CONTENTS

Number 1, January, 1931

I. The Relative Toxicities of Some Organic Salts of Triethyl Lead Hydroxides. By Henry Gilman and O. M. Gruhzit	1
and on the Number of Pigeons in the Pigeon-emesis Method. By P. J. Hanzlik, A. B. Stockton and S. S. Davis	5
By A. B. Stockton, P. T. Pace and M. L. Tainter	11
Its Evaluation, Mechanism, and Relation to Chemical Constitution. By Ernest Fourneau and Kenneth I. Melville	21
V. Studies in Mercurial Chemotherapy. II. The Quantitative Evaluation of Mercurial Diuresis and Its Relation to Chemical Constitution. By	
VI. The Effect of Mechanical Constriction of the Hepatic Veins upon the	47
Anticoagulant Action of Witte's Peptone. By Elizabeth Cranston and O. R. Caillet	65
By Frank Co Tui	71
Lappa. By John C. Krantz, Jr. and C. Jelleff CarrIX. The Use of Therapeutic Effects as End-points in the Biologic Titration	83
of the Digitalis Bodies. By Harry Gold, Ben Gelfand and William Hitzig	89
Nitric Acid Esters and Sodium Nitrite in Man. By L. A. Crandall, Jr., C. D. Leake, A. S. Loevenhart and C. W. Muehlberger	103
XI. The Acute Toxicity of Glyceryl Trinitrate and Sodium Nitrite in Rabbits. By Theodore V. Oltman and Lathan A. Crandall, Jr	121
Number 2, February, 1931	
XII. Guanidine Structure and Hypoglycemia. II. By Fritz Bischoff and M. Louisa Long	127
XIII. Further Observations on the Pregnancy-Response of the Uterus of the Cat. By R. G. Gustavson and H. B. Van Dyke	139
XIV. A Study of the Skin Vessels in some Forms of Inflammation of the Skin. By G. H. Percival and C. M. ScottXV. Intestinal Bleeding Following Administration of Posterior Pituitary	147
Extracts. By S. J. Weinberg	165

XVI. Some Factors Affecting the Comb-Growth Response in the Brown	
Leghorn Capons. By E. B. Womack, F. C. Koch, Lincoln V. Domm	
and Mary Juhn	173
XVII. On the Effect of the Pituitary Body upon the Epidermal Melanophores	
of the Toad. By Bun-Ichi Hasama	179
XVIII. The Effect of Glycocyamine on the Coronary Circulation. By A.	
M. Ginsberg and O. O. Stoland	195
XIX. Does Insulin Antagonize the Action of Atropine on the Cardiac Vagus	
Endings? By O. W. Barlow and Broda O. Barnes	209
XX. The Action of Insulin on the Perfused Frog Heart and on the Isolated	
Rabbit Intestine. By O. W. Barlow	217
XXI. The Action of Insulin on the Frog: The Influence of Dosage, Tempera-	
ture, Excision of the Liver, Administration of Glucose, Sodium Bicar-	
bonate and Calcium Gluconate on the Reaction of the Frog to Insulin.	
By O. W. Barlow, W. N. Vigor and R. I. Peck	229
XXII. Magnesium Absorption in Dogs. By J. E. Winter and C. H. Richey.	
211111. Hangarootaan taboot poton in 2 ogs. 2 y ov 2, winter und ov 11. Micholy	
Number 3, March, 1931	
XXIII. Chemotherapy of Quinoline Compounds. Part II. The Action	
of Certain Quinoline Compounds on Paramoecia. By Upendranath	
Brahmachari, Tarapada Bhattācharyya, Phanindranath Brahmachari,	
Radhakrishna Banerjea and Bibhuty Bhusan Maity	255
XXIV. On the Physostigmine-Like Action of Certain Synthetic Urethanes.	
By A. C. White and E. Stedman	259
XXV. The Oral, Rectal and Intravenous Administration of Sodium Iso-	
Amyl-Ethyl-Barbiturate (Sodium Amytal). By Edward E. Swanson	
	289
XXVI. The Influence of pH on the Activity of Certain Local Anesthetics	
as Measured by the Rabbit's Cornea Method. By Tillman D. Gerlough.	307
XXVII. The Effect of Chronic Morphine Poisoning upon Growth, the	
Oestrous Cycle and Fertility of the White Rat. By Harold B. Myers	317
XXVIII. A Study of the Effects of Certain Diuretics on the Concentration of	
Blood Chlorides in Dogs. By Harold L. Hansen, Leonard S. Fosdick	
and Carl A. Dragstedt	325
XXIX. Studies on Calcium. III. Effects of Daily Subcutaneous Injections	
of Calcium Gluconate on Thyroparathyroidectomized Dogs. By Arnold	
L. Lieberman and Stanislaus A. Szurek	333
XXX. The Accumulation of Guanidine in the Blood Following Acute Liver	
Injury by Carbon Tetrachloride, Chloroform, Arsenic or Phosphorus.	
By Jessie T. Cutler	337
XXXI. The Irritative Properties of Various Halogenated and Unhalogenated	
Oils and Their Compounds. By Lathan A. Crandall, Jr., Paul H.	
Holinger and Eugene L. Walsh	347
XXXII. The Action of Adenosine and Certain Related Compounds on the	
Coronary Flow of the Perfused Heart of the Rabbit. By Alfred M.	
Wedd	355
XXXIII. The Premedication Values of Avertin, Nembutal, Phanodorn and	
Pernocton in Relation to Nitrous Oxide Anesthesia. By O. W. Barlow,	
James T. Duncan and Joseph D. Gledhill	367

CONTENTS V

XXXIV. An Experiment for Demonstrating the Elective Action of Morphine and Strychnine. By C. A. Dragstedt, R. B. Mullenix, J. E. Kearns,	
W. W. Webb and C. J. Wilen.	379
XXXV. "The Use of Therapeutic Effects as End-Points in the Biologic	
Titration of the Digitalis Bodies." By P. J. Hanzlik	383
Number 4, April, 1931	
XXXVI. General Properties, Irritant and Toxic Actions of Ethylene Glycol.	
By P. J. Hanzlik, M. A. Seidenfeld and C. C. Johnson	387
XXXVII. The Effect of Calcium and Potassium on Cardiac Reactions to Mer-	
cury. By William Salant and Harold Nagler	407
XXXVIII. Regulation of Respiration. The Effect upon Salivary Secretion	
of an Increased Oxygen Content of the inspired Air and of Forced Ven-	
tilation. By Nathan B. Eddy	423
XXXIX. Regulation of Respiration. The Effect upon Salivary Secretion of	
the Intravenous Administration of Sodium Sulphide, Sodium Cyanide	405
and Methylene Blue. By Nathan B. Eddy	430
XL. Regulation of Respiration. The Antagonism Between Methylene Blue	440
and Sodium Cyanide. By Nathan B. EddyXLI. Picrotoxin as an Antidote in Acute Poisoning by the Shorter Acting	449
Barbiturates. By A. H. Maloney, R. H. Fitch and A. L. Tatum	ARE
XLII. The Effect of Iso-Amylethyl Barbituric Acid (Amytal) on the Excre-	700
tion of Water. By Hellmut Marx	483
won or waver. By mening main	XOO

ILLUSTRATIONS

Increases in blood pressure and pulse rate in 7 subjects after intramuscular	
injection of racemic synephrine in doses ranging from 0.075 to 0.5 gram	
(Fig. 1)	13
Mean blood pressure increases in five subjects after intravenous injections	
of racemic synephrine in doses of from 0.025 to 0.05 gram (Fig. 2)	14
Comparative systolic blood pressure responses in a patient (M. W.) after 0.4	
gram synephrine and 0.12 gram ephedrine, intramuscularly (Fig. 3)	15
Studies in mercurial chemotherapy II. The quantitative evaluation of	
mercurial diuresis and its relation to chemical constitution (Fig. 1)	51
Tracings of uterine movements and blood-pressure of cats after the adminis-	
tration of pregnancy-urine (Fig. 1)	141
Sections of uterine horns and ovaries of cat J (see fig. 1, B). $(\times 11)$ (Fig. 2).	
— of uterine horns. (×11) (Fig. 3)	144
Exfoliative dermatitis. Skin of arm, showing erythema and scaling (Fig. 1).	151
dermatitis. Showing how Bier's white spots occur on erythematous and	
desquamating skin (Fig. 2)	153
— dermatitis. Showing the blanching action of adrenaline (1:1000) on the	
erythematous and scaly skin of the chest (Fig. 3)	154
Erythema due to ultra-violet radiation (Fig. 4)	157
—— due to ultra-violet radiation (Fig. 5)	15 8
Some factors affecting the comb growth response in the brown leghorn capons	
(Fig. 1)	176
The right toad injected two hours previously with 0.5 cc. pituglandol; the	
left, a control (Fig. 1)	181
right toad injected with the neuro-intermediate lobe extract three	
hours previously; the left, a control (Fig. 2)	182
Cutaneous melanophores of the excised toad-web (Fig. 3)	
The toad's pituitary body (Fig. 4)	
Sagittal section of the toad's pituitary body (Fig. 5)	185
The left toad after removal of the anterior and neuro-intermediate lobes; the	
right toad after removal of only the anterior lobe (Fig. 6)	187
Microscopic view of the pituitary body of the toads shown in figure 6	
(Fig. 7)	187
The left toad, infundibular part was stimulated twenty-four hours previously;	
the right, a control (Fig. 8)	189
Tracings of isolated virginal uterus of guinea pig suspended in 50 cc. Locke's	
solution (Fig. 9)	
of isolated virginal uterus of guinea pig suspended in 50 cc. Locke's	
solution (Fig. 10)	192
Blood pressure record from dog 2 weighing 16 kgm., ether anesthesia, show-	
ing effect of repeated injections of 10 cc. of a 1 per cent solution of	
glycocyamine in N/10 HCl intravenously (Fig. 1)	196

Blood pressure record of decerebrated dog weighing 13.4 kgm. showing effect	
of repeated injections of 10 cc. of a 1 per cent solution of glycocyamine	
in N/10 HCl intravenously (Fig. 2)	97
tained fall of blood pressure following injection of 20 cc. of a 1 per cent	
solution of glycocyamine in N/10 HCl (Fig. 3)	100
Pressure (upper curve) and coronary sinus flow (lower curve) from one	100
dog under ether anesthesia (Fig. 4)	202
— pressure and coronary output of dog weighing 15 kgm., ether anesthesia,	
control experiment showing practically uniform flow through a period of	
	206
Final record on dog weighing 11 kgm. showing effect of stopping artificial	
respiration on the coronary output (Fig. 6)	206
Does insulin antagonize the action of atropine on the cardiac vagus endings	
(Fig. 1, A and B)	211
insulin antagonize the action of atropine on the cardiac vagus endings	
(Fig. 2, A and B) 2	211
The reaction of an isolated segment of rabbit intestine (ileum) to consecutive	
dosages of insulin added to the bath (Fig. 1)	225
— influence of ergotoxine on the reaction of an isolated segment of rabbit	
ileum to insulin (Fig. 2)	726
— action of insulin on the frog: the influence of dosage, temperature, excision of the liver, administration of glucose, sodium bicarbonate and	
calcium gluconate on the reaction of the frog to insulin (Fig. 1)	27
Changes in serum magnesium after: (1) mechanically induced vomiting; (2)	NI
apomorphine; (3) 0.400 gram per kilogram MgCl ₂ with and without	
vomiting; (4) 0.800 gram per kilogram MgCl ₂ in 4 doses at one-half hour	
intervals (Fig. 1)	47
Magnesium absorption in fevered and non-fevered dogs (Figs. 2)	
Effect of initial gastric acidity and the use of alcohol and alcohol plus ginger	
as adjuvants upon magnesium absorption following oral administration	
of 0.200 gram per kilogram. MgCl ₂ (Fig. 3)	249
Average changes in blood concentration compared with magnesium absorp-	
tion in 8 normal fasted dogs (MgCl ₂) (Fig. 4)	
Effect of feeding upon magnesium absorption (Fig. 5)	251
Changes in serum magnesium following oral administration of magnesium	
oxid in single and repeated doses (Fig. 6)	:51
Magnesium absorption in dogs from stomach separated from intestine (Fig. 7)	חבים
On the physostigmine-like action of certain synthetic urethanes (Fig. 1) 2	
— the physostigmine-like action of certain synthetic urethanes (Fig. 1) 2	
	272
	273
	274
	276
— the physostigmine-like action of certain synthetic urethanes (Fig. 7) 2	7 8
- the physostigmine-like action of certain synthetic urethanes (Fig. 8) 2	279
— the physostigmine-like action of certain synthetic urethanes (Fig. 9) 2	281

ix

On the physostigmine-like action of certain synthetic urethanes (Fig. 10)	
— the physostigmine-like action of certain synthetic urethanes (Fig. 11)	
— the physostigmine-like action of certain synthetic urethanes (Fig. 12).	
The oral, rectal and intravenous administration of sodium iso-amyl-ethyl-	
barbiturate (sodium amytal) (Fig. 1)	
oral, rectal and intravenous administration of sodium iso-amyl-ethyl-	
barbiturate (sodium amytal) (Fig. 2)	
- oral, rectal and intravenous administration of sodium iso-amyl-ethyl-	
barbiturate (sodium amytal) (Chart 1)	
influence of pH on the activity of certain local anesthetics as measured	
by the rabbit's cornea method (Fig. 1)	
— influence of pH on the activity of certain local anesthetics as measured	
by the rabbit's cornea method (Fig. 2)	
— influence of pH on the activity of certain local anesthetics as measured	
by the rabbit's cornea method (Fig. 3)	311
- influence of pH on the activity of certain local anesthetics as measured	212
by the rabbit's cornea method (Fig. 4)	313
influence of pH on the activity of certain local anesthetics as measured	214
by the rabbit's cornea method (Fig. 5)	314
effect of chronic morphine poisoning upon growth the oestrous cycle	210
and fertility of the white rat (Fig. 1)	
effect of chronic morphine poisoning upon growth, the oestrous cycle and fertility of the white rat (Fig. 2)	300
- effect of chronic morphine poisoning upon growth, the oestrous cycle	020
and fertility of the white rat (Fig. 3)	221
time of the diuretic response after intravenous administration of eu-	021
phyllin in unanesthetized dogs (Fig. 1)	327
Diuretic response and blood chloride concentration after intravenous ad-	021
ministration of euphyllin in dogs (Fig. 2)	328
Changes in coronary flow in a normal rabbit following increasing doses of	020
The state of the s	357
Reactions to successive doses of adenosine, each of which produced maximal	
dilatation, in a control rabbit which had been fed arachis oil (Fig. 2)	358
Comparison of sodium nitrite and adenosine (Fig. 3)	360
of sodium nitrite and adenosine before and after vaso-constriction by	
pitressin (Fig. 4)	361
— of yeast adenylic acid, muscle adenylic acid, and adenosine (Fig. 5)	362
Vaso-dilator responses in the heart of a rabbit suffering from hypervitamin-	
	364
Diagram of arrangement for cross-circulation (Fig. 1)	380
Effects of continued intramuscular injections and drinking of ethylene	
	397
Renal calculi after ethylene glycol (Fig. 2)	400
	411
- effect of calcium and potassium on cardiac reactions to mercury (Fig. 2).	414
	416
Regulation of respiration. The effect upon salivary secretion of an increased	
oxygen content of the inspired air and of forced ventilation (Fig. 1)	424

Regulation of respiration. The effect upon salivary secretion of an increased oxygen content of the inspired air and of forced ventilation (Fig. 2)..... 425 of respiration. The effect upon salivary secretion of an increased oxygen content of the inspired air and of forced ventilation (Fig. 3)...... 426 of respiration. The effect upon salivary secretion of an increased oxygen content of the inspired air and of forced ventilation (Fig. 4)..... 427 of respiration. The effect upon salivary secretion of the intravenous administration of sodium sulphide, sodium cyanide and methylene blue of respiration. The effect upon salivary secretion of the intravenous administration of sodium sulphide, sodium cyanide and methylene blue - of respiration. The effect upon salivary secretion of the intravenous administration of sodium sulphide, sodium cyanide and methylene blue of respiration. The effect upon salivary secretion of the intravenous administration of sodium sulphide, sodium cyanide and methylene blue of respiration. The effect upon salivary secretion of the intravenous administration of sodium sulphide, sodium cyanide and methylene blue of respiration. The antagonism between methylene blue and sodium of respiration. The antagonism between methylene blue and sodium of respiration. The antagonism between methylene blue and sodium - of respiration. The antagonism between methylene blue and sodium The effect of iso-amylethyl barbituric acid (amytal) on the excretion of effect of iso-amylethyl barbituric acid (amytal) on the excretion of

ILLUSTRATIONS