CONTENTS OF VOLUME 215

No. 1, October 1980

Hydrolysis of Diacetylmorphine (Heroin) by Human Serum Cholinesterase. OKASAN LOCKE  15
HARRY W. ECKEBROR AND BERT N. LA DU

Effects of Drugs on Behavior in Rats Maintained on Morphine, Methadone or Pentobarbital. D. E. McMILLAN, W. T. McGIVNEY  9
AND W. C. HARDWICK


The Effects of Cocaine and Metanephrine on the Cardiac Responses to Norepinephrine Infusions. YUKITAKA MASUDA, YASUO MATSUZAKI AND MATTHEW N. LEVY  20

Effects of Lanthanum and Trifluoperazine on [3H]Calmodulin Binding to Rat Striatal Particulates. YUEN-SUM LAU AND MARGARET E. GREGO  25

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 Neuromuscular Effects of a Specific Inhibitor of Acetylcholinesterase. RICHARD T. BOIS, RICK G. HUMMEL, WOLF D. DETTBARN AND MICHAEL B. LASKOWSKI  53


The Role of Norepinephrine in the Regulation of Fluid Absorption in the Rat Proximal Tubule. Y. L. CHIN  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. CHENNAVASIN, R. SEITWILL 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. SHADE  86

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 Microsomally Activated Pulmonary Bronchiolar Alkylating Agent and Cytoxan. ALAN R. BUCKFITT AND MICHAEL R. BOYD  97

Mechanism of Captopril-Induced Renal Vasodilatation 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. BARNETT H. COOPER, THERESA J. HESTER AND ROBERT A. MAXWELL  127

Amphetamine-Haloperidol Interactions on Striatal and Mesolimbic Tyrosine Hydroxylase Activity and Dopamine Metabolism. RONALD KUCZENSKY  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. McMILLAN, DWIGHT C. GERMAN, MANJIT K. SANGHERA, WORTHY WARMACK AND PARKHURST A. SHORE  150

The Pulmonary Vascular Effects of Three Prostaglandin E1 Analogs in Conscious Newborn Lambs. JAMES E. LOCK, FLAVIO COCEANI, FRANCIS HAMILTON, ALISON GREENAWAY-COATES AND PETER M. OLLEY  156

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

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


Characterization of Alpha-1 Adrenergic Receptors in the Heart Using [3H]WB4101: Effect of 6-Hydroxydopamine Treatment. SHIZUO YAMADA, HENRY I. YAMAMURA AND WILLIAM R. ROESKE  176

Cephalosporin Nephrotoxicity. Transport, Cytotoxicity and Mitochondrial Toxicity of Cephaloglycin. 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 o-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. HERCHEZUZ, N. THONNART, A.
CARPINELLI, A. SENER AND W. J. MALAISSE. Is the Antihypertensive Effect of Propranolol Caused by an Action within the Central Nervous System? 213

HELM VAN ESSSEN AND HARRY A. J. STRUYKER-BOUDDIER. Adrenergic Regulation of Blood Glucose Levels: Possible Involvement of Postsynaptic Alpha-2 Type Adrenergic Receptors Regulating Insulin Release. 221

TERU NAKADATE, TOSHIKO NAKAI, TAMACURA MUKAI AND RYUCHI KATO. Dose-Dependent Pharmacokinetics of Tolazidine in the Rat. 226

RAMAN VENKATRAMAN AND JAMES E. AXELSON. The Effect of Phenobarbital and SKF 555-A on Tolazidine Pharmacokinetics in the Rat. 231

JAMES E. AXELSON. Prostacyclin and Thromboxane A2 Synthesis by Rabbit Pulmonary Artery. 235

PHYLLIS M. SALZMAN, JOHN A. SALMON AND SALVADOR MONCADA. Binding of Drugs to Muscle Tissue: Dependence on Drug Concentration and Lipid Content of Tissue. 240

BRECTHARD FICHTL, BRIGITTA BONDY AND HERMAN KURZ. Interaction of Calcium and Microtubules in the Action of Cyclic AMP on the Road Urinary Bladder. 248

SHIGEKAZU YUASA, YOSHIHIRO TAKAMITSU, SHIGEHIRO MIKI, YOSHIMASA ORITA, HIROSHI ABE AND TAKEHIKO WATANABE. Comparative Cardiac Contractile Actions of Six Narcotic Analgesics: Morphine, Meperidine, Pentazocine, Fentanyl, Methadone and Ia-Acetylmethadol (LAAM). 254

STEPHEN V. RENDIC, EZZA A. AMSTED, GARY L. HENDERSON AND DEAN T. MASON. Cardio-Selective Beta Adrenergic Stimulation with Prenalterol in the Conscious Dog. 259

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. 265

L. ROMSON, LARRY R. BUSH, DAVID W. HAACK AND BENEDICT R. LUCCHESI. No. 2, November 1980

STANLEY GREENBERG. Studies on the Effect of Chronic Oral Administration of Minoxidil and Hydralazine on Vascular Function in Spontaneously Hypertensive Rats. 279

FELIX J. FREY, BRIGITTE FREY, ANDREAS GREITHER AND LESLIE Z. BENET. Prednisolone Clearance at Steady State in Dogs. 287

MATTHEW S. MILLER, A. JAY GANDOLFI, ROBERT W. VAUGHAN AND JOHN B. BENTLEY. Disposition of Enflurane in Obese Patients. 292

LINDA F. QUENZER, BRIAN A. PATTERSON AND ROBERT L. VOLLE. The Cyclic Nucleotide of the Rat Superior Cervical Ganglion. 297

STEPHEN D. MIGDAL, GARY L. SLICK, DAODU ABU-HAMDAN AND FRANKLIN D. McDONALD. Phenytoin, Renal Function and Renin Release. 304

A. P. CAPUTTI, F. ROSSI, K. CARNEY AND H. E. BREZENOFF. Modulatory Effect of Brain Acetylcholine on Reflex-Induced Bradycardia and Tachycardia in Conscious Rats. 309

GREGORY R. FERRIER. Effects of Castration and Chronic Morphine Administration on Liver Alcohol Dehydrogenase and the Metabolism of Ethanol in the Male Sprague-Dawley Rat. 317

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 Jugular Vein. 325

MARLENE L. COHEN, ROBERT R. RUFFOLO, JR. AND KATHRYN S. WILEY. Effects of Transmembrane Potential on Oscillatory Afterpotentials Induced by Acetylstrophanthidin in Canine Ventricular Tissues. 332

GREGORY R. FERRIER. Maturation of Sympathetic Neurotransmission in the Rat Heart. VI. The Effect of Neonatal Central Catecholaminergic Lesions. 332

RANDY DESKIN, ELLIOTT MILLS, WILLIAM L. WHITMORE, FREDERIC J. SEIDLER AND THEODORE A. SLOTKI. Muscarinic Antagonism of the Effects of a Phosphodiesterase Inhibitor (Methylisobutylxanthine) in Embryonic Chick Ventricile. 348

REBECCA L. BIGGON, PAUL M. EPSTEIN AND ACHILLESE J. PAPPANO. Possible Generation of Potent Vasoconstricting Substance from Prostaglandin Endoperoxide Analogs, Human Platelets Mixture. 357

SHOJI SHIBATA, W. K. W. HO AND U. IBIDA. Dissociation of Varied Actions of Norepinephrine on 45Ca Uptake and Release at Different Sites in Rabbit Aortic Smooth Muscle. 363

HIDEAKI KARAKI AND GEORGE B. WEISS. Stereoselectivity of the Stimulus Effects of Morphine and Cyclazocine in the Squirrel Monkey. 369

JANICE J. TEAL AND STEPHEN G. HOLTZMAN. Potentiative Effects of Alpha Agonistic Synaptomimetic Amines on Vasoconstriction by Adrenergic Nerve Stimulation. 377

CHE SU. Comparative Study of the Electroencephalographic and Behavioral Effects of Ia-Acetylmethadol (LAAM), Two of Its Metabolites and Morphine and Methadone in the Rat. 382

SCOTT E. LUKAS, J. EDWARD MORRETON AND NAIM KHANAN. Gentamicin Uptake by Renal Tubule Brush Border Membrane Vesicles. 382

JAMES L. 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. 390

JUAN KUPERSMITH AND ROBERT COHEN. Metabolism of Benzidine by a Prostaglandin-Mediated Process in Renal Inner Medullary Slices. 394

NEVILLE S. RAPP, TERRY V. ZENNER, WENDY W. BROWN AND BERNARD B. DAVIS. Effect of the Angiotensin Converting Enzyme Inhibitor, Captopril, on NaCl Appetite of Rats. 401

MELVIN J. FREGLY. Increase of Neutrotenic Content Elicited by Neuroleptics in Nucleus Accumbens. 407

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. 413
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 Norpinephrine in the Rabbit. RODNEY W. LAPPF, DAVID P. HENRY and LYNN R. WILLIS 443
Regulatory Role of Glutathione and Soluble Sulphydryl Groups in the Toxicity of Adriamycin. RICHARD D. OLSON, JAMES S. MACDONALD, CHRIS J. VAN BOXTL, ROBERT C. BOERTH, RAYMOND D. HARRISON, ALFRED E. SLONIM, RICHARD W. FREEMAN and JOHN A. AYAES 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. KIETH T. DEMAREST, DAVID J. SMITH and JAMES A. 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 Antipheplurin-A and Its Relationship to the Inotropic Effect. KITARO HASHIMOTO, REIKO OCHI, KOBUKU HASHIMOTO, JUN INUI and YUJU MIURA 479
Presynaptic Effects of 2-Aminotetralins on Stratial Dopaminergic Neurons. IRENE S. HOFFMAN, ROBERT J. NAYLOR and LIU X. CURBETU 486
Antidopaminergic Properties of Yohimbine. BERNARD SCATTON, BRANIMIR ZIVKOVIC and JAREK DEDER 494
Effects of Acesulfotol and Other Structurally Related Beta Adrenergic Blockers on Transmembrane Action Potential in Guinea-Pig Papillary Muscles. HIDAEI SADA and TAKASHI BAN 507
Tolerance to the Effects of Morphine on Intestinal Motility of Unanesthetized Dogs. NORMAN W. WEISBRODT, PIETER J. THOR, E. M. COPENLAND and THOMAS F. BURKS 515
Effects of Alpha Adrenergic Blockade, Combined Nicotinic and Muscarinic Ganglion Blockade and Spinal Anesthesia upon Norpinephrine Depression of Ganglion Tranmission in the Dog. JAMES G. HILTON 522
Improvement of Human Myocardial Mitochondria after Dobutamine: A Quantitative Ultrastructural Study. DONALD V. UNVERFERTH, CARL V. LIEB, RAYMOND D. MAGORIEN, RICHARD CROSSBREY, JOHN R. SIVILBECK, ALBERT J. KOLIBASH, MICHAEL R. DICK, JOSEPH A. MEACHAM and NOBUISHA BARB 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. PUHTT, THOMAS WALLIE and U. KRISTINA WALLE 539

No. 3. December 1980

The Effects of Chronic Methylenebisulphate 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-Oxazolidinedion. Y. L. CHAN 557
Transport of Choline Out of the Cranial Cerebrospinal Fluid Spaces of the Rabbit. ROBERT C. LAMN and LEWIS S. SCHANKER 563
Sodium Dependence of the Positive Inotropic Effect of Cardiac Glycosides. JAY R. WIGGINS and JUAN JOSÉ BENTOLILA 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 ['H]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. KIEFETS, 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. 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. JWAARLAL MAWRAH, MICHAEL R. PALMER, DONALD J. WOODWARD, BARRY J. HOFFER and ROBERT FREEMAN 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. KOWDELL, DAVID A. BROOKS, RICHARD C. ALLEN and WALTER T. KYNRR 619
Sites of Antinoceptive Action of Systemically Injected Morphine: Involvement of Supraspinal Loci as Revealed by Intracere-