

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 Effect of Arginine Vasopressin and Its Analog on the Synthesis of Prostaglandin E ₂ by Rat Renal Medullary Interstitial Cells in Culture. THOMAS R. BECK, AVIV HASSID AND MICHAEL J. DUNN	15
The Effects of Cocaine and Metanephrine on the Cardiac Responses to Norepinephrine Infusions. YUKITAKA MASUDA, YASUO MATSUDA AND MATTHEW N. LEVY	20
Effects of Lanthanum and Trifluoperazine on [¹²⁵ I]Calmodulin 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 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
Opiate Binding Sites in the Retina: Properties and Distribution. R. D. HOWELLS, J. GROTH, J. M. HILLER AND E. J. SIMON	60
The Role of Norepinephrine in the Regulation of Fluid Absorption in the Rat Proximal Tubule. Y. L. CHAN	65
The Effect of Estradiol-17 β Treatment on the Metabolism and Biliary Excretion of Phenytoin in the Isolated Perfused Rat Liver and <i>in Vivo</i> . MARY VORE AND CHRISTOPHER MONTGOMERY	71
Pharmacokinetic-Dynamic Analysis of the Indomethacin-Furosemide Interaction in Man. P. CHENNAVASIN, R. SEIWELL 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. SHADEH	86
Differential Effects of the Anticonvulsants, Phenobarbital, Ethosuximide and Carbamazepine on Neuromuscular Transmission. MARC T. ALDERDICE AND BRAD A. TROMMER	92
The <i>in Vitro</i> Formation of Glutathione Conjugates with the Microsomally Activated Pulmonary Bronchiolar Alkylating Agent and Cytotoxin, 4- <i>Ipomeanol</i> . ALAN R. BUCKPITT 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 <i>in Situ</i> 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 <i>in Situ</i> Perfused Rat Liver. TOSHIKO IMAMURA AND JAMES M. FUJIMOTO	116
A New Mode of Action of SKF 525-A on Morphine Disposition Studied by Segmented Retrograde Intrabiliary Injection (SRII) in the Isolated <i>in Situ</i> 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 <i>in Vivo</i> . BARRETT R. COOPER, TERESA J. HESTER AND ROBERT A. MAXWELL	127
Amphetamine-Halperidol Interactions on Striatal and Mesolimbic Tyrosine Hydroxylase Activity and Dopamine Metabolism. RONALD KUCZENSKI	135
Potentialization 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 WARNACK AND PARKHURST A. SHORE	150
The Pulmonary Vascular Effects of Three Prostaglandin I ₂ 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. HALUSHKA	160
Effect of Plasma Protein Binding on Quinidine Kinetics in the Rabbit. THEODOR W. GUENTERT AND SVEIN ØIE	165
Effect of the Converting Enzyme Inhibitor SQ-20881 on Urinary Excretion of Prostaglandin E ₂ in the Rat: Influence of Pretreatment with Deoxycorticosterone. J. G. BARR, D. DIZ, M. L. KAUKER AND A. NASJLETTI	172
Characterization of α -1 Adrenergic Receptors in the Heart Using [³ H]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 FRAVERT	186
Mechanisms of Organic Cation Transport in Kidney Plasma Membrane Vesicles: 1. Countertransport Studies. PETER D. HOLOHAN AND CHARLES R. ROSS	191
Changes in Cardiac Glycoside Activity Produced by Aminosugar Addition. L. SCOTT COOK, ROBERT W. CALDWELL AND CLINTON B. NASH	198
Stereospecific Radioimmunoassay of α - <i>l</i> -Acetylmetadol (LAAM). KIP L. MCGILLIARD AND GEORGE D. OLSEN	205
Regulation of Calcium Fluxes in Rat Pancreatic Islets: The Role of K ⁺ Conductance. A. HERCHUELZ, N. THONNART, A.	

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-BOUDIER	221
Adrenergic Regulation of Blood Glucose Levels: Possible Involvement of Postsynaptic <i>Alpha</i> -2 Type Adrenergic Receptors Regulating Insulin Release. TERUO NAKADATE, TOSHIO NAKAKI, 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 525A 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. BURCKHARD FICHTL, BRIGITTA BONDY AND HERMAN KURZ	248
Interaction of Calcium and Microtubules in the Action of Cyclic AMP on the Rod Urinary Bladder. SHIGEKAZU YUASA, YOSHIHIRO TAKAMITSU, SHIGEHIRO MIKI, YOSHIMASA ORITA, HIROSHI ABE AND TAKEHIKO WATANABE	254
Comparative Cardiac Contractile Actions of Six Narcotic Analgesics: Morphine, Meperidine, Pentazocine, Fentanyl, Methadone and <i>l</i> - α -Acetylmethadol (LAAM). STEPHEN V. RENDIG, EZRA A. AMSTERDAM, GARY L. HENDERSON AND DEAN T. MASON	259
Cardio-Selective <i>Beta</i> Adrenergic Stimulation with Prenalterol in the Conscious Dog. W. THOMAS MANDERS, STEPHEN F. VATNER AND EUGENE BRAUNWALD	266
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	271

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	287
Disposition of Enflurane in Obese Patients. MATTHEW S. MILLER, A. JAY GANDOLFI, ROBERT W. VAUGHAN AND JOHN B. BENTLEY	292
The Cyclic Nucleotide Content of the Rat Superior Cervical Ganglion. LINDA F. QUENZER, BRIAN A. PATTERSON AND ROBERT L. VOLLE	297
Phenytol, Renal Function and Renin Release. STEPHEN D. MIGDAL, GARY L. SLICK, DAUD 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 <i>Beta</i> -1 and <i>Beta</i> -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 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 THEODORE A. SLOTKIN	342
Muscarnic Antagonism of the Effects of a Phosphodiesterase Inhibitor (Methylisobutylxanthine) in Embryonic Chick Ventricle. REBECCA L. BIEGON, PAUL M. EPSTEIN AND ACHILLES J. PAPPANO	348
Possible Generation of Potent Vasocontracting Substance from Prostaglandin Endoperoxide Analogs, Human Platelets Mixture. SHOJI SHIBATA, W. K. W. HO AND U. ISHIDA	357
Dissociation of Varied Actions of Norepinephrine on ⁴⁵ Ca Uptake and Release at Different Sites in Rabbit Aortic Smooth Muscle. HIDEAKI KARAKI AND GEORGE B. WEISS	363
Stereoselectivity of the Stimulus Effects of Morphine and Cyclazocine in the Squirrel Monkey. JANICE J. TEAL AND STEPHEN G. HOLTZMAN	369
Potentiative Effects of <i>Alpha</i> Agonistic Sympathomimetic Amines on Vasoconstriction by Adrenergic Nerve Stimulation. CHE SU	377
Comparative Study of the Electroencephalographic and Behavioral Effects of <i>l</i> - α -Acetylmethadol (LAAM), Two of Its Metabolites and Morphine and Methadone in the Rat. SCOTT E. LUKAS, J. EDWARD MORETON AND NAIM KHAZAN	382
Gentamicin Uptake by Renal Tubule Brush Border Membrane Vesicles. JAMES J. LIPSKY, LINDA CHENG, BERTRAM SACKTOR AND PAUL S. LIETMAN	390
Differing Electrophysiologic Effects of Slow Response Inhibiting Agents Manganese and Verapamil on Ischemic, Infarcted and Normal Tissue <i>in Situ</i> . JOEL KUPERSMITH AND ROBERT COHEN	394
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	401
Effect of the Angiotensin Converting Enzyme Inhibitor, Captopril, on NaCl Appetite of Rats. MELVIN J. FREGLEY	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 γ -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 BRINK, PAMELA G. DUNCAN, MALINDA MIDZENSKI AND JAMES S. DOUGLAS	426
Cyclic Nucleotides and Contraction/Relaxation in Airway Muscle: H ₁ and H ₂ Agonists and Antagonists. PAMELA G. DUNCAN, CHARLES BRINK, 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 Sulfhydryl Groups in the Toxicity of Adriamycin. RICHARD D. OLSON, JAMES S. MACDONALD, CHRIS J. VAN BOXTEL, 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 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 MARSHAL 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, RIKUO OCHI, KOROKU HASHIMOTO, JUN INUI AND YUJI MIURA	479
Presynaptic Effects of 2-Aminotetralins on Striatal Dopaminergic Neurons. IRENE S. HOFFMAN, ROBERT J. NAYLOR AND LIUGI X. CUBEDDU	486
Antidopaminergic Properties of Yohimbine. BERNARD SCATTON, BRANIMIR ZIVKOVIC AND JAROSLAV DEDEK	494
Response of the Bladder to Bethanechol after Acute Spinal Cord Transection in Cats. D. A. S. TWIDDY, J. W. DOWNIE AND S. A. AWAD	500
Effects of Acebutolol and Other Structurally Related <i>Beta</i> Adrenergic Blockers on Transmembrane Action Potential in Guinea-Pig Papillary Muscles. HIDEAKI 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 <i>Alpha</i> 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. LEIER, RAYMOND D. MAGORIEN, RICHARD CROSKERY, JOHN R. SVIRBELY, ALBERT J. KOLIBASH, MICHAEL R. DICK, JOSEPH A. MEACHAM AND NOBUHISA BABA	527
Does Histamine Influence Vasodilation Caused by Prolonged Arterial Occlusion or Heavy Exercise? ALAN DANIEL AND CARL R. HONIG	533
Propranolol Effects on Membrane Repolarization Time in Isolated Canine Purkinje Fibers: Threshold Tissue Content and the Influence of Exposure Time. JACK K. PRUETT, THOMAS WALLE AND U. KRISTINA WALLE	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-Oxazolinedion. 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 BENTOLLA	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 ₂ (5-Ht ₂) Receptors Labeled with [³ 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. KHEIFETS, 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- <i>p</i> -Dioxin. I. P. LEE AND K. SUZUKI	601
Electrophysiological Evidence for Presynaptic Actions of Phencyclidine on Noradrenergic Transmission in Rat Cerebellum. JWAHARLAL MARWAHA, MICHAEL R. PALMER, DONALD J. WOODWARD, BARRY J. HOFFER 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 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	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	633
Stereospecific Assay for (-)- and (+)-Propranolol in Human and Dog Plasma. BERNIE SILBER AND SIDNEY RIEGELMAN	643
Drug Preference in Humans: Double-Blind Choice Comparison of Pentobarbital, Diazepam and Placebo. ROLAND R. GRIFFITHS, GEORGE E. BIGELOW, IRA LIEBSON AND JULIA E. KALISZAK	649
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 <i>d</i> - and <i>l</i> -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
Effects of Vaccination with <i>Haemophilus Influenzae</i> on Adrenoceptor Function of Tracheal and Parenchymal Strips. A. J. M. SCHREURS, G. K. TERPSTRA, J. A. M. RAAIJMAKERS AND F. P. NIJKAMP	691
Actions of <i>Mu</i> , <i>Kappa</i> , <i>Sigma</i> , <i>Delta</i> 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. OKWUASSABA 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. FUMIAKI HATA, KUNIO TAKEYASU, YOSHIO MORIKAWA, RON-TSAN LAI, HAJIME ISHIDA AND HIROSHI YOSHIDA	716
Index, Volume 215, October-December, 1980	723