

## CONTENTS

### NUMBER 1, JULY, 1917

I. Quantitative Experiments on the Liberation of Epinephrin from the Adrenals After Section of their Nerves, with Special Reference to the Question of the Indispensability of Epinephrin for the Organism. By G. N. Stewart and J. M. Rogoff.....	1
II. The Influence of Asphyxia upon the Rate of Liberation of Epinephrin from the Adrenals. By G. N. Stewart and J. M. Rogoff.....	49
III. Pharmacological Studies of the Ipecac Alkaloids and Some Synthetic Derivatives of Cephaeline. I. Studies on Toxicity. By A. L. Walters and E. W. Koch.....	73
IV. Agaricin. By Helen McCartney.....	83

### NUMBER 2, AUGUST, 1917

V. On the Toxic Action of Opium Alkaloids Individually and in Combination with Each Other on Paramecia. By David I. Macht and Homer G. Fisher.....	95
VI. Toxicity of Phosphates, in Relation to Blood Calcium and Tetany. By Carl Binger.....	105
VII. Perfusion of the Mammalian Medulla. Note on the Action of Ethyl Alcohol. By D. R. Hooker.....	121
VIII. Experiments with Succinate and its Hydroxy Derivatives on the Isolated Frog Heart. By William Salant, A. E. Livingston and Helene Connet.....	129
IX. Endermic Reactions. III. Further Experiments on Local Urticaria. By Torald Sollmann.....	147

### NUMBER 3, SEPTEMBER, 1917

X. The Effect of Caffeine on the Reaction to Carbon Dioxide of the Normal Human Respiratory Mechanism. By G. P. Grabfield and J. H. Means....	159
XI. On Certain Antagonists of Pilocarpine. By Fred Ransom.....	169
XII. Pharmacological Studies of the Ipecac Alkaloids and Some Synthetic Derivatives of Cephaeline. II. Studies on Emetic Effect and Irritant Action. By A. L. Walters, C. R. Eckler and E. W. Koch.....	185
XIII. A Method for the Standardization of Thyroid Preparations. By J. M. Rogoff.....	199
XIV. The Influence of Oxygen upon Inflammatory Reactions. By S. Amberg, A. S. Loevenhart and W. B. McClure.....	209

## NUMBER 4, OCTOBER, 1917

XV. The Action of Certain Emetine Derivatives on Amoebae. By F. L. Pyman and C. M. Wenyon.....	237
XVI. Aल्पine, Eucaïne, Holocaine, Novocaine and Stovaine on the Bladder. By J. A. Waddell.....	243
XVII. The Action of Adrenalin in Inhibiting the Flow of Pancreatic Secretion. By F. C. Mann and L. C. McLachlin.....	251
XVIII. The Non-Dependence of the Protein Quotient in the Blood Serum upon the Rapidity of Metabolism, with Especial Reference to the Non-Effect of Antipyretics, Sodium Cacodylate and Thyroid Extract. By S. Hanson and I. McQuarrie.....	261
XIX. Note on the Physiological Action of <i>Cordyceps sinensis</i> . By J. F. Brewster and C. L. Alsberg.....	277
XX. The Fate of Strychnin in the Body. By Robert A. Hatcher and Cary Eggleston.....	281

## NUMBER 5, NOVEMBER, 1917

XXI. Attempts to Produce a Substance with Thyroid-like Activity by the Artificial Iodization of Proteins. By J. M. Rogoff and David Marine.....	321
XXII. The Influence of Ergotoxin on Body Temperature. By T. S. Githens	327
XXIII. Pharmacological Studies of the Ipecac Alkaloids and Some Synthetic Derivatives of Cephaeline. III. Studies on Protozoöcidal and Bactericidal Action. By A. L. Walters, W. F. Baker and E. W. Koch.....	341
XXIV. Changes in Rhythmicity, Irritability and Tone in the Purged Intestine. By Walter C. Alvarez and Fletcher B. Taylor.....	365
XXV. Comparative Activity of Local Anesthetics. I. Paralysis of Motor Nerve Fibers. Direct Application to the Sciatic Nerve of the Frog. By Torald Sollmann.....	379

## NUMBER 6, DECEMBER, 1917

XVI. Experiments on the Therapeutics of Amoebic Dysentery. By H. H. Dale and Clifford Dobell.....	399
XVII. The Salicylates. IX. The Question of Salicyluric Acid in Salicyl Urines. By Paul Hanzlik.....	461

## NUMBER 7, JANUARY, 1918

XVIII. A Quantitative Study of the Effect of Digitalis on the Heart of the Cat. By G. Canby Robinson and Frank N. Wilson.....	491
XIX. On the Absorption of Drugs and Poisons Through the Vagina. By David I. Macht.....	509
XXX. Local Hemostatic Properties of Cotarnine and Some Other Agents. By Paul J. Hanzlik.....	523
Index.....	543

## ILLUSTRATIONS

Intestine tracings. Bloods from cat anesthetized with urethane (Fig. 1)...	10
— tracings. Bloods from cat anesthetized with urethane (Fig. 2).....	12
— tracings. Bloods from dog anesthetized with ether, and with right adrenal excised (Fig. 3).....	16
— tracings. Bloods from same dog as in figure 3 (Fig. 4).....	17
Uterus tracings. Bloods from same dog as used in figures 3 and 4 (Fig. 5).	17
Bloods from dog anesthetized with ether (Fig. 6).....	20
Intestine tracings. Bloods from same dog as used in figure 6 (Fig. 7)....	20
— tracings. Bloods from cat with right adrenal excised and nerves of left severed (Fig. 8).....	22
— tracings. Bloods from same cat used for figure 8 (Fig. 9).....	23
— tracings. Bloods from cat with right adrenal excised and nerve connections of left cut (Fig. 10).....	25
— tracings. Bloods from same cat used for figure 10 (Fig. 11).....	26
— tracings. Bloods from cat with right adrenal excised and nerves of left cut (Fig. 12).....	29
— tracings. Bloods from the same cat used for figure 12, but with smaller magnification (Fig. 13).....	30
— tracings. Blood from same cat used for figures 12 and 13 (Fig. 14)....	31
Uterus tracings. Bloods from same cat used for figures 12 to 14 (Fig. 15)..	31
Intestine tracings. Bloods from a cat with right adrenal excised, left semi-lunar ganglion extirpated and lumbar sympathetic chain severed three weeks before the experiment (Fig. 16).....	33
— tracings. Blood from the same cat used for figure 16 (Fig. 17).....	34
— tracings. Bloods from the same cat used for figures 16 and 17 (Fig. 18)....	35
Uterus tracings. Bloods from the same cat used for figures 16 to 18 (Fig. 19)...	36
— tracings. Bloods from cat with left adrenal excised and nerve connections of right semi-lunar ganglion cut fifteen weeks before experiment (Fig. 20).....	40
Intestine tracings. Bloods from same cat used for figure 20 (Fig. 21).....	41
— tracings. Bloods from cat with right adrenal excised and nerve connections of left semi-lunar ganglion cut fifteen weeks before experiment (Fig. 22).....	45
— tracings. Bloods from same cat used for figure 22 (Fig. 23).....	45
Uterus tracings. Bloods from same cat used for figures 22 and 23 (Fig. 24)	46
Intestine tracings. Blood from cat anesthetized with urethane (Fig. 1)....	51
— tracings. Blood from same cat used for figure 1 (Fig. 2).....	52
— tracings. Blood from same cat used for figures 1 and 2 (Fig. 3).....	53
Uterus tracings with blood from cat used for figures 1 to 3 (Fig. 4).....	53
— tracings (Fig. 5).....	55
— tracings. Blood from dog with cerebral hemispheres destroyed (Fig. 6)..	57

Intestine tracings. Blood from dog rendered insensitive by increased intracranial pressure (experiment 4) (Fig. 7).....	60
— tracings. Blood from the same dog used for figure 7 (Fig. 8).....	61
— tracings. Blood serum from dog rendered insensitive by increased intracranial pressure (experiment 5) (Fig. 9).....	63
— tracings. Sera from same dog used for figure 9 (Fig. 10).....	64
Uterus tracings. Sera of same dog used for figures 9 and 10 (Fig. 11).....	65
Intestine tracings. Blood from cat rendered insensitive by increased intracranial pressure (Fig. 12).....	67
— tracings. Blood from same cat used for figure 12 (Fig. 13).....	68
Uterus tracings. Blood from same cat used for figures 12 and 13 (Fig. 14).....	69
Frog's heart perfused in situ from sinus (Fig. 1).....	85
— heart perfused in situ from sinus (Fig. 2).....	85
— heart perfused in situ from sinus (Fig. 3).....	86
— heart perfused in situ from sinus (Fig. 4).....	87
— stomach ring (Fig. 5).....	89
Rabbit's intestine suspended in warm oxygenated Ringer (Fig. 6).....	89
— intestine (Fig. 7).....	90
— uterus (non-pregnant) (Fig. 8).....	90
Cat's uterus (non-pregnant) (Fig. 9).....	91
Titration curve of orthophosphoric acid (after Clark and Lubs modified) (Fig. 1).....	114
Curve represents the average analyses of four experiments demonstrating the inverse concentration of serum calcium and phosphorus after phosphate injection (Fig. 2).....	115
In each figure the upper tracing records the respiratory movements of the epigastrium (Figs. 1, 2 and 3).....	126, 127
Frog 218, Series I (Fig. 1).....	132
— 14, Series II (Fig. 2).....	134
— 10, Series II (Fig. 3).....	136
— 25, Series II (Fig. 4).....	138
Average curves for reaction to increasing amounts of CO <sub>2</sub> in the inspired air (Fig. 1).....	162
Experiment 17 (Fig. 2).....	165
Continuous perfusion with pilocarpine (Fig. 1).....	169
Effects of various concentrations of pilocarpine (Fig. 2).....	171
Partial antagonistic effect of strontium (Fig. 3).....	172
Prophylactic effect of digitalis (Fig. 4).....	173
Partial antagonism of digitalis (Fig. 5).....	174
— antagonism of digitalis (Fig. 6).....	175
Prophylactic effect of caffeine (Fig. 7).....	175
Antagonizing effect of caffeine in combined perfusion (Fig. 8).....	176
— effect of caffeine in combined perfusion (more pilocarpine and less caffeine than in figure 8 (Fig. 9).....	176
— effect of caffeine in combined perfusion after pilocarpine alone (Fig. 10)...	177
Antagonism of adrenalin in combined perfusion (Fig. 11).....	177
Antagonizing effect of adrenalin in combined perfusion after pilocarpine alone (Fig. 12).....	178

Prophylactic effect of adrenalin (Fig. 13).....	179
Partial prophylactic effect of saponine (Fig. 14).....	179
— antagonism of saponine in combined perfusion (Fig. 15).....	180
Antagonism of saponine in combined perfusion after pilocarpine (Fig. 16)..	180
Bladder rat. Effects of holocaine and alypine (Fig. 1).....	246
— rat. Effects of beta eucaine and cocaine (Fig. 2).....	246
— rat. Effects of alpha eucaine alone and mixed with holocaine (2 : 1) (Fig. 3).....	246
— rat. Effect of novocaine after atropine paralysis (Fig. 4).....	247
— rat. Effects of stovaine alone and mixed with holocaine (2 : 1) (Fig. 5)...	247
— rat. Effect of epinephrine and antagonism of holocaine (Fig. 6).....	248
— rat. Effect of stovaine after atropine paralysis (Fig. 7).....	248
Kymograph record of blood pressure and rate of pancreatic flow (Fig. 1)...	252
— record of blood pressure and rate of pancreatic flow (Fig. 2).....	253
— record of blood pressure and rate of pancreatic flow (Fig. 3).....	254
— record of pancreatic volume, blood pressure and rate of pancreatic flow (Fig. 4).....	255
— record of pancreatic volume, blood pressure and rate of pancreatic flow (Fig. 5).....	255
— record of pancreatic volume, blood pressure and rate of pancreatic flow (Fig. 6).....	256
— record of pancreatic volume, blood pressure and rate of pancreatic flow (Fig. 7).....	257
Sample tracings from segments from a normal rabbit, on the left, and a rabbit purged by castor oil on the right (Fig. 1).....	373
Average gradient of rhythmicity in segments excised from purged and normal animals (Fig. 2).....	376
Control record (Fig. 1a).....	492
Flattening of T-waves (Fig. 1b).....	492
Conduction time prolonged T-wave inverted (Fig. 1c).....	492
Aurico-ventricular dissociation abnormal V. complexes (Fig. 1d).....	492
Varying V. complexes passing into ventricular fibrillation (Fig. 1e).....	492
Absorption of aconitin hydrochloride through normal vagina of a non- pregnant dog (Fig. 1).....	513
Showing absorption of one per cent solution of KCN from the vagina of a non-pregnant dog (Fig. 2).....	515
Showing absorption of two per cent carbolic solution from vagina of non- pregnant dog (Fig. 3).....	517