CONTENTS

NUMBER 1, MAY, 1936

I. A Method for Obtaining a Preparation of the Melanophore Hormone of the Pituitary Gland. R. L. Stehle .................. 1

II. A New Bloodless Method for Continuous Recording of Peripheral Circulatory Changes. Hans Molitor and Michael Kniazuk... 6


IV. Effects of Acetanilid on the Growth and Blood Morphology of Rats. Paul K. Smith and W. E. Hambourger .................. 34

V. The Growth and Blood Morphology of Rats Receiving Sodium Bromide, Caffeine and Combinations with Acetanilid. Paul K. Smith and W. E. Hambourger ....... 43

VI. The Thyrotropic Hormone of the Pituitary Gland and Iodine Metabolism. Benjamin F. Stimmel, D. Roy McCullagh and Valerian Picha .................. 49

VII. Chemotherapeutic Action on Sp. minus in Mice by Certain Anil and Styryl Quinoline Compounds Free from Metals or Metalloids. C. H. Browning and R. Gulbransen .............. 56

VIII. Effect of Dinitrophenol on Rate of Alcohol Metabolism. H. W. Newman and M. L. Tainter .......................... 67

IX. Ergotocin, Ergometrine, Ergostetrine and Ergobasine. K. K. Chen, Edward E. Swanson, E. C. Kleiderer and G. H. A. Clowes ... 74

X. The Toxicity and Glycaemic Properties of a Number of Amidine and Guanidine Derivatives. W. A. Broom .................... 81

XI. Dilation of the Coronary Vessels by Certain Organic Extracts and Drugs. Charles W. Greene .............................. 98

NUMBER 2, JUNE, 1936

XII. The Scientific Proceedings of the American Society for Pharmacology and Experimental Therapeutics, Incorporated. Twenty-Seventh Annual Meeting, Held at Washington, D. C., March 25, 26, 27, 28, 1936. Edited by the Secretary, E. M. K. Geiling ....... 113

XIII. Comparative Actions of Sympathomimetic Compounds: Bronchodilator Actions in Bronchial Spasm Induced by Histamine. W. M. Cameron and M. L. Tainter .................... 152

XIV. The Effect of Morphine Sulphate and of Dihydromorphinone Hydrochloride upon the Antrum, Pyloric Sphincter and Duodenum in Non-Anesthetized Dogs. Charles M. Gruber, J. Earl Thomas, Joseph O. Crider and John T. Brundage ......... 170
CONTENTS


NUMBER 3, JULY, 1936

XVII. The Local Anaesthetic Actions of Certain Pyrazoline and Quino-line Compounds. H. K. Sinha .......................... 199

XVIII. Threshold Anesthetic and Lethal Concentrations of Certain Spinal Anesthetics in the Rabbit. Raymond N. Bieter, Raymond W. Cunningham, Oa Lenz and J. J. McNearney .......... 221

XIX. Addiction and Tolerance to Barbiturates? The Effects of Daily Administration and Abrupt Withdrawal of Phenobarbital-Sodium and Pentobarbital-Sodium in the Albino Rat. Eugene J. Stanton .................................................... 245

XX. The Effect of Acid on the Guinea Pig Ileum Contracted by Acetylcholine and Histamine. James W. Sachs and Joseph McK. Ivie ................................................................. 253

XXI. Studies on Barbiturates. XV. The Excretion of Barbital in Normal and Nephropathic Subjects. William P. Argy, Charles R. Linegar and James M. Dille ...................... 258

XXII. On the Duration of Spinal Anesthesia in the Rabbit. Raymond N. Bieter, J. J. McNearney, Raymond W. Cunningham and Oa Lenz ......................................................... 264

XXIII. Some Pharmacological and Toxicological Properties of Vinyl Ether. Hans Molitor ........................................... 274

XXIV. On the Cause of the Delayed Death in the Rat by Isopropyl Betabromallyl Barbituric Acid (Nostal) and Some Related Barbiturates. Harald G. O. Holek and Paul R. Cannon ....... 289


XXVI. The Reactions of the Human Foetal Gastrointestinal Tract in vitro. A. D. McLachlin ......................................... 324

NUMBER 4, AUGUST, 1936

XXVII. Comparative Effects of Barbituric Acid Derivatives on the Isolated Heart. Robert L. Johnston ..................... 333

XXVIII. Comparative Assay of Oestrone in Rat and Mouse. A. M. Hain and J. M. Robson ........................................ 337

XXIX. Action of Epinephrine, Tyramine and Ephedrine on Small Intes-tine of Unanesthetized Dog, Before and Following the Administra-tion of Cocaine. Charles M. Gruber .......................... 347

XXX. Studies on the Pharmacological Action of Coriamyrtin. A. H. Maloney .................................................. 361

XXXI. Role of Potassium in Epinephrine Action. W. J. R. Camp and J. A. Higgins ............................................... 376
XXXII. Alcohol Injected Intravenously: Further Observations on the Effect of Habituation on Rate of Metabolism. Henry W. Newman and Windsor C. Cutting 388

XXXIII. Anaesthetic Effects of Some Furan Derivatives. V. E. Henderson and A. H. R. Smith 394

XXXIV. Rate of Bismuth Absorption in Experimental Animals Following Peroral Administration. Geo. E. Clarke and Homer F. Marsh 399

XXXV. Pharmacological Action of Coriamyrtin. Edward E. Swanson and K. K. Chen 410

XXXVI. Rôle of Histamine in Canine Anaphylactic Shock. Carl A. Dragstedt and Franklin B. Mead 419

XXXVII. Action of Drugs on the Choline Esterase of the Brain. Frederick Bernheim and Mary L. C. Bernheim 427

XXXVIII. Depression of Respiration by Oxygen. E. K. Marshall, Jr., and Morris Rosenfeld 437

XXXIX. Site of Action of Caffeine as a Respiratory Stimulant. D. H. Le Messurier 458

XL. Antagonism between Ephedrine Sulphate and Sodium Isoamylethylbarbiturate (Sodium Amytal) after Intracisternal Injection during Morphine-sodium Isoamylethylbarbiturate (Sodium Amytal) Anesthesia and Ether Anesthesia. James C. Rice and Robert M. Isenberger 464

ILLUSTRATIONS

Wiring diagram of apparatus for recording peripheral circulatory changes (fig. 1) ............................................. 8

Photo-electric cell (fig. 2) ............................................. 9

--- cell in position (fig. 3) ............................................. 9

Effect of active hyperemia; peripheral vasodilatation after intravenous injection of bulbocapnine (fig. 4) .................. 11

--- of congestion on peripheral circulation (fig. 5) ................. 12

Difference between regular Traube-Hering waves and response to a sensory stimulus (fig. 6) .................................. 13

Effect of intravenous injection of papaverine on peripheral circulation (fig. 7). .................................................. 14

--- of two equal doses of adrenalin on peripheral circulation (fig. 8) ..................................................... 15

Influence of small and large doses of morphine on vascular response to sensory stimuli (fig. 9) .............................. 16, 17

Relative hypnotic values of thioureas, graphically expressed (fig. 1) .......................................................... 26

Duration of various phases of intoxications induced by thioureas, graphically expressed (fig. 2) ................................ 27

Growth of rats receiving daily doses of acetanilid (fig. 1) ........... 36

--- of rate receiving daily doses of acetanilid (fig. 2) ............... 38

--- of rate receiving daily doses of acetanilid (fig. 3) ............... 40

--- of rate receiving daily doses of caffeine and of acetanilid-caffeine (fig. 1) .................................................. 46

Influence of small and large doses of morphine on vascular response to sensory stimulation (fig. 9) .......................... 69

Comparison of ergotocin, ergometrine, ergostertrine and ergobasine on isolated rabbit's uterus (fig. 1) ......................... 77

Effects on coronary flow and blood pressure of 1 cc. padutin in jugular vein (fig. 1) .................................................. 102

--- on rate of coronary flow of 1 cc. padutin in jugular vein (fig. 2) ..................................................... 104

--- on rate of coronary flow of 1 cc. pancreatic extract into jugular vein (fig. 3) .................................................. 106

Effect of injection of 3 cc. of pancreatic extract into jugular vein to demonstrate active dilation of coronaries (fig. 4) ........ 107

--- on coronaries and blood pressure of intravenous injection of muscle extract, lacarnol (fig. 5) .............................. 108

--- on coronaries and blood pressure of intravenous injection of muscle extract, lacarnol (fig. 6) .............................. 109

--- on coronaries and blood pressure of injection of 2.5 cc. of 25 per cent aqueous solution of coramine into jugular vein (fig. 7) .......................... 110

Bronchodilator and pressor actions of sympathomimetic amines in pithed dogs treated with histamine: epinephrine, epine, 3-4 dioxyephedrine, ethylborsuprarenin, arterenol and neosynephrine (fig. 1) .................. 154

--- and pressor actions of sympathomimetic amines in pithed dogs treated with histamine: cobefrin, ephedrine, phenylisopropylamine, octin and atropine (fig. 2) .................................................. 157
Effect on gastric, pyloric and duodenal tonus and activity of injection of dihydromorphinone hydrochloride on unanesthetized male dog with gastric and duodenal fistulae (fig. 1) .......................... 173
— on gastric, pyloric and duodenal tonus and activity of injection of dihydromorphinone hydrochloride on unanesthetized female dog with gastric and duodenal fistulae (fig. 2) .......................... 175
Record of pyloric sphincter of cat under ether anesthesia (fig. 3) ............... 176
— of pyloric sphincter of dog under ether anesthesia (fig. 4) ...................... 176
Reaction of coronary vessels of cat to injection of acetylcholine (figs. 1 and 2) 183
Response of cat heart to successive injections of acetylcholine (fig. 3) ............ 184
Reaction of coronary vessels of cat to injection of carbaminoyl choline (fig. 4) 185
Method of mounting sciatic-gastrocnemius of Rana esculenta Hung (fig. 1) .. 201
Individual variations in paralysis of frog’s sciatic (fig. 2) .......................... 203
Anesthesia of rabbit’s cornea (fig. 3) .................................................. 206
— of rabbit’s cornea (fig. 4) ............................................................. 208
— of human wheal (fig. 5) .............................................................. 209
— of rabbit’s corneas (fig. 6) ......................................................... 210
— of human wheal (fig. 7) ............................................................. 211
Percentage mortality produced by intravenous injection of drugs in mice (fig. 8) ................. 213
Diagram showing site of injection in human fingers (fig. 9) ......................... 215
Group median responses (struggles per minute) of rats during daily administra-
tion of phenobarbital-sodium and pentobarbital-sodium and after permanent withdrawal (fig. 1) ...................................................... 248
Amount of acid necessary to relax and isolated strip of guinea pig ileum con-
tracted with histamine and acetylcholine (fig. 1) .................................. 255
Spinal anesthesia in rabbit with procaine HCl (fig. 1) .............................. 268
— anesthesia in rabbit with procaine HCl, tutocaine, panthesine, mety-
caine, pantocaine and nupercaine (fig. 2) ..................................... 270
Toxicity curves of chloroform, ethyl ether and vinyl ether during a 3-hour
anesthesia (fig. 1) ................................................................. 276
Arrangement used for determination of chemical changes of vinyl ether
during rebreathing (fig. 2) ...................................................... 280
Toxicity curves of decomposed vinyl ether during a 3-hour anesthesia (fig. 3) 281
Relation between anesthetic concentration and time of induction (fig. 4) ......... 284
Influence of temperature on time of induction in mice (fig. 5) ..................... 285
— of temperature on time of recovery in mice (fig. 6) ............................ 286
Amplifier used in study of phrenic potentials (fig. 1) ................................ 311
Types of records of inspiratory impulses (fig. 2) ................................... 316
Data from typical record of phrenic potentials before, during and after injec-
tion of nicotine (fig. 3) ............................................................. 319
Tracings of respiratory cycles at different times before and after injection of
nicotine in typical experiment (fig. 4) .............................................. 320
— of inspirations following injection of nicotine (fig. 5) .......................... 321
Circular ring from stomach of human foetus (fig. 1) ............................... 325
— ring from stomach of human foetus (fig. 2) ..................................... 326
Longitudinal section from jejunum of human foetus (fig. 3) ......................... 327
— section from ileum of human foetus (fig. 4) ..................................... 327
ILLUSTRATIONS

Decrease in amplitude of cardiac contractions in succeeding minutes (fig. 1) .......... 334
Average decrease in heart tracings in millimeters per minute (fig. 2) .............. 335
Reactions of groups of 20 or 40 rats to oestrone and its benzoate (fig. 1) ........ 339
of groups of 20 or 40 mice to oestrone and its benzoate (fig. 2) ................. 340
Thiry-Vella loop of jejunum from stomach of dog (fig. 1) ......................... 352
Record taken on dog with Thiry-Vella fistula of ileum (fig. 2) .................... 353
Thiry-Vella loop of ileum of dog (fig. 3) ........................................ 355
— loop of jejunum of animal (fig. 4) ............................................. 356
Tracings showing carotid pressure and respiration following nembutal anesthesia in rabbit (fig. 1) ............................................. 367
— showing carotid pressure and respiration following nembutal anesthesia (fig. 2) .............................................................. 367
Slowing of heart followed by acceleration following administration of potassium (fig. 1) ......................................................... 378
Changes in urinary bladder induced by potassium chloride and stimulation of cut cervical vagus (fig. 2) .................................. 380
Rise in blood pressure subsequent to vagus stimulation (fig. 3) ................. 381
Changes induced in auricle and ventricle by epinephrine and potassium chloride (fig. 4) .............................................................. 382
Rise in blood pressure effected by potassium chloride after removal of adrenal glands (fig. 5) ......................................................... 382
Relaxation of duodenum and rise in blood pressure induced by epinephrine and potassium chloride (fig. 6) .................................. 383
Constriction of bronchial muscles effected by histamine and relieved by potassium chloride (fig. 7) ......................................................... 384
Contraction of kidney produced by potassium chloride (fig. 8) .................. 386
Average blood alcohol values after administration of alcohol (fig. 1) ......... 390
— blood alcohol values after administration of alcohol (fig. 2) .............. 390
— blood alcohol values after administration of alcohol (fig. 3) .............. 391
Detoxification of "sodium amytal" by coriamyrtin (fig. 1) ......................... 416
Estimation of activity of brain choline esterase by guinea pig ileum (fig. 1a) .. 428
Effect of addition of brain esterase on intestine contracted by acetylcholine (fig. 1b) .................................................. 429
— of hydrogen ion concentration on activity of brain choline esterase (fig. 2) ................................................................. 430
— of different concentrations of morphine and apomorphine on hydrolysis of acetylcholine by brain esterase (fig. 3) ..................... 433
Respiratory depression following administration of oxygen after anesthetization with phenobarbital sodium and injection of morphine (fig. 1) .......... 439
— depression following administration of oxygen after anesthetization with phenobarbital sodium and injection of morphine (fig. 2) .. 440
Oxygen depression in cats under different anesthetics (fig. 3) .................. 441
Respiratory depression following administration of oxygen preceded by injection of morphine sulfate (fig. 4) ......................... 442
Respiration following administration of carbon dioxide in oxygen and in air preceded by anesthetization with phenobarbital sodium (fig. 5) .......... 443
— and blood pressure following administration of oxygen preceded by anesthetization with phenobarbital sodium and injection of morphine sulfate (fig. 6) ........................................ 445
ILLUSTRATIONS

Respiration following administration of oxygen preceded by anesthetization with phenobarbital sodium (fig. 7) 446
— following administration of oxygen preceded by anesthetization with phenobarbital sodium (fig. 8) 447
Percentage saturation of hemoglobin of arterial blood plotted against percentage reduction of respiratory minute volume by oxygen (fig. 9) 448
Respiration and blood pressure following administration of oxygen preceded by anesthetization with phenobarbital sodium and injection of morphine sulfate (fig. 10) 451
Effect of intravenous injection of caffeine sodium benzoate on respiration and blood pressure (fig. 1) 460
— of intravenous injection of caffeine sodium benzoate and of epinephrine on respiration and blood pressure (fig. 2) 461
— of intravenous ephedrine and of cisternal ephedrine on duration of cisternal sodium amytal respiratory paralysis (fig. 1) 466
Effects of cisternal ephedrine on duration of cisternal sodium amytal respiratory paralysis (fig. 2) 467
Respiration following administration of sodium amytal and ephedrine sulfate (fig. 3) 469
— following administration of sodium amytal and ephedrine sulfate (fig. 4) 469
Biologic assay of “International Standard” estrin and of certain commercial preparations (fig. 1) 476
— assay of “International Standard” estrin and of certain commercial preparations (fig. 2) 476
— assay of “International Standard” estrin and of certain commercial preparations (fig. 3) 477
— assay of “International Standard” estrin and of certain commercial preparations (fig. 4) 479
— assay of “International Standard” estrin and of certain commercial preparations (fig. 5) 479
— assay of “International Standard” estrin and of certain commercial preparations (fig. 6) 480