CONTENTS

NUMBER 1, SEPTEMBER, 1919

I. On the Relation Between Tonus and Smooth Muscle in the Terrapin Heart. By Charles D. Snyder and E. Cowles Andrus 1

II. The Action of Adrenalin on the Heart. I. Action on the Turtle Heart. By W. J. R. Heinekamp 17

III. The Salicylates. XI. The Stability and Destruction of the Salicyl Group under Biological Conditions. By P. J. Hanzlik and N. C. Wetzel 25

IV. The Salicylates. XII. The Excretion of Salicyl after the Administration of Methyl Salicylate to Animals. By P. J. Hanzlik and N. C. Wetzel 43

V. The Effects of Chlorine upon Isolated Bronchi and Pulmonary Vessels. By Henry G. Barbour and Henry W. Williams 47


VII. Drugs after Chlorine Gassing. II. Observations upon the Treatment of Gassed Dogs with Circulatory Stimulants. By H. G. Barbour 61

VIII. The Effects of Chlorine upon the Body Temperature. By Henry G. Barbour 65

NUMBER 2, OCTOBER, 1919

IX. On the Penetration of Dichloroethylsulphide (Mustard Gas) into Marine Organisms, and the Mechanism of its Destructive Action on Protoplasm. By R. S. Lillie, G. H. A. Clowes and R. Chambers 75

X. The Effect of Pyretics and Antipyretics on Catalase Production. By W. E. Burge 121

XI. Drugs after Chlorine Gassing. III. Notes on the Treatment of Gassed Dogs with Calcium, with Quinine, and with Atropine. By Henry G. Barbour 131

XII. Local Anaesthetics: Do They Precipitate Proteins. By Torald Sollmann 135

XIII. The Role of the Bromide Salts on Rhythmically Contracting Organs. I. The Action of the Bromides on the Isolated Mammalian Heart. By Theophile Kruse 137

XIV. The Role of the Bromide Salts on Rhythmically Contracting Organs. II. The Action of the Bromides on Smooth Muscle. By Theophile Kruse 149


XVI. The Hemostatic Properties of Thromboplastic Agents under Different Conditions. By P. J. Hanzlik and C. M. Weidenthal 189

NUMBER 3, NOVEMBER, 1919

XVII. Benzylcarbinol: A Local Anesthetic. By Axel M. Hjort and Joseph T. Eagan 211
CONTENTS

XVIII. The Comparative Skin Irritant Properties of Dichlorethylsulphide ("Mustard Gas") and Other Agents. By Paul J. Hanzlik and Jesse Tarr 221
XIX. Anaphylactoid Phenomena from Thromboplastic Agents. By Paul J. Hanzlik, Howard T. Karsner and Joseph Fetterman 229
XX. Observations on Paradichlorobenzene and Paradibromobenzene. By Torald Sollmann 243
XXI. Experiments with Carvacrol. By Torald Sollmann 251
XXII. An Experimental Study of the Action of Chloramines. By Bernard Fantus and M. I. Smith 259
XXIII. Histamine and Pituitary Extract. By Douglas Cow 275
XXIV. Histamine and Pituitary Extract. By John J. Abel and D. I. Macht 279

NUMBER 4, DECEMBER, 1919

XXVI. Perfusion of the Medulla of the Turtle with Atropin, Caffein, and with Strychnin. A. D. Bush 313
XXVII. Comparative Toxicity of Local Anesthetics and of Antipyretics for Earthworms. Torald Sollmann 319
XXVIII. On the Anthelmintic Action of Benzyl Alcohol and Benzyl Esters. David I. Macht 323
XXIX. The Action of Adrenalin on the Heart. II. The Modification of the Action of Adrenalin by Morphin. W. J. R. Heinekamp 327
XXX. The Action of Drugs on the Output of Epinephrin from the Adrenals. V. Cura. G. N. Stewart and J. M. Rogoff 343
XXXI. Cocaine Intoxication in the Rabbit. C. A. Mills 355

NUMBER 5, JANUARY, 1920

XXXII. The Constituents of Lathyrus sativus Seeds and Their Action. Walter J. Dilling 359
XXXIII. The Restoration of the Frog's Heart in Chloroform Poisoning. Fred Ransom 367
XXXIV. Anaphylactoid Phenomena from the Intravenous Administration of Various Colloids, Arsenicals and Other Agents. Paul J. Hanzlik and Howard T. Karsner 379
XXXV. A Comparison of the Prophylactic Effects of Atropine and Epinephrine in Anaphylactic Shock and Anaphylactoid Phenomena from Various Colloids and Arsphenamine. Paul J. Hanzlik and Howard T. Karsner 425

NUMBER 6, FEBRUARY, 1920

XXXVI. Effects of Various Colloids and Other Agents Which Produce Anaphylactoid Phenomena on Bronchi of Perfused Lungs. Paul J. Hanzlik and Howard T. Karsner 449
XXXVII. Effects of Various Colloids and Other Agents Which Produce Anaphylactoid Phenomena on Surviving Intestine and Uterus. Paul J. Hanzlik 463
XXXVIII. Hemagglutination in Vitro by Agents Which Produce Anaphylactoid Symptoms. Howard T. Karsner and Paul J. Hanzlik 479
XXXIX. Index 493
ILLUSTRATIONS

Effect of changing the perfusate from a Ringer's solution with a $P_H$ value of 7.6 to another of the same composition (Fig. 1)......................... 4
Antagonistic action of morphine and papaverin upon tonus (Fig. 2)........ 5
Paralysing effect of benzyl alcohol upon the tonus oscillations elicited by a change from a $P_H$ value of 7.4 to 7.6 (Fig. 3)......................... 7
Dominating effects of the drugs over the hydrogen ion index (Fig. 4)..... 8
Tonus inhibiting action of papaverin (0.001 per cent) following the administration of atropin (0.005 per cent) (Fig. 5).............................. 10
Failure of atropin to modify the tonus waves called forth by morphine in the left hand half of the figure (Fig. 6)................................. 11
Effects of adrenalin chlorid in Ringer's of various hydrogen ion concentra-
tions (Fig. 7)........................................ 12
Until point 4 in the record, nearly fifteen minutes, the heart had been perfused with adrenalin-free Ringer of a $P_H$ index = 7.1 (Fig. 8)................. 13
Total inhibition of turtle heart following perfusion of brain with 1–50,000
adrenalin (Fig. 1)........................................ 19
Partial inhibition effected by perfusing the turtle brain with 1–10,000 strych-
nine sulphate solution (Fig. 2)........................................ 20
— inhibition effected by the perfusion of 1–10,000 adrenalin through turtle's
brain (Fig. 3)........................................ 20
One cubic centimeter of 1–1000 adrenalin was injected directly into the heart
muscle (Fig. 4)........................................ 22
Chlorine on pulmonary veins (Figs. 1, 2 and 3).......................... 50
— on pulmonary veins (Figs. 4, 5 and 6).......................... 51
— on bronchi (Figs. 7, 8, 9 and 10).......................... 52
Body temperature of dogs exposed to certain concentrations of chlorine
(Fig. 1)........................................ 67
Effects of limited radiation of heat in dogs gassed with lethal concentrations
of chlorin (Fig. 2)........................................ 70
Curve showing order of relative toxicity (Fig. 1).......................... 93
Comparison of rate of hydrolysis of saturated "mustard gas" solution at
21°C., with diminution in toxicity (Fig. 2).......................... 98
Effects of pyretics and antipyretics (Fig. 1).......................... 123
— of pyretics and antipyretics (Fig. 2).......................... 126
— of pyretics and antipyretics (Fig. 3).......................... 128
Bromide Locke perfusion of the isolated heart of a puppy (Fig. 1)........ 139
Graph representing alternate perfusion of a chloride and a bromide Locke's
solution on the isolated heart of a puppy (Fig. 2).......................... 140
Bromide Locke perfusion of the isolated heart of a puppy (Fig. 3)........ 141
Graph representing a constant perfusion of a bromide Ringer's solution on
a cat's heart (Fig. 4)........................................ 142
Bromide Locke perfusion of the isolated heart of a puppy (Fig. 5)........ 144
Two segments of cat intestine (Fig. 1) ........................................... 151
Intestine of cat, showing the regularizing influence of the bromide solution
(Fig. 2) .............................................................................................. 152
— of of cat, showing the stimulating influence of a bromide Ringer’s solution
(Fig. 3) .............................................................................................. 152
Two segments of cat intestine, showing that the augmentation of a bromide
solution is less intense if the segment is rhythmic (Fig. 4) ................. 153
Coagulation of oxalated beef plasma according to different concentrations
of thromboplastins and cephalins ......................................................... 183
Active principles of pituitary gland (Fig. 1) ....................................... 301
— principles of pituitary gland (Fig. 2) .............................................. 302
— principles of pituitary gland (Fig. 3) .............................................. 303
— principles of pituitary gland (Fig. 4) .............................................. 304
— principles of pituitary gland (Fig. 5) .............................................. 305
— principles of pituitary gland (Figs. 6, 7) ....................................... 306
— principles of pituitary gland (Fig. 8) .............................................. 307
— principles of pituitary gland (Fig. 9) .............................................. 309
— principles of pituitary gland (Fig. 10) .......................................... 311
Head of striped turtle showing relative position of medulla .................. 315
Experiment No. X. Atropin ................................................................ 315
Graph from experiment 17 ................................................................. 316
— from experiment 24 ..................................................................... 316
— from experiment 25 ..................................................................... 316
Rise in pressure produced by the intravenous injection of 1 cc. 1-2000 ad-
renalin previous to morphin (Fig. 1) ................................................. 328
— in pressure produced by the intravenous injection of adrenalin 1 cc.
1-2000 after 0.016 gram of morphin (Fig. 2) .................................... 330
— in pressure produced by the intravenous injection of adrenalin 1 cc.
1-2000 after morphin and after physostigmin had been given to sensitize
the vagus endings (Fig. 3) ............................................................... 332
Effect of 1 cc. of 1-10,000 adrenalin previous to morphin (Fig. 4) .......... 333
— of increasing the pressure by occlusion of the abdominal aorta previous
to the use of morphin (Fig. 5) .......................................................... 334
— of 1 cc. 1-10,000 adrenalin after morphin had been administered (Fig. 6) 334
— of occluding the abdominal aorta after morphin had been given (Fig. 7) 335
Intestine tracings. Bloods from cat 378 (Fig. 1) ................................. 340
— tracings. Bloods from cat 378 (Fig. 2) ........................................... 347
— tracings. Bloods from cat 378 (Fig. 3) ........................................... 348
Uterus tracings. Bloods from cat 377 (Fig. 4) .................................... 351
Effects of colloids on intestine and uterus. Experiment 167 (Fig. 1) ...... 474
— of colloids on intestine and uterus. Experiment 166 (Fig. 2) .......... 475
— of colloids on intestine and uterus. Experiment 165 (Fig. 3) .......... 475