

CONTENTS OF VOLUME 154

No. 1, OCTOBER 1966

| | |
|--|-----|
| The Actions of the Catecholamines on Transmission in the Superior Cervical Ganglion of the Cat. WILLIAM C. DE GROAT AND ROBERT L. VOLLE..... | 1 |
| Presence of Tone in the Denervated and in the Decentralized Nictitating Membrane of the Spinal Cat and Its Influence on Determinations of Supersensitivity. S. Z. LANGER..... | 14 |
| The Physiologic Role of the Sympathetic Nervous System in Exercise. H. M. MALING, D. N. STERN, P. D. ATTLAND, B. HIGHMAN AND B. B. BRODIE..... | 35 |
| The Use of Tritiated Phenoxybenzamine for Investigating Receptors. JON E. LEWIS AND JACK W. MILLER..... | 46 |
| Enhancement of H ³ -Norepinephrine Uptake in Rat Tissues by O-Methylated Metabolites of Catecholamines. LESLIE L. IVERSEN, JOSEPH E. FISCHER AND JULIUS AXELROD..... | 56 |
| Aralkylamines with Different Effects on the Metabolism of Aromatic Monoamines. A. PLETSCHER, M. DA PRADA, W. P. BURKARD, G. BARTHOLINI, F. A. STEINER, H. BRUDERER AND F. BIGLER..... | 64 |
| Rate-Increasing Action of Methylguanidine upon the Isolated Mammalian Heart. OTTO KRAYER, WERNER MOSIMANN AND GABRIELE SILVER..... | 73 |
| Effect of Corticosteroids on the Cardiovascular Responses to Angiotensin and Norepinephrine. ALLAN M. LEFER, J. LAURENCE MANWARING AND RICHARD L. VERRIER..... | 83 |
| The Cardiopulmonary Effects of Quinidine and Procainamide. LUIS E. FOLLE AND DOMINGO M. AVIADO..... | 92 |
| Radiometric Measurement of Paw Temperature Changes Associated with Local Inflammation. ANTHONY W. PIRCIO AND EDWARD J. GROSKINSKY..... | 103 |
| Interactions of Morphine Sulfate and Sodium Salicylate on Respiration in Cats. P. PENTIAH, F. REILLY AND H. L. BORISON..... | 110 |
| Differential Effects of Depressant Drugs on Presynaptic Inhibition. JAMES T. MIYAHARA, DON W. ESPLIN AND BARBARA ZABLOCKA..... | 119 |
| The Blockade of Reticular and Spinal Facilitation of Motor Function by Orphenadrine. K. H. GINZEL..... | 128 |
| An Assessment of Inhalation as a Mode of Administration of Heroin by Addicts. BENJAMIN PUI-NIN MO AND E. LEONG WAY..... | 142 |
| A Pyrrolopyrimidine with Depressant Actions on the Central Nervous System. STATA NORTON AND ROBERT E. JEWETT..... | 152 |
| Pharmacologic and Toxicologic Studies of <i>m</i> -(1-Methyl-3-Propyl-3-Pyrrolidinyl)-Phenol (CI-572), an Analgetic and Antitussive Agent. C. V. WINDER, M. WELFORD, J. WAX AND D. H. KAUMP..... | 161 |
| Absorption, Distribution and Metabolism of Dimethylsulfoxide in the Rat, Rabbit and Guinea Pig. H. B. HUCKER, P. M. AHMAD AND E. A. MILLER..... | 176 |

No. 2, NOVEMBER 1966

| | |
|---|-----|
| Histochemical and Functional Relationships of Catecholamines in Adrenergic Nerve Endings. I. Participation of Granular Vesicles. L. S. VAN ORDEN, III, F. E. BLOOM, R. J. BARNETT, AND N. J. GIARMAN..... | 185 |
| Interactions between the Catecholamines and Ganglionic Stimulating Agents in Sympathic Ganglia. WILLIAM C. DE GROAT AND ROBERT VOLLE..... | 200 |
| Nonganglionic Parasympathomimetic Action of Nicotine upon the Isolated Cat Iris. U. SCHAEFFI, B. L. DENNISON AND M. DODD..... | 216 |
| Potentiation by Hydrocortisone of Responses to Catecholamines in Vascular Smooth Muscle. JOHN C. BESSE AND ALLAN D. BASS..... | 224 |
| Modification by Sodium and Calcium of the Cardiotoxicity Induced by Ouabain. NOBORU TODA AND THEODORE C. WEST..... | 239 |
| The Effect of Serum Potassium Concentration on Quinidine Toxicity. MARTIN BRANDFONBRENNER, JEAN KRONHOLM AND HARVEY R. JONES..... | 250 |

| | |
|--|-----|
| Myocardial <i>Alpha</i> and <i>Beta</i> Adrenergic Receptors as Demonstrated by Atrial Functional Refractory-Period Changes. WILLIAM C. GOVIER, NANCY C. MOSAL, PEGGY WHITTINGTON AND ANN H. BROOM | 255 |
| Response of Isolated Guinea-Pig Atria to Various Ganglion-Stimulating Agents. B. BHAGAT | 264 |
| Cardiovascular Actions of Diazepam in the Cat. C. Y. CHAI AND S. C. WANG | 271 |
| Electrolyte Content of Perfused Rat Ventricles Exposed to Halothane or Anoxia. RAYMOND R. PARADISE AND LIONELL K. GRIFFITH | 281 |
| Enhancement of Peritoneal Fluid Absorption by Dehydration, Mercaptomerin and Vasopressin. LEROY SHEAR, JOHN J. CASTELLOT, JAMES H. SHINABERGER, LOREN POOLE AND KEVIN G. BARRY | 289 |
| Effect of Dimethyl Sulfoxide on Permeability and Electrical Properties of Frog Skin. WILLIAM D. MORAIN, CAROL A. REPLOGLE AND PETER F. CURRAN | 298 |
| The Effects of Succinylcholine, Decamethonium, Hexacarbacholine, Gallamine and Dimethyl Tubocurarine on the Twitch and Tonic Neuromuscular Systems of the Cat. RONALD L. KATZ AND KENNETH E. EAKINS | 303 |
| Decreased Central Depressant Effect of Progesterone and Other Steroids in Rats Pretreated with Drugs and Insecticides. A. H. CONNEY, M. JACOBSON, W. LEVIN, K. SCHNEIDMAN AND R. KUNTZMAN | 310 |
| Inhibition of Writhing by Narcotic Antagonists. JACK PEARL AND LOUIS S. HARRIS | 319 |
| An Experimental Pain Method Sensitive to Morphine in Man: The Submaximum Effort Tourniquet Technique. GENE M. SMITH, LAWRENCE D. EGBERT, ROBERT A. MARKOWITZ, FREDERICK MOSTELLER AND HENRY K. BEECHER | 324 |
| Emesis Induced by the Intracerebroventricular Administration of Hydergine and Mechlorethamine Hydrochloride. R. H. PAPP, H. B. HAWKINS, N. N. SHARE AND S. C. WANG | 333 |
| Observations on the Pharmacology of Diphenidol, a Potent Antiemetic. CHARLES A. LEONARD, TSUNEO FUJITA, DAVID H. TEDESCHI, CHARLES L. ZIRKLE AND EDWIN J. FELLOWS | 339 |
| Age, Confinement and Aggregation as Factors in Amphetamine Group Toxicity in Mice. HARVEY I. CHERNOV, PATRICIA FURNESS, DORIS PARTYKA AND ALBERT J. PLUMMER | 346 |
| Effects of Mecamylamine on Avoidance Conditioning and Maze Learning of Mice. ALBERTO OLIVERIO | 350 |
| The Metabolism of Ethopabate in Chickens. RUDOLF P. BUHS, DONALD POLIN, JOHN O. BEATTIE, JOHN L. BECK, JACK L. SMITH, OTTO C. SPETH AND NELSON R. TRENNER | 357 |
| Metabolism of Volatile Anesthetics. III. Induction of Microsomal Dechlorinating and Ether-Cleaving Enzymes. RUSSELL A. VAN DYKE | 364 |
| Effect of Morphine and Nalorphine on the Metabolism of Phospholipids in Guinea Pig Cerebral Cortex Slices. S. J. MULÉ | 370 |
| The Fate of FD&C Blue No. 2 in Rats. ELIZABETH J. LETHCO AND JUNIUS M. WEBB | 384 |

No. 3, DECEMBER 1966

| | |
|--|-----|
| Adrenergic Responses of Renshaw Cells. F. F. WEIGHT AND G. C. SALMOIRAGHI | 391 |
| The Effect of Convulsant Drugs on Transmission through the Cuneate Nucleus. EUGENE S. BOYD, DENNIS A. MERITT AND LEONARD C. GARDNER | 398 |
| Relationships between Drug-Evoked Potentials and Transmission in a Sympathetic Ganglion. GERARD L. GEBBER AND ROBERT L. VOLLE | 410 |
| Observations on the Ganglion-Stimulating Action of Angiotensin and Bradykinin. U. TRENDELENBURG | 418 |
| Transmission of Preganglionic Impulses through the Muscarinic Receptors of the Superior Cervical Ganglion of the Cat. U. TRENDELENBURG | 426 |
| The Effect of a Thiamine Analog on Neuromuscular Transmission. W. L. NASTUK AND P. J. POPPERS | 441 |
| Effects of <i>m</i> -Amino Benzoic Acid Ethylester on Neuromuscular Transmission in the Frog. TAKASHI MAENO | 449 |

| | |
|--|-----|
| Inhibition of the Release of Acetylcholine from Isolated Guinea-Pig Ileum by Crystalline Tetrodotoxin. YASUMI OGURA, YOKO MORI AND YOSHIO WATANABE..... | 456 |
| Intestinal Relaxation Produced by Sympathomimetic Amines in the Isolated Rabbit Jejunum: Selective Inhibition by Adrenergic Blocking Agents and by Cold Storage. BERT K. B. LUM, M. H. KERMANI AND RICHARD D. HELLMAN..... | 463 |
| Influence of Tyramine on Receptor Interaction with Dibenamine in Aortic Strips from Reserpine-Treated Rabbits. JOSEPH J. KRZANOWSKI, JR. AND ROBERT A. WOODBURY..... | 472 |
| Cocaine Tachyphylaxis and Effects on Indirectly-Acting Sympathomimetic Drugs in the Rabbit Aortic Strip and in Splenic Tissue. GERTRUDE D. MAENGWYN-DAVIES AND THEODORE KOPPANYI..... | 481 |
| Application of Steady State Kinetics to the Estimation of Synthesis Rate and Turnover Time of Tissue Catecholamines. B. B. BRODIE, E. COSTA, A. DLABAC, N. H. NEFF AND H. H. SMOOKLER..... | 493 |
| <i>p</i> -Chlorophenylalanine: A Specific Depletor of Brain Serotonin. B. KENNETH KOE AND ALBERT WEISSMAN..... | 499 |
| Relationship between 5-Hydroxytryptamine and Nerve Stimulation of Ciliary Activity. EDWARD AIELLO AND GIANCARLO GUIDERI..... | 517 |
| The "Humoral" Component of the Pressor Response to Central Vagal Stimulation and the Identification of the "Humor" as Norepinephrine. DRORI BEN-ISHAY, INGRID L. GRUPP AND GUNTHER GRUPP..... | 524 |
| The Influence of Thyroid Hormone on Myocardial Metabolism of Norepinephrine in the Guinea Pig. M. JAY GOODKIND..... | 531 |
| Localization of Venoconstrictor Responses. A. J. RICE, C. R. LEESON AND J. P. LONG..... | 539 |
| Mechanisms of Sinus Bradycardia Induced by Veratrum Alkaloids—Protoveratrine A. C. Y. CHAI AND S. C. WANG..... | 546 |
| Absence of Effects of Cardiac Glycosides on Cardiac Myosin and a Ca ⁺⁺ -Sensitive Reconstituted Cardiac Actomyosin. ARNOLD M. KATZ..... | 558 |
| Effect of Cyclopropane and Halothane on Ventricular Mechanics; a Change in Ventricular Diastolic Pressure-Volume Relationships. WILLIAM K. HAMILTON, C. PHILIP LARSON, J. DAVID BRISTOW AND ELLIOT RAPAPORT..... | 566 |
| Biotransformation of Digitoxin in the Dog. B. G. KATZUNG AND F. H. MEYERS..... | 575 |
| Stimulation of Cerebrospinal Fluid Production by Low Doses of Intraventricular Ouabain. W. W. OPPELT AND R. F. PALMER..... | 581 |
| Studies on the Uptake of Morphine by the Choroid Plexus <i>in Vitro</i> . A. E. TAKEMORI AND MICHAEL W. STENWICK..... | 586 |
| The Effect of Potassium on Nicotine-Induced Contracture and Ca ⁴⁵ Movements in Frog Sartorius Muscle. GEORGE B. WEISS..... | 595 |
| The Effect of pH on Nicotine-Induced Contracture and Ca ⁴⁵ Movements in Frog Sartorius Muscle. GEORGE B. WEISS..... | 605 |
| The Protective Effect of Aldrin against the Toxicity of Organophosphate Anticholinesterases. ANTHONY J. TRIOLO AND J. M. COON..... | 613 |
| Prevention and Remission by Adrenocortical Steroids of Nicotinamide Deficiency Disorders and of 6-Aminonicotinamide Toxicity in Rats and Dogs. PAUL GREENGARD, E. B. SIGG, I. FRATTA AND SYLVIA B. ZAK..... | 624 |
| Physiologic Disposition of H ³ -Cyclazocine in Nontolerant, Tolerant and Abstinent Dogs. S. J. MULÉ AND C. W. GORODETZKY..... | 632 |
| ω -Amino Acids and Various Biogenic Amines as Antagonists to Pentylene-tetrazol. SIDNEY KOBRIN AND JOSEPH SEIFTER..... | 646 |
| Failure to Anesthetize Human Subjects by Intravenous Administration of Magnesium Sulfate. G. SOMJEN, M. HILMY AND C. R. STEPHEN..... | 652 |
| The Effect of Phenyramidol on the Metabolism of Bishydroxycoumarin. HARVEY M. SOLOMON AND JOHN J. SCHROGIE..... | 660 |
| Effects of Several Saluretic-Diuretic Agents on Renal Hemodynamics. JERRY B. HOOK, ARNOLD H. BLATT, MICHAEL J. BRODY AND HAROLD E. WILLIAMSON..... | 667 |
| Erratum..... | 674 |
| Index, Volume 154, October-December 1966..... | 675 |