CONTENTS OF VOLUME 215

No. 1, October 1980

Hydrolysis of Diacetylmorphine (Heroin) by Human Serum Cholinesterase. Oksana Lockridge, Nancy Mottershaw-Jackson, Harry W. Eckerson and Bert N. La Du 1

Effects of Drugs on Behavior in Rats Maintained on Morphine, Methadone or Pentobarbital. D. E. McMillan, W. T. McGivney and W. C. Hardwick 9


The Effects of Cocaine and Metanephrine on the Cardiac Responses to Norepinephrine Infusions. Yurika Maasa, Yasuo Matsuda and Matthew N. Levy 20

Effects of Lanthanum and Trifluoperazine on [125I]Calcium Binding to Rat Striatal Particulates. Yuen-Sum Lau and Margaret E. Gnegy 28

Tolerance and Disposition of Tetrahydrocannabinol in Man. C. Anthony Hunt and Reese T. Jones 35

The Effects of Methadone on Respiratory and Ventilation in Pygmy Goats. Richard C. Neal and George D. Olsen 45


The Role of Norepinephrine in the Regulation of Fluid Absorption in the Rat Proximal Tubule. Y. L. Chan 65

The Effect of Estradiol-17β Treatment on the Metabolism and Biliary Excretion of Phenytoin in the Isolated Perfused Rat Liver and in Vivo. Mary Vore and Christopher Montgomery 71

Pharmacokinetic-Dynamic Analysis of the Indomethacin-Furosemide Interaction in Man. P. Chennaivas, R. Seiwel and D. C. Brater 77

Live Protein Synthesis and Catabolism in Mirex-Pretreated Rats with Enlarging Livers. Keith M. Robinson and James D. Yarbrough 82

Oxazepam Kinetics: Effects of Age and Sex. David J. Greenblatt, Marcia Divoll, Jerold S. Harmatz and Richard I. Shader 86

Differential Effects of the Anticonvulsants, Phenobarbital, Ethosuximide and Carbamazepine on Neuromuscular Transmission. Marc T. Aldendise and Brad A. Trommer 92

The in Vitro Formation of Glutathione Conjugates with the Microsomally Activated Pulmonary Bronchial Alkylating Agent and Cytotoxin, 4-Ipopropan. Alan R. Buckpitt and Michael R. Boyd 97

Mechanism of Captopril-Induced Renal Vasodilation in Anesthetized Dogs after Nonhypotensive Hemorrhage. P. C. Wong and B. G. Zimmerman 104

Transit Patterns of Marker Compounds Given by Segmented Retrograde Intrabiliary Injection (SRII) in the Isolated in Situ Perfused Rat Liver. Toshiko Imamura and James M. Fujimoto 110

Site of Action of Dehydrocholate in Inhibiting the Biliary Excretion of Morphine in the Isolated in Situ Perfused Rat Liver. Toshiko Imamura and James M. Fujimoto 116

A New Mode of Action of SKF 522-A on Morphine Disposition Studied by Segmented Retrograde Intrabiliary Injection (SRII) in the Isolated in Situ Perfused Rat Liver. Toshiko Imamura and James M. Fujimoto 122


Amphetamine-Haloperidol Interactions on Striatal and Mesolimbic Tyrosine Hydroxylase Activity and Dopamine Metabolism. Ronald Kuczenski 135

Potentiation of Responses to Adrenergic Nerve Stimulation in Isolated Rat Atria during Chronic Tricyclic Antidepressant Administration. Fulton T. Crews and Charles B. Smith 143

Pimozide: Delayed Onset of Action at Rat Striatal Pre- and Postsynaptic Dopamine Receptors. Brian A. McMillen, Dwight C. German, Manjit K. Sanghera, Worthy Warnak and Parkhurst A. Shore 150

The Pulmonary Vascular Effects of Three Prostaglandin I2 Analogs in Conscious Newborn Lambs. James E. Lock, Flavio Cocca, Francis Hamilton, Alison Greenaway-Coates and Peter M. Olley 156

Ibufrofen Improves Survival from Endotoxin Shock in the Rat. W. C. Wise, J. A. Cook, T. Eiller and P. V. Halushka 160

Effect of Plasma Protein Binding on Quinidine Kinetics in the Rabbit. Theodore W. Gunning and Svein Öie 165


Cephalosporins Nephrotoxicity. Transport, Cytotoxicity and Mitochondrial Toxicity of Cephaloglycin. Bruce M. Tane and Doris Fravert 186


Changes in Cardiac Glycoside Activity Produced by Aminosugar Addition. L. Scott Cook, Robert W. Caldwell and Clinton B. Nash 198

Stereoselective Radiolmuoasssay of s-L-Acetylmethadol (LAAM). Kip L. McGillard and George D. Olsen 205

Regulation of Calcium Fluxes in Rat Pancreatic Islets: The Role of K+ Conductance. A. Hechuelz, N. Thonnart, A.
No. 2, November 1980

Studies on the Effect of Chronic Oral Administration of Minoxidil and Hydralazine on Vascular Function in Spontaneously Hypertensive Rats. STANLEY GREENBERG

279

Prednisolone Clearance at Steady State in Dogs. FELIX J. FREY, BRIGITTE M. FREY, ANDREAS GREITHER AND LEslIE Z. BENET

Disposition of Enflurane in Obese Patients. MATTHEW S. MILLER, A. JAY GANDOLFI, ROBERT W. VAUGHAN AND JOHN B. BENTLEY

287

292

297

304

325

332

348

357

363

369

377

382

390

394

401

407

413

Interaction of Calcium and Microtubules in the Action of Cyclic AMP on the Road Urinary Bladder. SHIGEKAZU YUASA, YOSHIHIRO TAKIMATSU, SHIGEMURU MIKI, YOSHIMASA ORITA, HIROSHI ABE AND TAKEHIKO WATANABE

Comparative Cardiac Contractile Actions of Six Narcotic Analgesics: Morphine, Meperidine, Pentazocine, Fentanyl, Methadone and I-alpha-Acetylmethadol (LAAM). STEPHEN V. RENDIC, EIZA A. AMSTERDAM, GARY L. HENDERSON AND DEAN T. MASON

Cardio-Selective Beta Adrenergic Stimulation with Prenalterol in the Conscious Dog. W. THOMAS MANDERS, STEPHEN F. VATNER AND EUGENE BRAUNWALD

The Beneficial Effects of Oral Ibuprofen on Coronary Artery Thrombosis and Myocardial Ischemia in the Conscious Dog. JOSEPH L. ROMSON, LARRY R. BUSH, DAVID W. HAACk AND BENEDICT R. LUCCHESI

Effect of Castrated and Chronic Morphine Administration on Liver Alcohol Dehydrogenase and the Metabolism of Ethanol in the Male Sprague-Dawley Rat. THEODORE J. CICERO, JERROLD D. BERNARD AND KARIN NEWMAN

Antagonist Dissociation Constants and Relative Agonist Efficacies for Compounds Interacting with Beta-1 and Beta-2 Adrenergic Receptors in the Rat Jugal Vein. MARLENE L. COHEN, ROBERT R. RUUFFOLO, JR. AND KATHRYN S. WILEY

Effects of Transmembrane Potential on Oscillatory Afterpotentials Induced by Acetylstrophanthidin in Canine Ventricular Tissues. GREGORY R. FERRIER

Maturation of Sympathetic Neurotransmission in the Rat Heart. VI. The Effect of Neonatal Central Cathecolaminergic Lesions. RANDY DESKIN, ELLIOTT MILLS, WILLIAM L. WHITMORE, FREDERIC J. SEIDLER AND THEODOROE A. SLOTKIN

Muscarnic Antagonism of the Effects of a Phosphodiesterase Inhibitor (Methylisobutylxantine) in Embryonic Chick Ventricle. REBECCA L. BIECON, PAUL M. EPSTEIN AND ACHILLES J. PAPPANO

Possibility of Generation of Potent Vasoconstricting Substance from Prostaglandin Endoperoxide Analogs, Human Platelets Mixture. SHOJI SHIBATA, K. W. H. HO AND U. IBEDA

Dissociation of Varied Actions of Norepinephrine on 45Ca Uptake and Release at Different Sites in Rabbit Aortic Smooth Muscle. HIDEAKI KARAKI AND GEORGE B. WEISS

Stereoisselectivity of the Stimulus Effects of Morphine and Cyclazocine in the Squirrel Monkey. JANICE J. TEAL AND STEPHEN G. HOLTZMAN

Potentiative Effects of Alpha Agonistic Sympatomimetetic Amines on Vasoconstriction by Adrenergic Nerve Stimulation. CHE SU

Comparative Study of the Electrophrenographic and Behavioral Effects of I-alpha-Acetylmethadol (LAAM), Two of Its Metabolites and Morphine and Methadone in the Rat. SCOTT E. LUKAS, J. EDWARD MORETON AND NAIM KHANZAN

Gentamicin Uptake by Renal Tubule Brush Border Membrane Vesicles. JAMES J. LIPSKY, LINDA CHENG, BERTRAM SACKTOR AND PAUL S. LIETMAN

Differing Electrophysiologic Effects of Slow Response Inhibiting Agents Manganese and Verapamil on Ischemic, Infarcted and Normal Tissue in Situ. JOSU KUPERSMITH AND ROBERT COHEN

Metabolism of Benzidine by a Prostaglandin-Mediated Process in Renal Inner Medullary Slices. NEVILLE S. RAPP, TERRY V. ZENSER, WENDY W. BROWN AND BERNARD B. DAVIS

Effect of the Angiotensin Converting Enzyme Inhibitor, Captopril, on NaCl Appetite of Rats. MELVIN J. FREELY

Increase of Neurotransmit Content Elicited by Neuroleptics in Nucleus Accumens. S. GOVONI, J. S. HONG, H.-Y. T. YANG AND E. COSTA

Inhibition of Depressor Cardiovascular Reflexes by a Derivative of gamma-Aminobutyric Acid (GABA) and by General Anesthetics
with Suspected GABA-Mimetic Effects. PETER M. LALLEY .......................... 418
Response and Sensitivity of Female Guinea-Pig Respiratory Tissues to Agonists during Ontogenesis. CHARLES BRINE, PAMELA G. DUNCAN, MALINDA MIDZENSKA AND JAMES S. DOUGLAS ........................... 426
Cyclic Nucleotides and Contraction/Relaxation in Airway Muscle: H1 and H2 Agonists and Antagonists. PAMELA G. DUNCAN, CHARLES BRINE, RICHARD L. ADOLPHSON AND JAMES S. DOUGLAS 434
Mechanism of Renal Tubular Secretion of Norepinephrine in the Rabbit. RODNEY W. LAPPE, DAVID P. HENRY AND LYNN R. WILLIS .......................... 443
Regulatory Role of Glutathione and Soluble Sulphhydril Groups in the Toxicity of Adriamycin. RICHARD D. OLSON, JAMES S. MACDONALD, CHRIS J. VAN BOITEL, ROBERT C. BOERTH, RAYMOND D. HARBISON, ALFRED E. SLONIM, RICHARD W. FREEMAN AND JOHN A. OATES ........................... 450
A Comparative Study of the Pharmacological Properties of the Positive Potential Recorded from the Superior Cervical Ganglia of Several Species. N. J. DUN AND A. G. KARCZMAR .......................... 455
The Presence of the Type A Form of Monoamine Oxidase within Nigrostriatal Dopamine-Containing Neurons. KEITH T. DEMAREST, DAVID J. SMITH AND JERBERT A. AZZARO .......................... 461
Hydrocortisone and Human Lymphocytes: Increases in Cyclic Adenosine 3',5'-Monophosphate and Potentiation of Adenylate Cyclase-Activating Agents. GIANNI MAURONE, LAWRENCE M. LICHTENSTEIN AND MARSHALL PLAUT .......................... 469
The Ionic Mechanism of Prolongation of Action Potential Duration of Cardiac Ventricular Muscle by Anthopleurin-A and Its Relationship to the Inotropic Effect. KEITARO HASHIMOTO, REIKO OCHI, KOBUKI HASHIMOTO, JUN HIUCHI AND YUJI MIURA .......................... 479
Presynaptic Effects of 2-Aminotetrinalin on Striatal Dopaminergic Neurons. IRENE S. HOFFMAN, ROBERT J. NAYLOR AND LUIGI X. CURENDO .......................... 486
Antidopaminergic Properties of Yohimbine. BERNARD SCATTON, BRANIMIR ZIVKOVIĆ AND JAREK DZEDEK .......................... 494
Effects of Acetubolol and Other Structurally Related Beta Adrenergic Blockers on Transmembrane Action Potential in Guinea-Pig Papillary Muscles. HIREDI SADA AND TAKASHI BAN .......................... 507
Tolerance to the Effects of Morphine on Intestinal Motility of Unanesthetized Dogs. NORMAN W. WEISBRODT, PIOTR J. THOR, E. M. COPELAND AND THOMAS F. BURKS .......................... 515
Effects of Alpha Adrenergic Blockade, Combined Nicotinic and Muscarinic Ganglion Blockade and Spinal Anesthesia upon Norepinephrine Depression of Ganglion Transmission in the Dog. JAMES G. HILTON .......................... 522
Improvement of Human Myocardial Mitochondria after Dobutamine: A Quantitative Ultrastructural Study. DONALD V. UNVERFERTH, CARL V. LIEG, RAYMOND D. MAGORIEN, RICHARD CROSSKEY, JOHN R. SIBIRLE, ALBERT J. KOLIBASH, MICHAEL R. DICK, JOSEPH A. MEACHAM AND NOBUYUKI BABA .......................... 527
Does Histamine Influence Vasodilation Caused by Prolonged Arterial Occlusion or Heavy Exercise? ALAN DANIEL AND CARL R. HONG .......................... 533
Propranolol Effects on Membrane Repolarization Time in Isolated Canine Purkinje Fibers: Threshold Tissue Content and the Influence of Exposure Time. JACK K. PHEUETT, THOMAS WALLACE AND U. KRISTINA WALLACE .......................... 539

No. 3, December 1980

The Effects of Chronic Methylphenidate Treatment on Growth and Endocrine Function in the Developing Rat. GEORGE H. GREELEY, JR. AND J. S. KIZER .......................... 545
Histaminergic Mechanisms Involved in the Centrally Mediated Effects of Ouabain. RANDALL L. TACKETT AND J. E. HOLL .......................... 552
Different Mechanisms of Action of Acetazolamide and Parathyroid Hormone on Proximal Tubular Absorption of Fluid and 5,5-Dimethyl-2,4-Oxazolidinedione. Y. L. CHAN .......................... 557
Transport of Choline Out of the Cranial Cerebrospinal Fluid Spaces of the Rabbit. ROBERT C. LANMAN AND LEWIS S. SCHANKER .......................... 563
Sodium Dependence of the Positive Inotropic Effect of Cardiac Glycosides. JAY R. WIGGINS AND JUAN JOSÉ BENTOLILIA .......................... 569
Phenytoin Inhibition of Cyclic Guanosine 3',5'-Monophosphate (cGMP) Accumulation in Neuroblastoma Cells by Calcium Channel Blockade. ROBERT E. STUDY .......................... 575
Regulation of Serotonin (5-HT) Receptors Labeled with [3H]Spiroperidol by Chronic Treatment with the Antidepressant Amitriptyline. STEPHEN J. PEROUTKA AND SOLOMON H. SNYDER .......................... 582
Three Day Pleural Inflammation: A New Model to Detect Drug Effects on Macrophage Accumulation. N. ACKERMAN, A. TOMOLONIS, L. MIRAM, J. KIEFFES, S. MARTINEZ AND A. CARTER .......................... 588
Maturation of Sympathetic Neurotransmission in the Rat Heart. V. Development of Baroreceptor Control of Sympathetic Tone. JORGE BARTOLOME, ELLIOTT MILL, CHRISTOPHER LAU AND THEODORE A. SLOTKIN .......................... 596
Induction of Aryl Hydrocarbon Hydroxylase Activity in the Rat Prostate Glands by 2,3,7,8-Tetrachlorodibenzo-p-Dioxin. I. P. LEE AND K. SUZUKI .......................... 601
Electrophysiological Evidence for Presynaptic Actions of Phencyclidine on Noradrenergic Transmission in Rat Cerebellum. JWAFARLAL MARWAHA, MICHAEL R. PALMER, DONALD J. WOODWARD, BARRY J. HOFER AND ROBERT FREEDMAN .......................... 606
Estrogen-Induced Alterations in the Autonomic Responses of the Rabbit Urinary Bladder. ROBERT M. LEVIN, FRANCES S. SHOFER AND ALAN J. WEIN .......................... 614
Alterations in Pentobarbital and Meperidine Pharmacokinetics Induced by Bile Duct Ligation in the Rat. ROBERT G. KNODELL, DAVID A. BROOKS, RICHARD C. ALLEN AND WALTER T. KYNER .......................... 619
Sites of Antiinocceptive Action of Systemically Injected Morphine: Involvement of Supraspinal Loci as Revealed by Intracere-
broventricular Injection of Naloxone. JOSEPH C. YEUNG AND THOMAS A. RUDY .......................... 626
Multiplicative Interaction between Narcotic Agonisms Expressed at Spinal and Supraspinal Sites of Antinociceptive Action as Revealed by Concurrent Intrathecal and Intracerebroventricular Injections of Morphine. JOSEPH C. YEUNG AND THOMAS A. RUDY ................................................................. 626

Stereospecific Assay for (−) - and (+)-Propranolol in Human and Dog Plasma. BERNIE SILBER AND SIDNEY RIEGELMAN .......... 643

Consistent Unmasking of Dopamine-Induced Dilation of the Canine Femoral Vascular Bed. JAY J. LISTINSKY, JAI D. KOHL AND LEON I. GOLDBERG ................................................................. 662
Comparative Studies of the Pharmacological Effects of the d- and l-Isomers of Codeine. THUY T. CHAU AND LOUIS S. HARRIS ................ 668
Effect of Carbonic Anhydrase Inhibitors and Acidosis on Choroid Plexus Epithelial Cell Sodium and Potassium. QUENTIN R. SMITH AND CONRAD E. JOHANSON ........................................... 673

The Renal Clearance of Digoxin is Dependent upon the Serum Digoxin Concentration. THOMAS P. GIBSON AND ANTONIO P. QUINTANILLA ............................................................................. 681

Purine Release from Vascular Adrenergic Nerves by High Potassium and a Calcium Ionophore, A-23187. TAKESHI KATSURAGI AND CHE SU ................................................................. 685


Actions of Mu, Kappa, Sigma, Delta and Agonist/Antagonist Opiates on Striatal Dopaminergic Function. PAUL L. WOOD, M. STOTLAND, J. W. RICHARD AND A. RACKHAM .............................................. 697

The Effect of Theophylline and Other Methylxanthines on Presynaptic Inhibition of the Longitudinal Smooth Muscle of the Guinea-Pig Ileum Induced by Purine Nucleotides. F. K. OEWUASSABA AND M. A. COOK ............................................... 704

Neuronal Uptake of Choline Following Release of Acetylcholine in the Perfused Heart. RUTH LINDMAN, KONRAD LÖFFELHOLZ, WOLFGANG WEIDE AND JUTTA WITZKE .................................................. 710

Specific Changes in the Cholinergic System in Guinea-Pig Vas Deferens after Denervation. FUMI AKI HATA, KUNIO TAKAYASU, YOSHI MORIZAWA, RON-TRAN LAI, HAJIME ISHIDA AND HIROSHI YOSHIDA .......... 716

Index, Volume 215, October–December, 1980 .............................................................................. 723