CONTENTS OF VOLUME 215
No. 1, October 1980

Hydrolysis of Diacetylmorphine (Heroin) by Human Serum Cholinesterase. OKASANA 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 Noradrenaline Infusions. YUKIYUKI ASADA, YASUO MATSUDA AND MATTHEW N. SLEVY 20

Effects of Lanthanum and Trifluoperazine on [125] Calmodulin Binding to Rat Striatal Particulates. YUEN-SUM LAU AND MARGARET E. GREY 28

Tolerance and Disposition of Tetrahydrocannabinol in Man. C. ANTHONY HUNT AND REESE T. JONES 35

The Effects of Methadone on Respiration and Ventilation in Pygmy Goats. RICHARD C. NEAL AND GEORGE D. OLSEN 45

Presynaptic and Postsynaptic Neuromodulatory Effects of a Specific Inhibitor of Acetylcholinesterase. RICHARD T. BOIS, RICK G. HUMMER, WOLF D. DUTTAN AND MICHAEL B. LASKOWSKI 51


The Role of Noradrenalin 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 Phenyltoin in the Isolated Perfused Rat Liver and in Vivo. MARY VORE AND CHRISTOPHER MONTGOMERY 71

Pharmacokinetic-Dynamic Analysis of the Indomethacin-Pufosamide Interaction in Man. P. CHENNASIN, R. SEIWAL 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 85

Differential Effects of the Anticonvulsants, Phenobarbital, Ethosuximide and Carbamazepine on Neuromuscular Transmission. MARC T. ALDERIDGE AND BRAD A. TROMMER 92

The in Vitro Formation of Glutathione Conjugates with the Microsomal Activated Pulmonary Bronchiolar Alkylating Agent and Cytotoxin, 4-Ipomeanol. ALAN R. BUCKPETT 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

Behavioral and Biochemical Effects of the Antidepressant Bupropion (Wellbutrin): Evidence for Selective Blockade of Dopamine Uptake in Vivo. BARRETT R. COOPER, TERESA J. HESTER AND ROBERT A. MAXWELL 127

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 WARMACK AND PARKHURST A. SHORE 150

The Pulmonary Vascular Effects of Three Prostaglandin I2 Analogs in Conscious Newborn Lambs. JAMES E. LOCK, FLAVIO COCEANI, FRANCIS HAMILTON, ALISON GREENAWAY-COATES AND PETER M. OLLEY 156

Ibuprofen Improves Survival from Endotoxin Shock in the Rat. W. C. WISE, J. A. COOK, T. ELLER AND P. V. HALLUSHKA 160

Effect of Plasma Protein Binding on Quinidine Kinetics in the Rabbit. THEODORE W. GUENTHER AND SVEIN OEKE 165


Characterization of Alpha-1 Adrenergic Receptors in the Heart Using [3H]JWB4101: Effect of 6-Hydroxydopamine Treatment. SHIZUO YAMADA, HENRY I. YAMAMURA AND WILLIAM R. ROUSE 176

Cephalosporin Nephrotoxicity. Transport, Cytotoxicity and Mitochondrial Toxicity of Cephalothin. BRUCE M. TUNE AND DORIS FRAVART 186


Changes in Cardiac Glycoside Activity Produced by Aminosugar Addition. L. SCOTT COOK, ROBERT W. CALDWELL AND CLINTON B. NASH 198

Stereospecific Radioimmunoassay of a-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. HERCHELZ, N. THONNART, A...
Contents

iv
Carpinelli, A. Sener and W. J. Malaisse ................................. 213
Is the Antihypertensive Effect of Propranolol Caused by an Action within the Central Nervous System? Jos F. M. Smits, HELMA VAN ESSEN AND HARRY A. J. STRUYKER-BOUDDIER .......... 221
Adrenergic Regulation of Blood Glucose Levels: Possible Involvement of Postsynaptic Alpha-2 Type Adrenergic Receptors Regulating Insulin Release. TeroD NAKADATE, Toshio NAKAI, Takamura Muraki and Ryuichi Kato .......................... 226
Dose-Dependent Pharmacokinetics of Tocainide in the Rat. RAMAN VENKATARAMANAN AND JAMES E. AXELSON .... 231
The Effect of Phenobarbital and SKF 55A on Tocainide Pharmacokinetics in the Rat. RAMAN VENKATARAMANAN AND JAMES E. AXELSON .... 235
Prostacyclin and Thromboxane A 2 Synthesis by Rabbit Pulmonary Artery. PHYLLIS M. SALZMAN, JOHN A. SALMON AND SALVADOR MONCADA .............. 240
Binding of Drugs to Muscle Tissue: Dependence on Drug Concentration and Lipid Content of Tissue. BURKHAARD FICHTL, BRIGITTA BONDY AND HERMAN KURZ 248
Interaction of Calcium and Microtubules in the Action of Cyclic AMP on the Road Urinary Bladder. SHIGEKAZU YUASA, YOSHIIKO TAKAMITSU, SHIGEHIRO MIKI, YOSHIMASA ORITA, HIROSHI ABE AND TAKEHIKO WATANABE .............................................. 254
Cardio-Selective Beta Adrenergic Stimulation with Prenalterol in the Conscious Dog. W. THOMAS MANDERS, STEPHEN F. VATNER AND EUGENE BRAUNWALD .......... 266

No. 2, 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 ... 287
Disposition of Enflurane in Obese Patients. MATTHEW S. MILLER, A. JAY GANDOLFI, ROBERT W. VAUGHAN AND JOHN B. BENTLEY .......... 292
The Cyclic Nucleotide of the Rat Superior Cervical Ganglion. LINDA F. QUENTER, BRIAN A. PATTERSON AND ROBERT L. VOLLE .............. 297
Phenytoin, Renal Function and Renin Release. STEPHEN D. MIGDAL, GARY L. SLICK, DAOUID ABU-HAMDAN AND FRANKLIN D. MCDONALD ........................................... 304
Modulatory Effect of Brain Acetylcholine on Reflex-Induced Bradycardia and Tachycardia in Conscious Rats. A. P. CAPUTI, F. ROSSI, K. CARNEY AND H. E. BREZENOFF .......... 309
Effects of Castration 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 .................................................. 317
Antagonist Dissociation Constants and Relative Agonist Efficacies for Compounds Interacting with Beta-1 and Beta-2 Adrenergic Receptors in the Rat Jugular Vein. MARLENE L. COHEN, ROBERT R. RUFFOLO, JR. AND KATHRYN S. WILEY ........................................ 325
Effects of Transmembrane Potential on Oscillatory Afterpotentials Induced by Acetylcholine Antagonist in Canine Ventricular Tissues. GREGORY R. FERRIER .......... 332
Maturation of Sympathetic Neurotransmission in the Rat Heart. VI. The Effect of Neonatal Central Catecholaminergic Lesions. RANDY DESKIN, ELLIOTT MILLS, WILLIAM L. WHITMORE, FREDERIC J. SEIDLER AND THEODORRE A. SLOTKIN .................................. 342
Muscarnic Antagonist of the Effects of a Phosphodiesterase Inhibitor (Methylisobutylxanthine) in Embryonic Chick Ventricles. REBECCA L. BIEGON, PAUL M. EPSSTEIN AND ACHILLES J. PAPPANO ........................................... 348
Possible Generation of Potent Vasoconstricting Substance from Prostaglandin Endoperoxide Analogs, Human Platelets Mixture. SHOJI SHIBATA, W. K.H. HO AND U. IBEDA .......... 357
Dissociation of Varied Actions of Norepinephrine on 4Ca Uptake and Release at Different Sites in Rabbit Aortic Smooth Muscle. HIDEAKI KARAKI AND GEORGE B. WEISS .......... 363
Stereoisselectivity of the Stimulus Effects of Morphine and Cyclocaine in the Squirrel Monkey. JANICE J. TEAL AND STEPHEN G. HOLZTMAN .... 369
Potentiating Effects of Alpha Agonist Symptomimetic Amines on Vasoconstriction by Adrenergic Nerve Stimulation. CHE SU ............................................ 377
Comparative Study of the Electroencephalographic and Behavioral Effects of I-A-Acetylmethadol (LAAM), Two of Its Metabolites and Morphine and Methadone in the Rat. SCOTT E. LUKAS, J. EDWARD MORETON AND NAHM KHAZAN ............ 382
Gentamicin Uptake by Renal Tubule Brush Border Membrane Vesicles. JAMES J. LIPSKY, LINDA CHENG, BERTHAM SACKTOR AND PAUL S. LIETMAN .......... 390
Differing Electrophysiologic Effects of Slow Response Inhibiting Agents Manganese and Verapamil on Ischemic, Infarcted and Normal Tissue in Situ. JOEL KUPERSMITH AND ROBERT COHEN .......... 394
Metabolism of Benzidine by a Prostaglandin-Mediated Process in Renal Inner Medullary Slices. NEVILLE S. RAPP, TERRY V. ZENNER, WENDY W. BROWN AND BERNARD B. DAVIS .......... 401
Effect of the Angiotensin Converting Enzyme Inhibitor, Captopril, on NaCl Appetite of Rats. MELVIN J. FREGLY .......... 407
Increase of Neurotensin Content Elicited by Neuroleptics in Nucleus Accumbens. S. GOVONI, J. S. HONG, H.-Y. T. YANG AND E. COSTA .......... 413
Inhibition of Depressor Cardiovascular Reflexes by a Derivative of y-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 Midzenski 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
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 Albert J. Azzaro 461
Hydrocortisone and Human Lymphocytes: Increases in Cyclic Adenosine 3’5’-Monophosphate and Potentiation of Adenylate Cyclase-Activating Agents. Gianni Marone, Lawrence M. Lichtenstein and Marshall Plaut 469
The Ionic Mechanism of Prolongation of Action Potential Duration of Cardiac Ventricular Muscle by Antihypertensive-A and Its Relationship to the Inotropic Effect. Keitaro Hashimoto, Rekuo Ochi, Koriuki Hashimoto, Jun Imui and Yuji Miura 479
Presynaptic Effects of 2-Aminotetrinal on Strial Dopaminergic Neurons. Irene S. Hoffman, Robert J. Naylor and Luigi X. Curedell 486
Antidopaminergic Properties of Yohimbine. Bernard Scatton, Branimir Zivkovic and Jaroslav Dedek 494
Effects of Acebutolol and Other Structurally Related Beta Adrenergic Blockers on Transmembrane Action Potential in Guinea-Pig Papillary Muscles. Hideaki Sada and Takashi Ban 507
Effects of Alpha Adrenergic Blockade, Combined Nicotinic and Muscarinic Ganglion Blockade and Spinal Anesthesia upon Norepinephrine Depression of Ganglion Transmission in the Dog. James H. Gillon 522
Does Histamine Influence Vasodilation Caused by Prolonged Arterial Occlusion or Heavy Exercise? Alan Daniel and Carl R. Honig 533

No. 3, December 1960

The Effects of Chronic Methylphenidate Treatment on Growth and Endocrine Function in the Developing Rat. George H. Greerey, 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
Sodium Dependence of the Positive Inotropic Effect of Cardiac Glycosides. Jay R. Wiggins and Juan Jose Bentollia 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. Tomolouis, L. Mirand, J. Kieffets, 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 Mills, Christopher Lau and Theodore A. Sloetkin 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. Jwaharlal Marwah, Michael R. Palmer, Donald J. Woodward, Barry J. Hopper and Robert Freedman 606
Estrogen-Induced Alterations in the Autonomic Responses of the Rabbit Uterine Bladder. Robert M. Levin, Frances S. Shoffer and Alan J. Weiz 614
Alterations in Pentobarbital and Meperidine Pharmacokinetica Induced by Bile Duct Ligation in the Rat. Robert G. Knodell, David A. Brooks, Richard C. Allen and Walter T. Kyner 619
Sites of Antinociceptive Action of Systemically Injected Morphine: Involvement of Supraspinal Loci as Revealed by Intracere-
broventricular Injection of Naloxone. JOSEPH C. YEUNG AND THOMAS A. RUDY

Multimetic Interaction between Narcotic Agonists 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 .......................................................... 633


Consistent Unmasking of Dopamine-Induced Dilation of the Canine Femoral Vascular Bed. JAY J. LISTINSKY, JAI D. KOHLI 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. TAKEHI KATSURAGI AND CHE SU .................................................. 685


Actions of Mu, Kappa, 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 LINDMAR, KONRAD LÖFFELHOLZ, WOLFGANG WEIDE AND JUTTA WITZKE ............................................. 710

Specific Changes in the Cholinergic System in Guinea-Pig Vas Deferens after Denervation. FUMIYI HATA, KUNIO TAKEYABU, YOSHIRO MORIKAWA, RON-THAN LAI, HAJIME ISHIDA AND HIROSHI YOSHIDA .................................................. 716

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