CONTENTS OF VOLUME 215

No. 1, October 1980

Hydrolysis of Diacetyl morphine (Heroin) by Human Serum Cholinesterase. Oksana Lockridge, Nancy Mottereshaw-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. Yurita Masuda, Yasuo Matsuda and Matthew N. Levy............. 20

Effects of Lanthanum and Trifluoperazine on 125I Calmodulin Binding to Rat Striatal Particles. Yuen-Sum Lau and Margaret E. Negrey.............................. 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


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


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. Hartzam and Richard I. Shader.......................... 86

Differential Effects of the Anticonvulsants, Phenobarbital, Ethoxxime and Carbamazepine on Neuromuscular Transmission. Mark T. Alderinde and Brad A. Trommer.................................................. 92

The in Vitro Formation of Glutathione Conjugates with the Microsoma1ly Activated Pulmonary Bronchiolar Alkylating Agent and Cytotoxin. 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 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 Kuczynski.......................... 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 Warnack 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


Effect of Plasma Protein Binding on Quinidine Kinetics in the Rabbit. Theodor W. Guenster and Svein Oie.......................... 165


Cephalosporin Nephrotoxicity. Transport, Cytotoxicity and Mitochondrial Toxicity of Cephaloglycin. Bruce M. TUNE and Doris Fravey.......................... 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-Acetylmethyl (LAAM). Kip L. Mc Gilliard and George D. Olsen.......................... 205

Regulation of Calcium Fluxes in Rat Pancreatic Islets: The Role of K + Conductance. A. Herchuelz, N. Thonnart, A. 205
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 Esse and Harry A. J. Struyker-Boudier 221
Adrenergic Regulation of Blood Glucose Levels: Possible Involvement of Postsynaptic Alpha-2 Type Adrenergic Receptors Regulating Insulin Release. Teruo Nakadate, Toshiro Nakaki, Takamura Muraki and Ryuichi Kato 226
Dose-Dependent Pharmacokinetics of Toximide in the Rat. Ramon Venkataramanan and James E. Axelsson 231
The Effect of Phenobarbital and SKF 555A on Toximide Pharmacokinetics in the Rat. Ramon Venkataramanan and James E. Axelsson 235
Prostacyclin and Thromboxane A2 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. Burkhard 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, Shigeo Imai, Yoshimasa Orita, Hiroshi Abe and Takehiro Watanae 254
Comparative Cardiac Contractile Actions of Six Narcotic Analgesics: Morphine, Meperidine, Pentazocine, Fentanyl, Methadone and Ia-Acetylmethadol (LAAM). Stephen V. Rendic, Ezra A. Amsterdam, Gary L. Henderson and Dean T. Mason 259
Cardio-Selective Beta Adrenergic Stimulation with Prenalterol in the Conscious Dog. W. Thomas Manders, Stephen F. Vatner and Eugenio Braunwald 266

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
Modulatory Effect of Brain Acetylcholine on Reflex-Induced Bradycardia and Tachycardia in Conscious Rats. A. P. Caputi, F. Rossii, K. C. H. and E. Brezenoff 309
Effects of Transmembrane Potential on Oscillatory Afterpotentials Induced by Acetylsophanethidin in Canine Ventricular Tissues. Gregory R. Ferriero 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
Muscarinic Antagonism of the Effects of a Phosphodiesterase Inhibitor (Methylisobutylxanthine) in Embryonic Chick Ventricile. Rebecca L. Biegon, Paul M. Epstein and Achilles J. Pappano 348
Possible Generation of Potent Vasoconstraining Substance from Prostaglandin Endoperoxide Analogs, Human Platelets Mixture. Shoji Shibata, W. K. H. Ho and U. Ishida 357
Dissociation of Varied Actions of Norepinephrine on 45Ca Uptake and Release at Different Sites in Rabbit Aortic Smooth Muscle. Hideaki Karaki and George E. 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 Alpha Agonist Sympathomimetic Amines on Vasoconstriction by Adrenergic Nerve Stimulation. Che Su 377
Comparative Study of the Electroencephalographic and Behavioral Effects of Ia-Acetylmethadol (LAAM), Two of Its Metabolites and Morphine and Methadone in the Rat. Scott E. Lukas, J. Edward Moreton and Naim Khasan 382
Gentamicin Uptake by Renal Tubule Brush Border Membrane Vesicles. James J. Lipsky, Linda Cheng, Bertram Sacktor and Paul S. Liemtan 390
Differing Electrophysiological Effects of Slow Response Inhibiting Agents Manganese and Verapamil on Isochemic, Infarcted and Normal Tissue in Situ. Joel Kuperstein 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. Fresly 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 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 Midzenz and James S. Douglass  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 Sulphydryl Groups in the Toxicity of Adriamycin. Richard D. Olson, James S. MacDonald, Chris J. van Boxtel, Robert C. Boerth, Raymond D. Hainsworth, Alfred E. Slonim, Richard W. Freeman and John A. Ates  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. Azaro  461
Hydrocortisone and Human Lymphocytes: Increases in Cyclic Adenosine 3'5'-Monophosphate and Potentiation of Adenylate Cyclase-Activating Agents. Gianluca Marone, Lawrence M. Lichterstein 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, Kikuo Ochi, Koboku Hashimoto, Jun Inui and Yuji Miura  479
Presynaptic Effects of 2-Aminotetrabroms on Strial Dopaminergic Neurons. Irene S. Hoffman, Robert J. Naylor and Luigi X. Cereddu  486
Antidopaminergic Properties of Yohimbine. Bernard Scatton, Branimir Zivkovic and Jaroslav Dezek  496
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
Does Histamine Influence Vasodilation Caused by Prolonged Arterial Occlusion or Heavy Exercise? Alan Daniel and Carl R. Hong  533

No. 3, December 1980

The Effects of Chronic Methylenidate Treatment on Growth and Endocrine Function in the Developing Rat. George H. Gheelely, 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 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 [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. Tomoloni, L. Miram, J. Rheepts, 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. 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 Uterine Bladder. Robert M. Levin, Frances S. Shover 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-
Contents

broventricular Injection of Naloxone. JOSEPH C. YEUNG AND THOMAS A. RUDY 626
Multiplicative Interaction between Narcotic Agonisms Expressed at Spinal and Supraspinal Sites of Antinoceptive Action as Revealed by Concurrent Intrathecal and Intracerebroventricular Injections of Morphine. JOSEPH C. YEUNG AND THOMAS A. RUDY 633
Sterespecific 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. 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. TAKESHI KATSURAGI AND CHE SU 685
Actions of Mu, Kappa, Sigma, Delta and Antagonist/Agonist 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 LINDBERG, KONRAD ÖFELHOEFL, WOLFGANG WREDE AND JULITA WITZKE 710
Specific Changes in the Cholinergic System in Guinea-Pig Vas Deferens after Denervation. FUMIaki HATA, KUNIO TAKEYASHI, YOSHIO MORIKAWA, RON-TIAN Lai, HAJIME ISHIDA AND HIROSHI YOSHIDA 716
Index, Volume 215, October–December, 1980 723