CONTENTS


Cyclooxygenase Inhibition Unmasks the Full Antidiuretic Agonist Activity of the Vasopressin Antagonist, SK&F 101926, in Dogs. Christine R. Albrightson-Winslow, Nancy Caldwell, David P. Brooks, William F. Huffman, Frans L. Stassen and Lewis B. Kinter 366

Pharmacokinetics and Pharmacodynamics of Atrial Natriuretic Peptide After Bolus and Infusion Administration in the Isolated Perfused Rat Kidney. Michael E. Brier and George B. Harding 372


Differential Cross-Tolerance to Opioid Agonists in Morphine-Tolerant Pigeons Responding Under a Schedule of Food Presentation. Rebecca M. Craft, Mitchell J. Picker and Linda A. Dykstra 386


Unsurmountable Antagonism to 5-Hydroxytryptamine in Rat Kidney Results from Pseudoirreversible Inhibition Rather Than Multiple Receptors or Allosteric Receptor Modulation. Richard A. Bond, Alex G. Ornstein and David E. Clarke 401

In Vivo Metabolism of Atrial Natriuretic Peptide: Identification of Plasma Metabolites and Enzymes Responsible for Their Generation. Philip A. Krieter, Gillian M. Olins, Sheldon P. Verrett and Richard C. Durley 411

Benzodiazepine and Beta-Carboline Interactions with GABA<sub>a</sub> Receptor-gated Chloride Channels in Mammalian Cultured Spinal Cord Neurons. Ashok K. Mehta and Maharaj K. Ticku 418

Cysteamine Produces Dose-related Bidirectional Immunomodulatory Effects in Mice. Henry U. Bryant, John W. Holaday and Edward W. Bernton 424


Pentobarbital-Like Discriminative Stimulus Effects of N-Methyl-D-Aspartate Antagonists. Joyce Willetts and Robert L. Balster 438


Effect of 1,3-bis(2-Chloroethyl)-1-Nitrosourea on Cholephilic Dye Metabolism and Excretion in Anesthetized Rats. Dale Hoyt and Robert E. Larson 450

Sensitivity and Tolerance to Ethanol-Induced Hypothermia in Genetically Selected Mice. John C. Crabbe, Daniel J. Feller and Janet S. Dorow 456

Differential Modulation by [d-Pen<sup>2</sup>, d-Pen<sup>5</sup>]Enkephalin and Dynorphin A-(1–17) of the Inhibitory Bladder Motility Effects of Selected Mu Agonists in Vivo. Russell J. Sheldon, Linda Nunan and Frank Porreca 462

Kinins Contribute to the Contractile Effects of Rat Glandular Kallikrein on the Isolated Rat Uterus. Gabriel G. Orce, O. A. Carretero, G. Scicli and A. G. Scicli 470

Stereoisselective Uptake of Atenolol into Storage Granules Isolated from PC12 Cells. E. E. Bagwell, J. G. Webb, T. Walle and T. E. Gaffney 476

Effects of Acute and Chronic Acyclovir on Canine Renal Function. Alane S. Kimes, Karen Kumor, Karen McCullough, David Holtzclaw, Diana Teller, Dennis Dobyen and David Spector 483

Effects of Protein Kinase Inhibitor, 1-(5-Isoquinolinylsulfonyl)-2-Methylpiperazine, on Beta-2 Adrenergic Receptor Activation and Desensitization in Intact Human Lymphocytes. Ka Kit Hui and Jun Liang Yu 492


Effect of Continuous Exposure to Selective D<sub>1</sub> and D<sub>2</sub> Dopaminergic Agonists on Rotational Behavior in Supersensitive Mice. James D. Winkler and Benjamin Weiss 507


Contents Continued on iv
### Contents Continued from iii

**Alpha Adrenoceptor Agonist Stimulation of Oxygen Consumption in Rat Proximal and Distal Nephrons.** Frank A. Gesek and Jack W. Strandhoy .......................... 529

**Characterization of Serotonin-1B Receptors Negatively Coupled to Adenylate Cyclase in OK Cells, a Renal Epithelial Cell Line from the Opossum.** T. J. Murphy and David B. Bylund .......... 535


**Prophylaxis of Cyanobacterial and Mushroom Cyclic Peptide Toxins.** William H. Adams, Richard D. Stoner, Diana G. Adams, Harry Read, Daniel N. Slatkin and Harold W. Siegelman ........................................... 552


**Characterization of the Pharmacokinetic Interaction between Nifedipine and Ethanol in the Rat.** Kathleen M. Boje and Ho-Leung Fung ........................................... 567

**Pharmacological Characterization of Neural Mechanisms Regulating Mucosal Ion Transport in Mouse Jejunum.** Russell J. Sheldon, Margaret E. Malarchik, Deborah A. Fox, Thomas F. Burks and Frank Porreca .......... 572

**Human Fat Cell Alpha-2 Adrenoceptors. I. Functional Exploration and Pharmacological Definition with Selected Alpha-2 Agonists and Antagonists.** Jean Galitzky, Pascale Mauriege, Michel Berlan and Max Lafontan .......... 583

**Human Fat Cell Alpha-2 Adrenoceptors. II. Comparative Study of Partial and Full Agonist Binding Parameters using [3H]Clonidine and [3H]UK-14,304.** Jean Galitzky, Max Lafontan, Herve Paris and Michel Berlan .......... 592

**Pharmacokinetic Modeling of the Anticonvulsant Action of Phenobarbital in Rats.** Jasper Dingemanse, Joost B. M. M. van Bree and Meindert Danhof ........................................... 601

**Inhibition of Converting Enzyme in the Cerebrospinal Fluid of Rats after Oral Treatment with Converting Enzyme Inhibitors.** Peter Gohile, Hansjörg Urbach, Bernward Schölkens and Thomas Unger .......... 609

**Mexiletine-Quinidine Combination: Enhanced Antiarrhythmic and Electrophysiologic Activity in the Dog.** Henry J. Duff ........................................... 617

**Activation of Heart Sarcoplasmic Reticulum Ca**++-Stimulated Adenosine Triphosphatase by Insulin. Mahesh P. Gupta, Sheu-Lun Lee and Naranjan S. Dhalla ........................................... 623

**Metabolic Changes in Glutathione and Metallothionein In Newborn Rat Liver.** Karen R. Gallant and M. George Cherian ........................................... 631

**Influence of Enzyme Induction and Inhibition on the Oxidation of Nifedipine, Sparteine, Mephenytoin and Antipyrine in Humans as Assessed by a “Cocktail” Study Design.** J. H. M. Schellens, J. H. F. van der Wart, M. Brugman and D. D. Breimer ........................................... 638

**Interaction of 8-(N,N-Diethylamino)Octyl 3,4,5-Trimethoxybenzoate Hydrochloride, Ryanodine and Procaine with Muscarinic Cholinergic M3 Receptor Sites in Smooth Muscle.** Tetsuhiro Hisayama, Issei Takayanagi, Naomi Kumagai and Haruichi Kubo ........................................... 646


**Catechol and Indole Metabolism in Rostral Ventrolateral Medulla Change Synchronously with Changing Blood Pressure.** D. Bhaskaran and Curt R. Freed ........................................... 660

**Potentiation of 3-Methylcholanthrene Induction of Rat Hepatic Cytochrome P450IA1 by Dexamethasone in Vivo.** Amanda J. Sherratt, Duane E. Banet, Mark W. Linder and Russell A. Prough ........................................... 667