

CONTENTS

NUMBER 1, AUGUST, 1921

I. On the Relative Amounts of Depressor and Broncho-Constrictor Substance Obtainable from the Anterior and Posterior Lobes of the Fresh Pituitary Gland. By John Roco.....	1
II. On the Pituitary Active Principles and Histamine. By H. H. Dale and H. W. Dudley.....	27
III. Studies of Chronic Intoxications on Albino Rats. V. Arsenic Trioxid. By Torald Sollmann.....	43
IV. On the Chemical Composition and Physiological Characteristics of Brain Cephalin. By Frederic Feuger.....	51
V. The Pharmacology of Chelidonin, the Benzylisoquinoline Alkaloid of Chelidonium (Celandine or Tetterwort) and Stylophorum. By P. J. Hanzlik.....	63

NUMBER 2, SEPTEMBER, 1921

VI. The Physiological Action of N-Methylhistamine and of Tetrahydropyrido-3.4-Iminazole ("Imidazolisopiperidin" of Fränkel). By H. H. Dale and H. W. Dudley.....	103
VII. Response to Drugs of Excised Bronchi from Normal and Diseased Animals. By D. I. Macht and Giu, Ching Ting.....	111
VIII. Epinephrine Hyperglycemia. II. By Arthur L. Tatum.....	121
IX. Quantitative Pathological Studies with Arsenic Compounds. I. The Influence of Fasting and Various Diets on Arsphenamine Poisoning and the Comparative Toxicity of Arsphenamine, Neorsphenamine and Para-Oxy-Meta-Amino-Phenyl-Arsenoxide. By Charles W. Hooper, Alfred C. Kolls and K. Dorothy Wright.....	133
X. Effects of Vasomotor Depressants upon the Volume of the Liver. By Charles W. Edmunds.....	155

NUMBER 3, OCTOBER, 1921

XI The Relation of the Dextrose and Water Content of the Blood to Antipyretic Drug Action. By H. G. Barbour and J. B. Herrmann.....	165
XII. The Activity of the Isolated Uterus. By Sukemasa Ogata.....	185
XIII. Notes on the Toxic Effects of Chlorine Antiseptics in Dogs. By H. G. Barbour and A. M. Hjort.....	201
XIV. The Reaction to Epinephrin Administered by Rectum. By R. G. Hoskins.....	207

- XV. Studies on the Influence of Phenylcinchoninic Acid and the Ethyl Ester of Paramethylphenylcinchoninic Acid on Renal Excretion. By Victor C. Myers and John A. Killian..... 213
- XVI. The Effect of Water Diuresis on the Elimination of Certain Urinary Constituents. By A. D. Carr..... 221

NUMBER 4, NOVEMBER, 1921

- XVII. A Simple Method for the Determination of the Coagulation Time of Blood in Animals. By O. Inchley..... 237
- XVIII. The Influence of the Electric Current on the Absorption of Drugs. By O. Inchley..... 241
- XIX. On the Influence of Colloids on the Action of Non-Colloidal Drugs. III. By W. Storm van Leeuwen and A. von Szent-Györgyi..... 257
- XX. On the Influence of Colloids on the Action of Non-Colloidal Drugs. IV. By W. Storm van Leeuwen and A. von Szent-Györgyi..... 271
- XXI. The Sensitiveness to Poisons in Avitaminous Animals. By W. Storm van Leeuwen and F. Verzár..... 293
- XXII. The Physiological Standardization of Extract of Belladonna. By W. Storm van Leeuwen and P. H. Maal..... 313

NUMBER 5, DECEMBER, 1921

- XXIII. The Effect of Hydrogen Ion Concentration on the Toxicity of Alkloids for Paramoecium. By Marian M. Crane..... 319
- XXIV. The Chemotherapy of Antimony. Comparison of the Antimonyl Tartrates with the Organic Compounds of Antimony. By Robert George Fargher and William Herbert Gray..... 341
- XXV. Experimental Inquiry into the Sedative Properties of Some Aromatic Drugs and Fumes. By David I. Macht and Giu, Ching Ting..... 361
- XXVI. A Study of Antispasmodic Drugs on the Bronchus. By David I. Macht and Giu, Ching Ting..... 373

NUMBER 6, DECEMBER, 1921

- XXVII. The Toxicity of the Blood of Adrenalectomised Frogs. By C. H. Kellaway..... 399
- XXVIII. Uterine Effects of Intravenous Injections of Fluids. By H. G. Barbour and F. H. Rapoport..... 407
- XXIX. The Mode of Action of Potassium upon Isolated Organs. By A. J. Clark..... 423
- XXX. On Scopolamine-Morphine Narcosis. By W. Storm van Leeuwen and A. von Szent-Györgyi..... 449
- XXXI. The Relation of Histamine to Intestinal Intoxication. I. The Presence of Histamine in the Human Intestine. By Jonathan Meakins and Charles Robert Harington..... 455
- XXXII. The Effects of Some New Local Anesthetics. Para-aminobenzoyl Dinormal Butyl-amino Ethanol and Propanol; and Diethyl Amino-Propyl Diphenyl Amino-Carbinol. By M. L. Bonar and Torald Sollmann 467

ILLUSTRATIONS

Dog, male, 6 kgm., ether anesthesia (Fig. 1).....	3
— pithed, 13.3 kgm. (Fig. 2).....	4
— pithed, 13.3 kgm. (Fig. 3).....	5
— pithed, 9.2 kgm. (Fig. 4).....	6
One entire horn virgin guinea-pig's uterus (Fig. 5).....	13
— entire horn virgin guinea-pig's uterus (Fig. 6).....	14
— entire horn virgin guinea-pig's uterus (Fig. 7).....	15
— entire horn virgin guinea-pig's uterus (Fig. 8).....	16
— entire horn virgin guinea-pig's uterus (Fig. 9).....	17
Male dog, 5.8 kgm., paraldehyde anesthesia (Fig. 10).....	18
Dog, male, 5.8 kgm., paraldehyde anesthesia (?) (Fig. 11).....	19
Effect of injecting into the femoral vein of a pithed dog 4 cc. out of a total quantity of 25 cc. aqueous solution of the chloroform extract of fraction I (mercuric chloride tar) of posterior lobe (Fig. 12).....	20
— of injecting into the femoral vein of a pithed dog 8 cc. out of a total quantity of 100 cc. aqueous solution of the chloroform extract of fraction I (mercuric chloride tar) of anterior lobe (Fig. 13).....	21
Shows that the apparatus employed for the preparation of figure 12 in which the chloroform extract of the posterior lobe was shown to constrict the bronchioles was not set to register small alterations in lung volume (Fig. 14).....	22
Effect of injection into the femoral vein of a pithed dog 1 cc. solution of pressor and oxytocic phosphate "A" = 11 mgm. prepared by decomposing the "proteid-HgCl ₂ -precipitate" of Abel and Nagayama (Fig. 15).....	23
Shows the entire absence of broncho-motor action of 5.5 and 11 mgm. of choline chloride injected into the femoral vein of a pithed dog (Fig. 16).....	24
Blood pressure of cat under ether (Fig. 1).....	32
— pressure of cat under ether (Fig. 2).....	33
Pituitary active principles and histamine (Fig. 3).....	34
— active principles and histamine (Fig. 4).....	35
Blood pressure of cat under ether (Fig. 5).....	36
Pituitary active principles and histamine (Fig. 6).....	37
Effect of erepsin on oxytocic principle (Fig. 7).....	40
Effects of arsenic on the growth of rats (Fig. 1).....	44
Arsenic on food consumption (Fig. 2).....	47
Effects of chelidonin on cardiac volume, kidney volume and blood-pressure of curarized and atropinized dog (18.5 kgm.) (Fig. 1).....	77
— of chelidonin on perfused turtle's heart (Fig. 2).....	78
Longitudinal strip of dog's ureter in 150 cc. of Tyrode's solution (Fig. 3).....	86
Dog's bladder; quiescent strip in 50 cc. Tyrode's solution (Fig. 4).....	86

Rabbit's aorta; ring preparation in 150 cc. Tyrode's solution (Fig. 5).....	86
Dog 15.2 kgm. Effect of chelidonin and hemorrhage on intestinal peristalsis, blood-pressure and respiration (Fig. 6).....	88
Effect of chelidonin on untreated bronchi of decerebrated dog (6.5 kgm.) (Fig. 7).....	93
— of chelidonin on bronchi of decerebrate cat (1.5 kgm.) (Fig. 8).....	93
Blood pressure of cat under ether (Fig. 1).....	105
Horn of guinea-pig's uterus suspended in 80 cc. Ringer solution (Fig. 2)..	105
Blood pressure of cat under ether (Fig. 3).....	109
Horn of guinea-pig's uterus suspended in 80 cc. Ringer solution (Fig. 4)...	109
Bronchus of pig (Fig. 1).....	114
Normal bronchus of pig (Fig. 2).....	114
Bronchus of pig (Fig. 3).....	115
Diseased bronchus of pig, freshly excised (Fig. 4).....	115
Section of pig's lung showing consolidation and inflammatory process (Fig. 5).....	116
— of normal lung of pig (Fig. 6).....	116
Amyl nitrite effect upon portal pressure and liver volume in the dog (Fig. 1).	157
Effect of the injection of 3 cc. of dog's urine upon the portal blood pressure and liver volume in the dog (Fig. 2).....	160
Experiment H17. Effect of sodium salicylate on normal dog (Fig. 1).....	169
— H15. Effect of sodium salicylate on coli fever dog (Fig. 2).....	169
— H25. Effect of antipyrine on normal dog (Fig. 3).....	170
— H33. Effect of antipyrine on coli fever dog (Fig. 4).....	170
— H28. Effect of quinine-hydrochlorid on normal dog (Fig. 5).....	171
— H32. Effect of quinine-hydrochlorid on coli fever dog (Fig. 6).....	171
— 60. Effect of sodium salicylate on coli fever dog (Fig. 7).....	172
— 57. Effect of sodium salicylate on coli fever dog (Fig. 8).....	173
— 24. Effect of coli vaccine and of sodium salicylate (Fig. 9).....	178
— 25. Effect of coli vaccine and of sodium salicylate (Fig. 10).....	178
Manner of suspending uterine horn of virgin rabbit (Fig. 1).....	187
Rhythmic contractions of circular muscle coat of virgin rabbit uterus (Fig. 2)	187
Uterus of non-pregnant multiparous rabbit (Fig. 3).....	188
Multiparous rabbit, horn of the uterus split (Fig. 4).....	189
— rabbit, whole uterus hofn as in figure 1 (Fig. 5).....	189
Contractions of longitudinal and circular muscle of pregnant rabbit (Fig. 6)..	190
Virgin rabbit uterus suspended as in diagram (Fig. 7).....	191
— rabbit. Nerves to right horn divided eighty-two days previously (Fig. 8).....	192
— rabbit uterus (Fig. 9).....	192
— rabbit. Operated fifty-six days previously (Fig. 10).....	193
— rabbit uterus (Fig. 11).....	193
— rabbit. Nerves of right horn cut sixty-four days previously (Fig. 12)..	194
— rabbit. Right horn cut sixty-four days previously (Fig. 13).....	194
Multiparous rabbit. Nerves of right horn cut twenty-two days previously (Fig. 14).....	195
— rabbit. Nerves to right horn cut twenty-two days previously (Fig. 15)	196
Rat's uterus (Fig. 16).....	196
Nervous supply of uterus severed by cutting broad ligament (Fig. 17).....	198

Effect of epinephrin by rectum on intestinal peristalsis and carotid blood pressure (Fig. 1).....	209
Coagulation time of blood (Fig. 1).....	238
— time of blood (Fig. 2).....	238
Influence of electric current on absorption of drugs, rabbits A and B (Fig. 1).....	244
— of electric current on absorption of drugs, blood pressure tracings (Fig. 2).....	245
— of electric current on absorption of drugs, diagram of apparatus (Fig. 3).....	246
— of electric current on absorption of drugs, rabbit, 2.5 grams of urethane (Fig. 4).....	247
— of electric current on absorption of drugs, guinea-pig, 300 grams of urethane (Fig. 5).....	251
Isolated gut suspended in 75 cc. of Tyrode solution. Influence of serum on pilocarpine action (Fig. 1).....	258
Influence of lecithin on pilocarpine action (Fig. 2).....	260
— of cholesterine on pilocarpine action (Fig. 3).....	261
— of cholesterine on pilocarpine action (Fig. 4).....	262
— of cephalin on pilocarpine action (Fig. 5).....	263
— of lecithin on histamine action (Fig. 6).....	267
— of lecithin on histamine action (Fig. 7).....	268
Isolated cat's intestine suspended in 75 cc. of Tyrode solution (Fig. 1).....	274
— gut suspended in 75 cc. Tyrode solution (Fig. 2).....	279
— gut suspended in 75 cc. Tyrode solution (Fig. 3).....	280
— cat's intestine suspended in 75 cc. Tyrode solution (Fig. 4).....	284
— cat's intestine suspended in 75 cc. Tyrode solution (Fig. 5).....	284
Influence of adrenaline (Parke, Davis and Company) on blood pressure of a fowl suffering from avitaminosis (Fig. 1).....	301
— of pilocarpine hydrochloride and atropine sulfate on isolated gut of normal fowl (Fig. 2a).....	303
— of pilocarpine and atropine on isolated gut of fowl suffering from experimental polyneuritis (Fig. 2b).....	303
Action of 0.05 mgm. of ergamine (Burroughs, Welcome and Company) on isolated gut of normal fowl (Fig. 3a).....	304
— of 0.005 mgm. of ergamine on isolated gut of fowl suffering from experimental polyneuritis (Fig. 3b).....	304
— of 0.1 mgm. of pilocarpine on isolated esophagus of fowl suffering from experimental polyneuritis (Fig. 4).....	305
— of adrenaline on blood pressure of cat suffering from experimental polyneuritis (Fig. 5).....	308
Fall in blood pressure caused by 0.01 mgm. of ergamine in a cat suffering from experimental polyneuritis (Fig. 6).....	309
Action of 0.01 mgm. of pilocarpine on isolated gut of a cat suffering from polyneuritis (Fig. 7).....	310
Pig's bronchus (Fig. 1).....	377
— bronchus (Fig. 2).....	377
Bronchus of pig (Fig. 3).....	378
— of pig (Fig. 4).....	378
Surviving bronchus of pig (Fig. 5).....	399
Pilocarpin hydrochloride, 1 mgm., produces marked contraction (Fig. 6).....	379

Bronchus of pig (Fig. 7).....	380
— of pig (Fig. 8).....	382
— of pig (Fig. 9).....	382
— of pig (Fig. 10).....	382
— of pig (Fig. 11).....	382
— of pig (Fig. 12).....	383
— of pig (Fig. 13).....	383
— of pig (Fig. 14).....	383
— of pig (Fig. 15).....	383
— of pig (Fig. 16).....	383
— of pig (Fig. 17).....	385
— of pig (Fig. 18).....	385
— of pig (Fig. 19).....	385
— of pig (Fig. 20).....	389
— of pig (Fig. 21).....	389
— of pig (Fig. 22).....	389
— of pig (Fig. 23).....	390
— of pig (Fig. 24).....	391
Perfused normal frog heart (Fig. 1).....	404
Uterine effects of intravenous injections. Dog 7 (Fig. 1).....	409
— effects of intravenous injections. Dog 4 (Fig. 2).....	411
— effects of intravenous injections. Dog 18 (Fig. 3).....	412
— effects of intravenous injections. Dog 18 (Fig. 4).....	413
— effects of intravenous injections. Dog 3 (Fig. 5).....	416
— effects of intravenous injections. Dog 1 (Fig. 6).....	418
— effects of intravenous injections. Dog 14 (Fig. 7).....	419
Fig. 1.....	427
Isolated frog's heart perfused, movements of auricle and ventricle record (Fig. 2).....	431
The action of thorium upon the frog's heart (Fig. 3).....	433
Frog's heart perfused with potassium-free Ringer (Fig. 4).....	434
Isolated auricle of rabbit suspended in Ringer (Fig. 5).....	437
The action of uranium upon the isolated auricle of the rabbit (Fig. 6).....	438
— action of potassium, rubidium, caesium and thorium upon the isolated rabbit's auricle when this is excited by lack of potassium (Fig. 7).....	439
— action of potassium, rubidium, caesium and thorium in producing contractions of the isolated uterus of the rabbit (Fig. 8).....	440
— action of potassium, rubidium, caesium and thorium in producing contractions in the isolated uterus of a kitten (Fig. 9).....	441
— effect of alteration of the potassium content of Ringer upon the vessels of a frog perfused through the aorta (Fig. 10).....	442
— action of potassium, rubidium and thorium in inhibiting the hyperacidity of the rabbit's uterus produced by lack of potassium (Fig. 11).....	442
— action of uranium and rubidium in inhibiting the hyperacidity produced by lack of potassium in the isolated gut and uterus of the rabbit (Fig. 12).....	442
— action of potassium, rubidium and caesium in inhibiting the hyperacidity produced by lack of potassium in the isolated gut of the rabbit (Fig. 13).....	443
Relation of histamine to intestinal intoxication (Fig. 1).....	460
Comparison of effective and toxic doses of anesthetics (Fig. 1).....	488