CONTENTS

NUMBER 1, FEBRUARY, 1922

I. The Action of Diptheria Toxin upon the Circulation. By S. Yabe ........... 1
II. Studies on Stimulation of the Respiration: The Action of Respiratory Stimulants upon the Respiration When Depressed by Increased Intracranial Pressure with Special Reference to Sodium Cyanide. By A. S. Loevenhart, J. Y. Malone and H. G. Martin .................. 13
III. Observations upon the Resistance of the Rat to Consecutive Injections of Strychnine. By Erich W. Schwartze .................. 49
IV. The Action of Drugs on the Output of Epinephrin from the Adrenals. VIII. Morphine. By G. N. Stewart and J. M. Rogoff .............. 59
V. The Influence of Muscular Exercise on Normal Cats Compared with Cats Deprived of the Greater Part of the Adrenals, with Special Reference to Body Temperature, Pulse and Respiratory Frequency. By G. N. Stewart and J. M. Rogoff .................. 87
VI. The Influence of Morphine on Normal Cats and on Cats Deprived of the Greater Part of the Adrenals, with Special Reference to Body Temperature, Pulse and Respiratory Frequency and Blood Sugar Content. By G. N. Stewart and J. M. Rogoff .................. 97

NUMBER 2, MARCH, 1922

VII. Perfusion of the Medulla of the Terrapin (Pseudomys troosti) with Adrenalin. By W. J. R. Heinekamp .................. 131
VIII. The Influence of Purgatives upon Blood Concentration. By Frank P. Underhill and Louis Errico .................. 135
IX. Studies on the Physiological Action of Some Protein Derivatives. IV. The Toxicity of Vaughan's Crude Soluble Poison. By Frank P. Underhill and Axel M. Hjort .................. 145
X. Studies on the Physiological Action of Some Protein Derivatives. V. The Relation of Blood Concentration to Peptone Shock. By Frank P. Underhill and Michael Ringer .................. 163
XI. Studies on the Physiological Action of Some Protein Derivatives. VI. The influence upon Blood Concentration of Vaughan's Crude Soluble Poison. By Frank P. Underhill and Michael Ringer .................. 179
XIII. Biological Reactions of Arsphenamine. II. The Protective Action of Hydrophilic Colloids on the Agglutination of Red Blood Cells by Arsphenamine .................. 199
CONTENTS

NUMBER 3, APRIL, 1922

XIV. The Action of Salicylates on the Uterus. By J. W. C. Gunn and Morris Goldberg .......................................................... 207

XV. A Note on Adrenalin Hyperglycemia in man. By Henry L. Ulrich and Harold Rypins ......................................................... 215

XVI. The Determination of the Circulation Time in Rabbits and Dogs and Its Relation to the Reaction Time of the Respiration to Sodium Cyanide. By A. S. Loevenhart, B. H. Schlomovitz and E. G. Seybold .............. 221

XVII. The Action of Potassium Salts on the Medulla as Shown by Perfusion of the Medulla of the Terrapin (Pseudomys troostii) with Potassium Salts. By W. J. R. Heinekamp .................................................. 239

XVIII. Scientific Proceedings of the American Society for Pharmacology and Experimental Therapeutics .............................................. 247

NUMBER 4, MAY, 1922

XIX. Functional Evidence of the Phylogeny of the Nervous System as shown by the Behavior and Resistance of the Developing Rat to Strychnine. By Erich W. Schartze ............................................................ 273

XX. Pharmacological Studies on Acetone. By William Salant and Nathaniel Kleitman ............................................................. 293

XXI. The Toxicity of Skatol. By William Salant and Nathaniel Kleitman ................................................................. 307


XXIII. Changes with Advancing Age in the Resistance of the Albino Rat to Arsenic. By F. S. Hammett and J. E. Nowrey, Jr .................................................. 331

XXIV. The Relative Toxicity of Germanium and Arsenic for the Albino Rat. By F. S. Hammett, J. H. Muller and J. E. Nowrey, Jr .................................................. 337

NUMBER 5, JUNE, 1922

XXV. The Hemolytic Properties of Arsphenamine and Fifteen Allied Compounds. By C. P. Grabfield .......................................................... 343

XXVI. Feeding Experiments on Tadpoles: Prostate Gland and Other Substances. By J. M. Rogoff and Wm. Rosenberg ......................... 353

XXVII. Animal Calorimetry. The Influence of Morphine upon Heat Production in the Dog. By Alfred Chanutin and Graham Lusk .......... 359

XXVIII. Studies of chronic Intoxications on Albino Rats. VI. Lead Carbonate. By Torald Sollmann .......................................................... 375


NUMBER 6, JULY, 1922

XXX. Biological Reactions of Arsphenamine. III. Its Immediate Toxicity as Contrasted with Its Late Ill Effects, and the Role of Agglutination in the Production of the Former. By Jean Oliver and So Sabro Yamada 393

XXXI, Studies on Strychnin. By Soma Weiss and Robert A. Hatcher ...... 419
ILLUSTRATIONS

Apparatus for recording stimulation of the respiration (Fig. 1) 16
Tracing showing stimulation of the respiration (Fig. 2) 18
— showing stimulation of the respiration (Figs. 3 and 4) 20
— showing stimulation of the respiration (Fig. 5) 21
— showing stimulation of the respiration (Figs. 6 and 7) 30
— showing stimulation of the respiration (Fig. 8) 34
— showing stimulation of the respiration (Fig. 9) 36
— showing stimulation of the respiration (Fig. 10) 37
Intestine tracings; bloods from cat 619 (Fig. 1) 63
— tracings; bloods from cat 619 (Fig. 2) 64
— tracings; bloods from cat 626 (Fig. 3) 67
— tracings; bloods from cat 624 (Fig. 4) 71
— tracings; bloods from cat 625 (Fig. 5) 73
— tracings; bloods from dog 622 (Fig. 6) 77
— tracings; bloods from dog 623 (Fig. 7) 80
Temperature curves (dog) (Fig. 1) 105
Partial inhibition produced by perfusing the brain of Pseudomys troosti with 1:50,000 adrenalin (Fig. 1) 132
Complete inhibition effected by the perfusion of 1:50,000 adrenalin through brain of Pseudomys troosti (Fig. 2) 132
Dog A. The influence of magnesium sulphate upon hemoglobin content (Fig. 1) 138
— B. The influence of magnesium sulphate upon hemoglobin content (Fig. 2) 138
— A. The influence of magnesium sulphate upon hemoglobin content (Fig. 3) 138
— A. The influence of sodium sulphate upon hemoglobin content (Fig. 4) 138
— B. The influence of sodium sulphate upon hemoglobin content (Fig. 5) 138
— A. The influence of sodium sulphate upon hemoglobin content (Fig. 6) 138
— B. The influence of rochelle salt upon hemoglobin content (Fig. 7) 139
— A. The influence of rochelle salt upon hemoglobin content (Fig. 8) 139
— B. The influence of rochelle salt upon hemoglobin content (Fig. 9) 139
— A. The influence of castor oil upon hemoglobin content (Fig. 10) 140
— B. The influence of castor oil upon hemoglobin content (Fig. 11) 140
— A. The influence of castor oil upon hemoglobin content (Fig. 12) 141
— B. The influence of cascara sagrada upon hemoglobin content (Fig. 13) 141
— A. The influence of cascara sagrada upon hemoglobin content (Fig. 14) 142
— B. The influence of cascara sagrada upon hemoglobin content (Fig. 15) 142
1. Injection of 0.3 gram per kilo “Witte Pepton” in ten seconds (Chart 1) 167
Dog 48. Injection of 0.5 gram per kilo "Witte Pepton" in ten seconds
(Chart 2) .......................... 167

— 46. Injection of 0.5 gram per kilo "Witte Pepton" in two minutes
(Chart 3) .......................... 168

— 7. Injection of 0.5 gram "Witte Pepton" in twelve minutes ........... 168

— 51. Rapid injection of 0.5 gram per kilo "Witte Pepton" (Chart 5) ... 169

— 52. Rapid injection of 0.5 gram per kilo "Witte Pepton" (Chart 6) ... 169

— 54. Rapid injection of 0.5 gram per kilo "Witte Pepton" (Chart 7) ... 170

— 55. Rapid injection of 0.5 gram per kilo "Witte Pepton" (Chart 8) ... 170

— 58. Rapid injection of 0.5 gram per kilo "Witte Pepton" (Chart 9) ... 172

— 61. One-half ounce of amyl nitrite inhaled (Chart 10) .................. 172

— 34. Rapid injection (five seconds) of 0.5 gram per kilo of denterox
proteoses (Chart 11) .......................... 175

— 40. Injection slowly (in four minutes) 1 mgm. per kilo of histamine
(Chart 12) .................................. 175

— 16. Injected intermittently during an interval of thirteen minutes
1 mgm. per kilo of histamine (Chart 18) .......................... 176

— 53. Injected rapidly 1 mgm. per kilo histamine followed by injections
of 7 cc. 1 per cent BaCl₂ solution (Chart 14) ........... 176

— 19. Rapid injection of Vaughan’s crude soluble poison (Chart 1) ... 182

— 20. Rapid injection of Vaughan’s crude soluble poison (Chart 2) ... 183

— 22. Rapid injection of Vaughan’s non-toxic residue (Chart 3) ........ 184

Effect of 1: 2000 sodium salicylate on the excised uterus of the pregnant rabbit
(Fig. 1) .................................. 208

Slight increase of tone of the isolated uterus after 1: 5000 sodium salicylate
(Fig. 2) .................................. 208

Uppermost line shows uterine movements, contraction recorded by downward movement of the uterus of the non-pregnant rabbit. Effect of injecting 200 mgm. of sodium salicylate per kilo. Lowest line records the injection (Fig. 3) .... 210

Same tracing as in figure 3 after ten minutes (Fig. 4) ........... 211

Determination of circulation time (Fig. 1) .......................... 225

Slowing produced by potassium bromide (Fig. 1) .......................... 240

— produced by potassium chloride (Fig. 2) .......................... 240

— produced by potassium iodide (Fig. 3) .......................... 240

— produced by potassium sulphate (Fig. 4) .......................... 241

— produced by potassium fluoride (Fig. 5) .......................... 241

— produced by potassium nitrate (Fig. 6) .......................... 241

— produced by potassium tartrate (Fig. 7) .......................... 241

Inhibition produced by potassium hydroxide (Fig. 8) .......................... 242

Slowing produced by potassium bromate (Fig. 9) .......................... 242

Inhibition produced by potassium cyanide (Fig. 10) .......................... 242

Slowing produced by potassium thiocyanide (Fig. 11) .......................... 242

Experiment 13. Cat, weight 2.4 kilos. Ether anesthesia (Fig. 1) .......... 295

— 21. Dog, weight 6.3 kilos. Ether anesthesia (Fig. 2) ........... 297

— 97. Frog heart perfused with 5 per cent acetone in Ringer’s solution
for twenty-five minutes (Fig. 3) .......................... 300

— 94. Frog heart (Fig. 4) .................................. 300
Experiment 102. Turtle heart (Fig. 5) 301
Cat, Weight 2.2 kilos. Ether anesthesia (Fig. 1) 310
Experiment 33. Injected 50 mgm. skatol in 1 cc. acetone (Fig. 2) 31
— 33. Moderate fall of blood pressure after rapid injection of 1 cc. acetone (Fig. 3) 312
— 40. Cat, weight 2.8 kilos. Urethane anesthesia (Fig. 1) 317
— 44. Turtle heart (Fig. 3) 323
— 55. Turtle heart perfused with mercuric chloride (Hg 1:1,000,000) for ten minutes (Fig. 4) 325
— 79. Frog heart perfused for one minute with mercuric chloride in Ringer's solution (Hg 1:10,000) shows depression (Fig. 5) 326
— 90. Dog, weight 6 kilos. Morphine ether anesthesia (Fig. 2) 320
— 55. Turtle heart (Fig. 3) 323
— 79. Frog heart perfused for one minute with mercuric chloride in Ringer's solution (Hg 1:10,000) (Fig. 6) 327
Type curves of effects of lead carbonate on growth (Fig. 1) 381
Rate of disappearance of phenoltetrachlorphthalein from blood of normal dogs (Fig. 1) 386
Dog 3. Two hours chloroform anesthesia (Fig. 2) 387
— 4. Two hours and twenty minutes chloroform anesthesia (Fig. 3) 388
— 5. Two hours and fifteen minutes chloroform anesthesia (Fig. 4) 389
Rabbit 48a, 0.28 gram of arsphenamine per kilo (Fig. 1) 400
— 20. 0.32 gram arsphenamine per kilo (Fig. 2) 400
— 48a. Sudden death following 0.28 gram arsphenamine per kilo (Fig. 3) 401
— 51. Sudden death following 0.42 gram arsphenamine per kilo (Fig. 4) 402
— 19. 0.40 gram arsphenamine per kilo (Fig. 5) 403
— 20. Died acutely following 0.32 gram of arsphenamine (Fig. 6) 403
— 27. Immediate death following 0.21 gram arsphenamine per kilo (Fig. 7) 404
— 54. Died suddenly after an injection of 25 cc. of red cells previously agglutinated with arsphenamine (Fig. 8) 407
— 26. Died two and one-half hours after the injection of 0.23 gram arsphenamine (Fig. 9) 409