CONTENTS

Number 1, September, 1930

III. Synergism of Local Anesthetics. By T. H. Rider	I. Studies in Cancer Chemotherapy. VIII. The Reaction of the Fluid of Rat Sarcoma 10. By L. C. Maxwell and Fritz Bischoff	1
Isomers and -Ketone. By M. L. Tainter and M. A. Seidenfeld		7
IV. Comparative Actions of Sympathomimetic Compounds: Catechol Derivatives. By M. L. Tainter		23
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	IV. Comparative Actions of Sympathomimetic Compounds: Catechol	50
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	Derivatives. By M. L. Tainter 4	43
Gluconate in Unanesthetized Dogs. By Arnold S. Lieberman, M.D		
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	Following the Intravenous Injection of Calcium Lactate and Calcium	
viduals After Peroral Administration of Calcium Lactate and Calcium Gluconate. By Arnold L. Lieberman, M.D		55
Gluconate. By Arnold L. Lieberman, M.D		
VII. Standardization of Ergot. Comparative Study of the Chemical and Biological Methods of Ergot Assay. By Maurice I. Smith and E. F. Stohlman		71
Stohlman	VII. Standardization of Ergot. Comparative Study of the Chemical and	
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		
Extracts upon Rat Sarcoma No. 10. By Fritz Bischoff and L. C. Maxwell	Stohlman	77
Maxwell	VIII. Hormones in Cancer. I. The Effect of Ovarian, Splenic, and Adrenal	
IX. Amytal Anesthesia in Fishes. By A. B. Keys and N. A. Wells		07
Number 2, October, 1930 X. A Practical Test for the Antidiuretic Action of Pituitary. By O. S. Gibbs	IX Amytal Anesthesia in Fishes. Rv A R Keys and N A Wells 11	91 15
X. A Practical Test for the Antidiuretic Action of Pituitary. By O. S. Gibbs	27 12 27 22 22 23 24 25 25 25 25 25 25 25 25 25 25 25 25 25	
Gibbs	Number 2, October, 1930	
Gibbs	X. A Practical Test for the Antidiuretic Action of Pituitary. By O. S.	
Pituitary Principles. By John J. Abel	Gibbs	29
XII. The Amide Nitrogen of Blood. V. A Theory of Ammonia Metabolism. By Sidney Bliss		
By Sidney Bliss		39
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	All. The Amide Nitrogen of Blood. V. A Theory of Ammonia Metabolism.	71
XIV. Resistance to Morphine in Experimental Uremia. By Eaton M. Mackay and Lois Lockard MacKay	XIII Mydriagia Affected by Sympathomimetic Agents Ry F F Yorkman 19	95
Mackay and Lois Lockard MacKay 207		•
XV. The Effects of Barbituric Acid Hypnotics on Basal Metabolism in	Mackay and Lois Lockard MacKay 20	07
	XV. The Effects of Barbituric Acid Hypnotics on Basal Metabolism in	
Humans. By Hamilton H. Anderson, Mei-Yo Chen and Chauncey D.		
Leake		15
XVI. The Action of Drugs on the Oxygen Consumption of the Frog's Isolated Auricle. By J. C. David	AVI. The Action of Drugs on the Oxygen Consumption of the Frog's isolated	

Number 3, November, 1930

XVII. Investigation into the Distribution of Lead in the Organism on Basis of a Photographic (Radiochemical) Method. By Svend Lomholt	235 247
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	
XX. Absorption and Narcotic Action. By H. H. King, J. Lowe Hall, A. C. Andrews and H. L. Cole.	
XXI. A Study of the Effect of Morphine upon the Respiratory Center. By A. H. Maloney and A. L. Tatum	
XXII. Chloroform Content in Various Tissues During Anesthesia and Its Relationship to the Theories of Narcosis. By James L. McCollum	
XXIII. The Quantitative Assay for the Testicular Hormone by the Comb	327
XXIV. Threshold Relationships of Testis Hormone Indicators in Mammals; The Rat Unit. By Carl R. Moore and T. F. Gallagher	
XXV. Further Observations on the Toxic Effects of Irradiated Ergosterol. By J. C. Hoyle	
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	37 3
By Robert P. Walton	403
H. B. Van Dyke and Zonja Wallen-Lawrence	413
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	
XXXI. The Reaction of Iodates in Vivo. By L. C. Maxwell	
By Ralph G. Smith and Russell L. Malcom	457
rations. By F. E. D'Amour and R. G. Gustavson	473
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
monium chloride and their mixtures (Fig. 3)	14
and their mixtures (Fig. 4)	15
cocaine, 1 per cent butyn, and their mixtures (Fig. 5)	16
isomers in ergotaminized cats (Fig. 1)pressure and pulse rate changes after epinephrine and synephrine-	30
isomers in cocainized cats (Fig. 2)pressure and pulse rate changes after synephrine-ketone. Cat 3.8 kgm.	32
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 ergo-	
taminized 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 l-epinephrine in an	
ergotaminized cat (3.3 kgm.; atropinized; urethane anesthesia) (Fig. 3) Effects of catechol on blood pressure, pulse rate and intestinal and cardiac	56
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 un-	~=
anesthetized dogs (Fig. 2)	67
— on calcium. II. Urinary output of calcium in normal individuals after	=0
peroral administration of calcium lactate and calcium gluconate (Fig. 1)	73
— on calcium. II. Urinary output of calcium in normal individuals after	74
peroral administration of calcium lactate and calcium gluconate (Fig. 2) on calcium. II. Urinary output of calcium in normal individuals after	74
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, clinocottus analis, no. C7, weight 37	
grams, November 13, 1929 (Fig. 1)	122
— and respirations, girella nigricans no. 5, temperature 16.5-17.1°C.	
(Fig. 2)	123
, effect upon oxygen uptake of girella, 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)	
— affected by sympathomimetic agents (Fig. 6)	
Female rats made uremic by bilateral nephrectomy at 170 days of age (Fig. 1)	
	200
Male rats made uremic at 225 days of age by the removal of the second kidney,	000
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	
	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)	
Print of a photographic plate exposed for three weeks to radiation from the	200
	000
sections on figure 1 (Fig. 2)	
Cross-sections of a young rat (4.3 grams) (Fig. 3)	24 0
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)record: 10-kgm, dog, non-anesthetized (Fig. 3)	
TCCOTA. IO-REIL GOV. HOH-EHEBLIELIZEG (FIE. 3)	20U

ILLUSTRATIONS	vii
Non-anesthetized 10-kgm. dog (Fig. 4)	264
—— 22-kgm. dog (Fig. 5)	
—— 12-kgm. dog (Fig. 6)	266
— dog, weighing 15 kgm. (Fig. 7)	269
Effect of morphine upon respiratory center, typical record (Fig. 1)	
Quantitative assay for testicular hormone (Fig. 1)	
Showing parallel increase in growth after fourth day on different doses	
(Fig. 2)	330
Responses to variations in doses (Fig. 3)	
Showing effect of fractionating the daily dose (Fig. 4)	
Quantitative assay for testicular hormone (Fig. 5)	
Toxic effects of irradiated ergosterol (Fig. 1)	
— effects of irradiated ergosterol (Fig. 2)	
— effects of irradiated ergosterol (Fig. 3)	
Section of myocardium of rat 216 (Fig. 4)	364
— of myocardium of rat 228 (Fig. 5)	364
— of myocardium of rat 236 (Fig. 6)	
— 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)	
Trypsin preparations for prevention of adhesions (Fig 1.)	
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)	
Metabolism during morphine addiction and withdrawal (Fig. 1)	
Relative fuel combustion (DuBois triangle) (Fig. 2)	
Nitrogen metabolism during morphine addiction and withdrawal (Fig. 3)	
Result of seven injections with varying doses into 112 animals (Fig. 1)	
Standard curve (Fig. 2)	
Variation from normal of rats with varying dosages (Fig. 3)	479
Percentage of animals whose behavior was irregular (Fig. 4)	
— of animals in oestrus (Fig. 5)	
Result of five injections of crystalline cestrin with varying doses (Fig. 1)	486