CONTENTS

NUMBER 1, FEBRUARY, 1921

I. On the Influence of Colloids on the Action of Non-Colloidal Drugs. I. By W. Storm van Leeuwen ............................... 1
II. Effect of Some Antipyretics on the Behavior of Rats in the Circular Maze. By D. I. Macht and Wm. Bloom .................. 21
III. Optical Isomers. VII. Hyosines and Hyoscyamines. By Arthur R. Cushny .................................................. 41
IV. Astringency and Protein-Precipitation by Masked Tannin Compounds. By Torald Sollmann ........................................... 63
V. Magnesium Sulphate in Arsenic Poisoning. By Olga S. Hansen .......... 105
VI. Some Observations upon the Behavior of a Fixed Oil (Peanut Oil) Injected Intraperitoneally. By Erich W. Schwartze .......... 115
VII. On the Influence of Colloids on the Action of Non-Colloidal Drugs. II. By W. Storm van Leeuwen and J. Zeijdner ............ 121
VIII. A Comparison of the Action of Certain Drugs upon Muscular Work in Frogs. By Eleanor M. Scarborough .................... 129
IX. The Action of Histamine and Peptone on the Isolated Small Intestine. By Herbert Olivecrona ........................................ 141

NUMBER 3, APRIL, 1921

XI. On the Duration of Construction of Bloodvessels by Epinephrine. By S. J. Meltzer and John Auer ................................ 177
XII. Studies of Chronic Intoxications on Albino Rats. IV. Fluorid, Chlorid and Calcium, Including Sodium Fluorid, Sodium Chlorid, “Phosphate Rock,” Calcium Phosphate (Precipitated) and Calcium Carbonate (Precipitated). By Torald Sollmann, O. H. Schettler and N. C. Wetzel. 197
XIII. The Action of Drugs upon the Output of Epinephrin from the Adrenals. VII. Physostigmine. By G. N. Stewart and J. M. Rogoff ........ 227

NUMBER 4, MAY, 1921

XV. The Comparative Toxicity of Thymol and Carvacrol (Isothymol). By A. E. Livingston ............................................. 261
XVI. Evidence for the Presence in Digitalis of a Principle that is Eliminated Rapidly after Intravenous Injection Into the Cat. By M. S. Dooley ................................................................. 277
CONTENTS

XVII. A Preliminary Paper on the Relation Between the Amount of Stainable Lipoid Material in the Renal Epithelium and the Susceptibility of the Kidney to the Toxic Effect of the General Anesthetics. By Wm. deB. MacNider...................................................... 289

XVIII. Scientific Proceedings of the American Society for Pharmacology and Experimental Therapeutics........................................... 325

NUMBER 5, JUNE, 1921

XIX. The Toxicity of Some Thioureas and Thiuramdisulphides. By P. J. Hanzlik and A. Irvine................................................................. 349


XXI. The Action of Drugs in Infection. I. The influence of Morphine in Experimental Septicemia. By Adolph Kraft and Neil M. Leitch....... 377

XXII. The Salicylates. XIII. The Liberation of Free Salicylic Acid from Salicylate in the Circulation. By P. J. Hanzlik.......................... 385

XXIII. Epinephrine Hyperglycemia. I. By Arthur L. Tatum.............. 395

XXIV. The Effect of Benzyl Benzoate on the Leucocytes of the Rabbit. By Ludwig A. Einge and Jens P. Jensen................................. 415

NUMBER 6, JULY, 1921

XXV. Route of Administration of Drugs in Relation to Toxicity in Chemotherapeutic Investigations with Special Reference to Intrapleural Injections of Ethylhydrocuprein Hydrochloride. By John A. Kolmer..... 431

XXVI. Comparative Effects of Morphin and Alkaloids of the Benzylisoquinolin Group on Cardiac Muscle. By P. J. Hanzlik.................... 445

XXVII. Attempt to Detect Thyroid Secretion in Blood Obtained from the Glands of Individuals with Exophthalmic Goiter and Other Conditions Involving the Thyroid. By J. M. Rogoff and H. Goldblatt......... 473

XXVIII. The Liver as a Blood Concentrating Organ. By Paul D. Lamson and John Roca................................................................. 481
ILLUSTRATIONS

Concentration-action curve, type I (Fig. 1) ........................................ 2
— action curve, type II (Fig. 2) ...................................................... 2
Adsorption curves of benzoic acid and succinic acid (Fig. 3) ............... 3
— isotherm of pilocarpine by animal charcoal (Fig. 4) ......................... 4
— of nicotine by animal charcoal (Fig. 5) ...................................... 5
—isotherm (logarithmated) of pilocarpine by animal charcoal (Fig. 6) ... 6
Strip of cat gut suspended in 75 cc. of Tyrode solution (Fig. 7, a-d) .... 9
Isolated strip of cat gut suspended in 75 cc. Tyrode solution (Fig. 8, a-e) 10
Amount and concentration of pilocarpine (Fig. 9) ............................. 13
Isolated cat gut suspended in 75 cc. of Tyrode solution (Fig. 10, a-c) ... 15
Circular maze viewed from above (Fig. 1) ..................................... 22
— maze with camera lucida attachment (Fig. 2) ................................. 23
Graphs of the secretion of saliva by a dog from 5 mgm. of pilocarpine nitrate injected subcutaneously at P, preceded by hyoscine hydrobromide at H (Fig. 1) .................................................. 45
— of the secretion of saliva by another dog from 5 mgm. pilocarpine nitrate injected subcutaneously at P, preceded by hyoscine hydrobromide at H (Fig. 2) .................................................. 46
Effect of hyoscines on the movements of the surviving bowel in 50 cc. of oxygenated Ringer's solution (exp. 1), (Fig. 3) ......................... 49
Tracing of surviving intestine of rabbit in 50 cc. of Tyrode's solution (Fig. 4). 49
Records of movements of a piece of surviving intestine of rabbit in Ringer's solution (Fig. 5) ................................................. 51
Time factor in solution of tannin-protein compounds (Fig. 1) ................ 81
— factor in solution of tannin-protein compounds (Fig. 2) .................... 82
— factor in hydrolysis of acetannins (Fig. 3) .................................... 90
Length of life (in 48-hour periods) of rabbits given potassium arsenite alone, and of animals given potassium arsenite and later magnesium sulphate (Fig. 1) .................................................. 111
Influence of colloids on non-colloidal drugs (Fig. 1, a-h) ...................... 125
Action of drugs upon muscular work of frogs (Fig. 1) ......................... 130
— of drugs upon muscular work of frogs (Fig. 2) ............................... 131
— of drugs upon muscular work of frogs (Fig. 3) ............................... 132
— of drugs upon muscular work of frogs (Fig. 4) ............................... 132
— of drugs upon muscular work of frogs (Fig. 5) ............................... 133
Control fatigue curve; perfusion with Ringer's solution (Fig. 6) ............ 134
Fatigue curve; perfusion with Ringer's solution (Fig. 7) ....................... 135
— curve; perfusion with Ringer's solution (Fig. 8) ............................ 135
— curve; perfusion with Ringer's solution (Fig. 9) ............................ 135
— curve; perfusion with Ringer's solution (Fig. 10) .......................... 136
— curve; perfusion with Ringer's solution (Fig. 11) .......................... 136
ILLUSTRATIONS

Intestine tracings. Bloods from cat 468 (Fig. 2) .............................. 231
  — tracings. Bloods from cat 469 (Fig. 3) ............................... 232
  — tracings. Bloods from cat 469 (Fig. 4) ............................... 233
  — tracings. Bloods from cat 469 (Fig. 5) ............................... 234
  — tracings. Bloods from cat 472 (Fig. 6) ............................... 236
  — tracings. Bloods from cat 472 (Fig. 7) ............................... 237
  — tracings. Bloods from cat 471 (Fig. 8) ............................... 240
  — tracings. Bloods from cat 471 (Fig. 9) ............................... 241
  — tracings. Bloods from cat 471 (Fig. 10) .............................. 241
  — tracings. Bloods from cat 479 (Fig. 11) .............................. 245
  — tracings. Bloods from cat 479 (Fig. 12) .............................. 246
Toxicity of thymol and carvacrol (Fig. 1) ................................. 269
  — of thymol and carvacrol (Fig. 2) ................................... 270
Microphotograph from a fresh frozen section of the kidney of the normal
control animal of experiment 2, table 1 (Fig. 1) .......................... 318
  — from a fresh frozen section of the kidney of the normal control animal
of experiment 5, table 1 (Fig. 2) ...................................... 318
  — from a fresh frozen section of the kidney of the animal of experiment 4,
table 1 (Fig. 3) .................................................................. 320
  — from a fresh frozen section of the kidney of the animal of experiment 10,
table 1 (Fig. 4) ................................................................. 320
Colored microphotograph from a fresh frozen section of the kidney of the
control naturally nephropathic animal of experiment 1, table 2 (Fig. 5) 322
  — microphotograph from a fresh frozen section of the naturally nephro-
pathic animal of experiment 10 (table 2) (Fig. 6) ......................... 322
Effect of benzyl benzoate on leucocytes (Charts I and II) .................. 419
  — of benzyl benzoate on leucocytes (Chart III) ......................... 421
  — of benzyl benzoate on leucocytes (Chart IV) .......................... 422
  — of benzyl benzoate on leucocytes (Chart V) ........................... 424
  — of benzyl benzoate on leucocytes (Chart VI) ......................... 425
Highest tolerated doses of ethylhydrocuprein hydrochlorid per kilogram of
white rat (Chart 1) ................................................................ 435
  — tolerated doses of quinin and urea hydrochlorid and quinin bisulphat
per kilogram of white rat (Chart 2) ...................................... 436
  — tolerated doses of mecurrophern per kilogram of white rat (Chart 3) .. 437
  — tolerated doses of solutions of disodium arsphenamin per kilogram of
white rat (Chart 4) ............................................................. 438
  — tolerated doses of neoarsphenamin per kilogram of white rat (Chart 5) .. 439
  — tolerated doses of ethylhydrocuprein hydrochlorid by intravenous
injection (Chart 6) .............................................................. 440
  — tolerated doses of ethylhydrocuprein hydrochlorid by subcutaneous
injection (Chart 7) .............................................................. 441
Effects of morphin on untreated turtle heart, of chelidonin after morphin and
of cotarnin hydrochlorid (stypticin) after chelidonin on the same heart
(Fig. 1) ............................................................................. 449
  — of chelidonin on frog’s heart (Fig. 2) .................................... 452
  — of cotarnin hydrochlorid on atropinized frog’s heart (Fig. 3) ......... 453
Effects of hydrastinin hydrochlorid after hydrastin hydrochlorid on atropinized frog's heart (Fig. 4) ......................................................... 454
— of narcotin hydrochlorid on atropinized frog's heart; antagonism by morphin hydrochlorid (Fig. 5) ................................................................. 455
— of chelidonin sulphate on untreated turtles, heart of morphin hydrochlorid after chelidonin and of cotarnin hydrochlorid (stypticin) after morphin (Fig. 6) ......................................................... 457
— of morphin hydrochlorid after hydrastin hydrochlorid on atropinized frog's heart (Fig. 7) ......................................................... 459
— of hydrastin on turtle's heart and antagonism by cotarnin hydrochlorid (stypticin) (Fig. 8) ......................................................... 460
— of different concentrations of chelidonin sulphate in Ringer's solution on frog's gastrocnemius muscle (Fig. 9) ......................................................... 463
Tadpoles after four doses ranging from 0.1 mgm. to 50 mgm. of standard desiccated cattle thyroid (Fig. 1) ......................................................... 477
— after four 20 mgm. doses of desiccated thyroid (Fig. 2) ......................................................... 477
— fed with 100 mgm. doses of dried blood every other day from June 13 to July 10 (Fig. 3) ......................................................... 478
Depression of the hemoglobin curve after the injection in ten to eleven minutes of 25 cc. isotonic saline per kilogram in eight normal dogs (Fig. 1) ......................................................... 483
— of the hemoglobin curve in two dogs in which the liver has been removed from the circulation (Fig. 2) ......................................................... 484
— of the hemoglobin curve in two normal dogs after the injection in ten to eleven minutes of 25 cc. isotonic saline per kilogram to which 0.9 mgm. per kilogram of epinephrin has been added (Fig. 3) ......................................................... 485
Twenty cubic centimeters per kilogram of isotonic saline plus 0.9 mgm. of epinephrin were injected into two dogs after the removal of the liver from the circulation (Fig. 4) ......................................................... 487
Twenty-five cubic centimeters per kilogram of isotonic saline was injected into three rabbits showing the depression of the hemoglobin curve (Fig. 5) ......................................................... 488
— cubic centimeters of isotonic saline plus 0.9 mgm. of epinephrin per kilogram was injected into three rabbits (Fig. 6) ......................................................... 489
Diagram showing the portal and systemic circulation (Fig. 7) ......................................................... 491
If the liver is removed from the circulation and the portal blood shunted around it by means of an Eck fistula it will be seen that there is no obstruction to the venous return in the entire body (Fig. 8) ......................................................... 492