

CONTENTS

NUMBER 1, SEPTEMBER, 1930

I. Studies in Cancer Chemotherapy. VIII. The Reaction of the Fluid of Rat Sarcoma 10. By L. C. Maxwell and Fritz Bischoff.....	1
II. Synergism of Local Anesthetics. By T. H. Rider.....	7
III. Comparative Actions of Sympathomimetic Compounds: Synephrine-Isomers and -Ketone. By M. L. Tainter and M. A. Seidenfeld.....	23
IV. Comparative Actions of Sympathomimetic Compounds: Catechol Derivatives. By M. L. Tainter.....	43
V. Studies on Calcium. I. Some Comparative Pharmacologic Effects Following the Intravenous Injection of Calcium Lactate and Calcium Gluconate in Unanesthetized Dogs. By Arnold S. Lieberman, M.D....	65
VI. Studies on Calcium. II. Urinary Output of Calcium in Normal Individuals After Peroral Administration of Calcium Lactate and Calcium Gluconate. By Arnold L. Lieberman, M.D.....	71
VII. Standardization of Ergot. Comparative Study of the Chemical and Biological Methods of Ergot Assay. By Maurice I. Smith and E. F. Stohlgman.....	77
VIII. Hormones in Cancer. I. The Effect of Ovarian, Splenic, and Adrenal Extracts upon Rat Sarcoma No. 10. By Fritz Bischoff and L. C. Maxwell.....	97
IX. Amytal Anesthesia in Fishes. By A. B. Keys and N. A. Wells.....	115

NUMBER 2, OCTOBER, 1930

X. A Practical Test for the Antidiuretic Action of Pituitary. By O. S. Gibbs.....	129
XI. On the Unitary Versus the Multiple Hormone Theory of Posterior Pituitary Principles. By John J. Abel.....	139
XII. The Amide Nitrogen of Blood. V. A Theory of Ammonia Metabolism. By Sidney Bliss.....	171
XIII. Mydriasis Affected by Sympathomimetic Agents. By F. F. Yonkman.	195
XIV. Resistance to Morphine in Experimental Uremia. By Eaton M. Mackay and Lois Lockard MacKay.....	207
XV. The Effects of Barbituric Acid Hypnotics on Basal Metabolism in Humans. By Hamilton H. Anderson, Mei-Yo Chen and Chauncey D. Leake.....	215
XVI. The Action of Drugs on the Oxygen Consumption of the Frog's Isolated Auricle. By J. C. David.....	229

NUMBER 3, NOVEMBER, 1930

XVII. Investigation into the Distribution of Lead in the Organism on Basis of a Photographic (Radiochemical) Method. By Svend Lomholt.....	235
XVIII. Further Observations on the Depressor Substance in Brain Tissue. By Ralph H. Major and C. J. Weber.....	247
XIX. The Electrocardiogram of Non-Anesthetized Dogs as Modified by the Intravenous Injection of Pitressin, Atropine Sulphate and Vagus Section. By Charles M. Gruber and William B. Kountz.....	253
XX. Absorption and Narcotic Action. By H. H. King, J. Lowe Hall, A. C. Andrews and H. L. Cole.....	275
XXI. A Study of the Effect of Morphine upon the Respiratory Center. By A. H. Maloney and A. L. Tatum.....	291
XXII. Chloroform Content in Various Tissues During Anesthesia and Its Relationship to the Theories of Narcosis. By James L. McCollum.....	305
XXIII. The Quantitative Assay for the Testicular Hormone by the Comb Growth Reaction. By T. F. Gallagher and Fred C. Koch.....	327
XXIV. Threshold Relationships of Testis Hormone Indicators in Mammals; The Rat Unit. By Carl R. Moore and T. F. Gallagher.....	341
XXV. Further Observations on the Toxic Effects of Irradiated Ergosterol. By J. C. Hoyle.....	351

NUMBER 4, DECEMBER, 1930

XXVI. Experimental Studies on Heart Tonics. IV. The Main Factors of Digitalis Standardization with a New Assay Method. By William Nyiri and Louis Du Bois.....	373
XXVII. Trypsin Preparations Suitable for the Prevention of Adhesions. By Robert P. Walton.....	403
XXVIII. On the Growth-Promoting Hormone of the Pituitary Body. By H. B. Van Dyke and Zonja Wallen-Lawrence.....	413
XXIX. "Dial" as a Surgical Anaesthetic for Neurological Operations; with Observations on the Nature of Its Action. By J. F. Fulton, E. G. T. Liddell and D. McK. Rioch.....	423
XXX. The Calorigenic Action of Morphine as Revealed by Addiction Studies. By H. G. Barbour, D. E. Gregg and L. H. Hunter.....	433
XXXI. The Reaction of Iodates in Vivo. By L. C. Maxwell.....	451
XXXII. Urinary Sulphur and Thiocyanate Excretion in Cyanide Poisoning. By Ralph G. Smith and Russell L. Malcom.....	457
XXXIII. A Critical Study of the Assay of Female Sex Hormone Preparations. By F. E. D'Amour and R. G. Gustavson.....	473
XXXIV. The Preparation and Assay of Crystalline Female Sex Hormone. By F. E. D'Amour and R. G. Gustavson.....	485

ILLUSTRATIONS

Studies in cancer chemotherapy. VIII. The reaction of the fluid of rat sarcoma 10 (Fig. 1).....	2
Anesthesia onset times in the frog's sciatic with 1 per cent cocaine, 1 per cent potassium chloride, and their mixtures (Fig. 1).....	10
— onset times in the frog's sciatic with 1 per cent cocaine, 0.5 per cent potassium chloride, and their mixtures (Fig. 2).....	11
— onset times in the frog's sciatic with 1 per cent cocaine, 1 per cent ammonium chloride and their mixtures (Fig. 3).....	14
— onset times in the frog's sciatic with 1 per cent cocaine, 1 per cent butyn, and their mixtures (Fig. 4).....	15
Durations of anesthesia of the rabbit's cornea after application of 1 per cent cocaine, 1 per cent butyn, and their mixtures (Fig. 5).....	16
Blood pressure and pulse rate changes after epinephrine, and synephrine-isomers in ergotaminized cats (Fig. 1).....	30
— pressure and pulse rate changes after epinephrine and synephrine-isomers in cocainized cats (Fig. 2).....	32
— pressure and pulse rate changes after synephrine-ketone. Cat 3.8 kgm. Urethane anesthesia; atropinized (Fig. 3).....	33
Responses of excised sheep's carotid artery to synephrine (Fig. 4).....	34
Blood pressure and pulse rate responses to catechol derivatives in the ergotaminized organism (Fig. 1).....	49
Responses of the blood pressure and pulse rate to catechol derivatives in the cocainized organisms (Fig. 2).....	51
Blood pressure and pulse rate responses to catechol and <i>l</i> -epinephrine in an ergotaminized cat (3.3 kgm.; atropinized; urethane anesthesia) (Fig. 3)...	56
Effects of catechol on blood pressure, pulse rate and intestinal and cardiac volumes (Fig. 4).....	57
Studies on calcium. I. Some comparative pharmacologic effects following the intravenous injection of calcium lactate and calcium gluconate in unanesthetized dogs (Fig. 1).....	67
— on calcium. I. Some comparative pharmacologic effects following the intravenous injection of calcium lactate and calcium gluconate in unanesthetized dogs (Fig. 2).....	67
— on calcium. II. Urinary output of calcium in normal individuals after peroral administration of calcium lactate and calcium gluconate (Fig. 1)...	73
— on calcium. II. Urinary output of calcium in normal individuals after peroral administration of calcium lactate and calcium gluconate (Fig. 2)...	74
— on calcium. II. Urinary output of calcium in normal individuals after peroral administration of calcium lactate and calcium gluconate (Fig. 3)...	75
Experiment 107 (Fig. 1).....	84
— 110 (Fig. 2).....	85

Experiment 312 (Fig. 3).....	86
— 313 (Fig. 4).....	87
Amytal and respiratory movements, <i>clinocottus analis</i> , no. C ₇ , weight 37 grams, November 13, 1929 (Fig. 1).....	122
— and respirations, <i>girella nigricans</i> no. 5, temperature 16.5–17.1°C. (Fig. 2).....	123
—, effect upon oxygen uptake of <i>girella</i> , 16.5°–17.1°C. (Fig. 3).....	125
Mydriasis affected by sympathomimetic agents (Fig. 1).....	197
— affected by sympathomimetic agents (Fig. 2).....	198
— affected by sympathomimetic agents (Fig. 3).....	199
— affected by sympathomimetic agents (Fig. 4).....	200
— affected by sympathomimetic agents (Fig. 5).....	201
— affected by sympathomimetic agents (Fig. 6).....	202
Female rats made uremic by bilateral nephrectomy at 170 days of age (Fig. 1)..	208
Male rats made uremic at 225 days of age by the removal of the second kidney, the first having been removed 5 days previously (Fig. 2).....	209
Female rats 90 days of age when the second kidney was removed five days after the first (Fig. 3).....	210
Male rats 150 days old made uremic by two nephrectomies five days apart (Fig. 4).....	211
Female rats 80 days old made uremic by bilateral nephrectomy at a single sitting (Fig. 5).....	212
Action of adrenaline on oxygen consumption (upper curve) and frequency (lower curve) of frog's isolated auricle (Fig. 1).....	231
— of strophanthin on oxygen consumption (A) and frequency (B) of frog's isolated auricle (Fig. 2).....	232
— of pilocarpine on oxygen consumption (upper curve) and frequency (lower curve) of frog's isolated auricle (Fig. 3).....	233
Sections of organs from a young rat (10 grams) (Fig. 1).....	238
Print of a photographic plate exposed for three weeks to radiation from the sections on figure 1 (Fig. 2).....	238
Cross-sections of a young rat (4.3 grams) (Fig. 3).....	240
Print of a photographic plate exposed for eight days to radiation from the sections on figure 3 (Fig. 4).....	240
Cross-sections of a new-born mouse (2 grams) (Fig. 5).....	242
Print of a photographic plate exposed for six days to radiation from the sections on figure 5 (Fig. 6).....	242
Showing lowering of blood-pressure produced by the brain extract in a rabbit (Fig. 1).....	248
Demonstrates that brain extract is effective in a dog after the use of atropin, while choline, after these additions, produces no effect (Fig. 2).....	250
A curve plotted from the data of one experiment upon a non-anesthetized 18-kgm. dog in which the blood pressure and pulse rate were determined under local anesthesia (Fig. 1).....	257
Electrocardiographic curves taken from an 18-kgm. dog non-anesthetized. Lead III (Fig. 2).....	259
— record; 10-kgm. dog, non-anesthetized (Fig. 3).....	260

Non-anesthetized 10-kgm. dog (Fig. 4).....	264
— 22-kgm. dog (Fig. 5).....	265
— 12-kgm. dog (Fig. 6).....	266
— dog, weighing 15 kgm. (Fig. 7).....	269
Effect of morphine upon respiratory center, typical record (Fig. 1).....	296
Quantitative assay for testicular hormone (Fig. 1).....	329
Showing parallel increase in growth after fourth day on different doses (Fig. 2).....	330
Responses to variations in doses (Fig. 3).....	331
Showing effect of fractionating the daily dose (Fig. 4).....	332
Quantitative assay for testicular hormone (Fig. 5).....	334
Toxic effects of irradiated ergosterol (Fig. 1).....	355
— effects of irradiated ergosterol (Fig. 2).....	358
— effects of irradiated ergosterol (Fig. 3).....	361
Section of myocardium of rat 216 (Fig. 4).....	364
— of myocardium of rat 228 (Fig. 5).....	364
— of myocardium of rat 236 (Fig. 6).....	365
— of kidney of rat 236 (Fig. 7).....	365
Toxic effects of irradiated ergosterol (Fig. 8).....	366
Experimental studies on heart tonics (Fig. 1).....	383
— studies on heart tonics (Fig. 2).....	384
— studies on heart tonics (Fig. 3).....	385
— studies on heart tonics (Fig. 4).....	387
— studies on heart tonics (Fig. 5).....	388
— studies on heart tonics (Fig. 6, 1).....	393
— studies on heart tonics (Fig. 6, 2).....	394
— studies on heart tonics (Fig. 6, 3).....	395
Trypsin preparations for prevention of adhesions (Fig. 1).....	405
Injection of phyone (Fig. 1).....	418
Responses of the hypophysectomized rats receiving same sterile phyone preparation in identical relative doses (Fig. 2).....	420
Response of groups of normal and hypophysectomized rats to phyone (Fig. 3).....	421
Metabolism during morphine addiction and withdrawal (Fig. 1).....	439
Relative fuel combustion (DuBois triangle) (Fig. 2).....	443
Nitrogen metabolism during morphine addiction and withdrawal (Fig. 3)...	445
Result of seven injections with varying doses into 112 animals (Fig. 1)....	477
Standard curve (Fig. 2).....	477
Variation from normal of rats with varying dosages (Fig. 3).....	479
Percentage of animals whose behavior was irregular (Fig. 4).....	480
— of animals in oestrus (Fig. 5).....	482
Result of five injections of crystalline oestrin with varying doses (Fig. 1)..	486