CONTENTS OF VOLUME 143

No. 1, JANUARY 1964

S-Demethylation by Microsomal Enzymes. Paul Mazel, J. Frank Henderson and	
Julius Axelrod.	1
The Metabolism of 1-Hydrazinophthalazine. WILLIAM M. McIsaac and Masayuki	_
KANDA	7
Species Differences in the Metabolism of Imipramine and Desmethylimipramine	1.4
(DMI). J. V. Dingell, F. Sulser and J. R. Gillette	14
	ດາ
BUTLER	23
Enhancement of the Renal Excretion of Cesium-137 in Rats Treated with Acetazol-	20
amide and Related Compounds. B. V. RAMA SASTRY AND MILTON T. BUSH	30
Inhibition of the Renal Tubular Transport of Epinephrine by the Benzothiadiazine	42
Compounds, Barbara Rennick, Marilyn Pryor and Norma Yoss.	42
Amphotericin B Renal Toxicity in the Dog. WILLIAM T. BUTLER, GEORGE J. HILL II,	47
CLARENCE F. SZWED AND VERNON KNIGHT.	47
The Effect of Sympathetic Nerve Stimulation on Volume, Vascular Resistance, and	
Norepinephrine Output in the Isolated Perfused Spleen of the Cat, and Its Modifi-	
cation by Cocaine. H. Thoenen, A. Huerlimann and W. Haefely	57
The Sympathomimetic Action of Bretylium on Isolated Atria and Aortic Smooth	C 4
Muscle, S. M. Kirpekar and Robert F. Furchgott.	64
Repletion of Cardiac Catecholamines in the Rat: Importance of the Adrenal Medulla	
and Synthesis from Precursors, B. Bhagat and F. E. Shideman	77
An Autoradiographic Study of the Uptake and Storage of Norepinephrine-H ³ in	
Tissues of Mice Treated with Reserpine and Cocaine. T. Samorajski, B. H.	60
Marks and E. J. Webster	82
W. Maynert and Roberto Levi	00
The Presence in Sciatic Nerve of Material that Releases Acetylcholine. Jack Peter	90
Green and E. A. Carlini	96
The Effects of External Calcium Concentration on the Distribution and Exchange of	90
Calcium in Resting and Beating Guinea-Pig Auricles. A. Grossman and Robert	
F. Furchgott	107
The Effects of Frequency of Stimulation and Calcium Concentration on Ca ⁴⁵ Ex-	107
change and Contractility on the Isolated Guinea-Pig Auricle. A. Grossman and	
Robert F. Furchgott	120
Elevation of Plasma Histamine Levels in the Dog Following Administration of Muscle	120
Relaxants, Opiates and Macromolecular Polymers. W. L. Thompson and R. P.	
WALTON	131
Effect of Gold Thiomalate on Protein Denaturation, Donald A. Gerber	
Effect of Gold Thiomaint on Frotein Denastration, Donald I. General	10,
No. 2, February 1964	
Some Narcotic Antagonists in the Benzomorphan Series. Louis S. Harris and Anne	
K. Pierson	141
Studies on the Human Addiction Liability of 2'-Hydroxy-5,9-Dimethyl-2-(3,3-Di-	111
methylallyl)-6,7-Benzomorphan (Win 20,228): A Weak Narcotic Antagonist. H.	
F. Fraser and D. E. Rosenberg.	149
Studies of Analgesic Drugs. VIII. A Narcotic Antagonist Analgesic Without Psychoto-	110
mimetic Effects. Arthur S. Keats and Jane Telford.	157
Interaction of Caffeine and Morphine on Respiration. J. Weldon Bellville	
Analgesic Effects in Monkeys of Morphine, Nalorphine, and a Benzomorphan Narcotic	- 50
Antagonist. Bernard Weiss and Victor G. Laties	169
Pilocarpine Blockade of Spinal Inhibition in Cats. Don W. Esplin and Barbara	200
Zablocka	174
The Action of d-Tubocurarine on the Motor Nerve Terminal, Frank G. Standaert	
The second of the second of the second secon	-01

iii

iv contents

The Relative Sensitivities of Diaphragm and Other Muscles of the Guinea Pig to Neuromuscular Blocking Agents. Dermot B. Taylor, Rosemary D. Prior and	
JOHN A. BEVAN	187
Studies on the Effect of Chlorcyclizine and Other Drugs on the Toxicity of Several Organophosphate Anticholinesterases. RICHARD M. WELCH AND J. M. COON	192
The Determination and Distribution of Polyamines in Mammalian Nervous System. HIROTOSHI SHIMIZU, YASUO KAKIMOTO AND ISAMU SANO	199
The Metabolism of Methyldopa in Hypertensive Human Subjects. Rudolf P. Buhs, John L. Beck, Otto C. Speth, Jack L. Smith, Nelson R. Trenner, Paul J.	
	205
The Metabolites of Indomethacin, a New Anti-Inflammatory Drug. Robert E. Harman, M. A. P. Meisinger, George E. Davis and Frederick A. Kuehl, Jr Action of Phentolamine on Rat Adipose Tissue. C. R. Boshart, T. C. Smith, L. Will,	215
A. PIRRÉ, J. PERRINE AND I. RINGLER	
MAREN AND CHRISTINE E. WILEY	230
Hydrochloride (P-286). J. Garrett, M. Gonçalves Moreira, W. Osswald and S. Guiarãees.	243
Adrenal Medullary Stimulation as the Chief Basis for Vasopressor Action and Cardiac Stimulation by Vanillic Acid Diethylamide. John Gatgounis and Robert Hart.	
Effects of Alteration of Sympathetic Tone Upon the Blood Pressure Response to	
Epinephrine. James G. Hilton, Pedro T. Arellano and Penelope A. Fenner. The Adrenotropic Receptors of the Cat Uterus. T. H. Tsai and W. W. Fleming	
No. 3, March 1964	
The Nature of the Antagonism Between Vitamin K and Indirect Anticoagulants. J. LOWENTHAL AND J. A. MACFARLANE	273
Antagonism of the Antimalarial Action of Chloroquine by Ferrihemate and an Hypothesis for the Mechanism of Chloroquine Resistance. Fred W. Schueler and	
W. F. CANTRELL. Stepwise Development of Resistance to D-Cycloserine in Staphylococcus Aureus. WARREN B. HOWE, G. LELAND MELSON, CHARLES H. MERIDITH, JAMES R. MOR-	218
RISON, MARTIN H. PLATT AND JACK L. STROMINGER Effect of pH and Incubation Upon Immediate Lethal Toxicity of Nitrogen Mustard.	282
LAURENS P. WHITE AND ELIZABETH F. CLAFLIN	285
Methanol Metabolism in the Rat. T. R. TEPHLY, R. E. PARKS, JR. AND G. J. MANNERING	292
Disposition and Fate of (-)-Cotinine-H ³ in the Mouse. Edward R. Bowman, Eskil Hansson, Lennox B. Turnbull, Herbert McKennis, Jr. and Carl G.	
Schmiterlöw	301
Tolerance to Behavioral Effects of LSD-25 in Rat. D. X. Freedman, J. B. Appel, F. R. Hartman and M. E. Molliver.	309
The Uptake of H ³ -Melatonin in Endocrine and Nervous Tissues and the Effects of Constant Light Exposure. Richard J. Wurtman, Julius Axelrod and Lincoln	
T. POTTER	314
Formation of β-Phenylethylamine in Mammalian Tissue and Its Effect on Motor Activity in the Mouse. Teruo Nakajima, Yasuo Kakimoto and Isamu Sano	319
Studies on the Biological Activities of the Aldehydes Derived from Norepinephrine, Serotonin, Tryptamine and Histamine. Jean Renson, Herbert Weissbach and Sidney Udenfriend	326
The Release of 5-Hydroxytryptamine, Potassium and Amino Acids from Platelets.	
SUE BUCKINGHAM AND E. W. MAYNERT Effect of Norepinephrine on Plasma Nonesterified Fatty Acid Concentrations After Administration of Cocaine. Michael H. Graham, Francois M. Abboud and	332
John W. Eckstein	340
The Effect of an Adrenergic Beta-Receptor Antagonist on the Cardiovascular System of the Dog. David E. Donald, Jay Kvale and John T. Shepherd	344

CONTENTS V

The Chronotropic and Vagal-Blocking Actions of Naphthylisoproterenol Studied by	
Direct Perfusion of the Sinus Node. Thomas N. James and Reginald A. Nadeau.	350
Effect of Ouabain and 3-Acetyl Strophanthidin on Potassium Exchange in the Dog	
Heart in situ. Gunter Grupp and Astrida Charles	356
Effect of Quinidine and Procaine Amide Upon Acetylstrophanthidin Cardiotoxicity.	
BENEDICT R. LUCCHESI AND ROBERT SHIVAK	366
The Pharmacology of 3-Phenoxypropylguanidine. Graham Chen, Charles R. Ensor,	
DUNCAN A. McCarthy, John R. McLean and Alfred Campbell	374
Selective Renal Carbonic Anhydrase Inhibition Without Respiratory Effect: Pharma-	
cology of 2-Benzenesulfonamido-1,3,4-Thiadiazole-5-Sulfonamide (CL 11,366).	
DAVID M. TRAVIS, CHRISTINE WILEY, BOHDAN R. NECHAY AND THOMAS H.	
Maren	383
Natruretic Response During Infusion of β -Diethylaminoethyldiphenylpropyl Acetate	
Hydrochloride (SKF 525-A) into the Renal Artery. F. N. MARSHALL AND HAROLD	
E. WILLIAMSON	395
Index, Volume 143, January-March 1964	401