | 457 |
| —, pulse, respiration and blood pressure (Fig. 11)..... | 458 |
| —, respiration, pulse and blood pressure (Fig. 12)..... | 458 |
| —, pulse and blood pressure (Fig. 13)..... | 460 |