

CONTENTS

Differential Blocking Effects of Atropine and Gallamine on Negative Chronotropic and Dromotropic Responses to Vagus Stimulation in Anesthetized Dogs. Yasuyuki Furukawa, Don W. Wallick and Paul Martin	797
Release of Endogenous Dopamine by Stimulation of 5-Hydroxytryptamine₂-Receptors in Rat Striatum. Patrizio Blandina, Joseph Goldfarb, Barbara Craddock-Royal and Jack Peter Green	803
Echothiophate and Cogeners Decrease the Voltage Dependence of End-Plate Current Decay in Frog Skeletal Muscle. Edward G. Henderson, Debra J. Post-Munson, Linda S. Reynolds and Paul M. Epstein	810
Contributions of Various Rat Plasma Peptidases to Kinin Hydrolysis. Hiroyuki Ishida, A. Guillermo Scicli and Oscar A. Carretero	817
Transport of Histone Through the Blood-Brain Barrier. William M. Pardridge, Domingo Triguero and Jody Buciak	821
Kinetics of Drug Action in Disease States. XXXVII. Effects of Acute Fluid Overload and Water Deprivation on the Hypnotic Activity of Phenobarbital and the Neurotoxicity of Theophylline in Rats. Jianguo Zhi and Gerhard Levy	827
Electrophysiological Effects of Cocaine in the Mesoaccumbens Dopamine System: Repeated Administration. Douglas J. Henry, Margaret A. Greene and Francis J. White	833
DTG and (+)-3-PPP Inhibit a Ligand-Activated Hyperpolarization in Mammalian Neurons. Daniel H. Bobker, Ke-Zhong Shen, A. Surprenant and John T. Williams	840
Guanyl-5'-yl-imidodiphosphate Regulation of Ligand Binding to LTD₄ Receptors on Guinea Pig Lung Membranes. Carol A. Catanese, Ron C. Falcone and David Aharony	846
Neuropeptide Y Preferentially Potentiates Responses to Adrenergic Nerve Stimulation by Increasing Rate of Contraction. Hai Quoc Vu, Dénes Budai and Sue Piper Duckles	852
Defective Modulation of Noradrenergic Neurotransmission by Exogenous Prostaglandins in Aging Spontaneously Hypertensive Rats. Edwin K. Jackson, William A. Herzer and John A. Lawson	858
Effects of Δ-9-Tetrahydrocannabinol on Sensory Evoked Hippocampal Activity in the Rat: Principal Components Analysis and Sequential Dependency. Robert E. Hampson, Thomas C. Foster and Sam A. Deadwyler	870
Effect of an Alkylating Analog of Prazosin on α-1 Adrenoceptor Subtypes and Arterial Blood Pressure. Michael T. Piascik, Brent T. Butler, John W. Kusiak, Josef Pitha and Joseph R. Holtman, Jr.	878
Effect of Clonidine on Myocardial Cyclic GMP Content in the Mouse-Activation of Central and Peripheral α Adrenoceptors. Y. Vulliamoz and M. Verosky	884
[³H]CGS 21680, a Selective A₂ Adenosine Receptor Agonist Directly Labels A₂ Receptors in Rat Brain. Michael F. Jarvis, Rainer Schulz, Alan J. Hutchison, Un Hoi Do, Matthew A. Sills and Michael Williams	888
Effects of Prenatal Nicotine Exposure on Development of Central and Peripheral Cholinergic Neurotransmitter Systems. Evidence for Cholinergic Trophic Influences in Developing Brain. H. A. Navarro, F. J. Seidler, J. P. Eylers, F. E. Baker, S. S. Dobbins, S. E. Lappi and T. A. Slotkin	894
Neurochemical Effects of Amphetamine Metabolites on Central Dopaminergic and Serotonergic Systems. Lisa A. Matsuda, Glen R. Hanson and James W. Gibb	901
Enhanced Slow-Pressor Response to Angiotensin II in Spontaneously Hypertensive Rats. Ping Li and Edwin K. Jackson	909
Antagonism by Tricyclic Antidepressants of the Muscarinic Receptors Located on the Adrenergic Nerve Endings in Rabbit Heart Atrium. George T. Somogyi and James M. Perel	922
Relationship between Plasma Atriopeptin Concentration and Function in the Conscious Primate. Carl Hoegler, John McIntyre, Guillermo Zeballos, Jeffrey Shapiro, Maria DeLeonardis, Philip Needleman and Thomas Hintze	929
Gentamicin and Verapamil Compete for a Common Transport Mechanism in Renal Brush Border Membrane Vesicles. Paul P. Sokol, Kelly R. Huiatt, Peter D. Holohan and Charles R. Ross	937
Adenosine Receptor-Mediated Relaxation in Coronary Artery: Evidence for a Guanyl Nucleotide-Binding Regulatory Protein Involvement. Majd H. Sabouni, Daniel J. Cushing and S. Jamal Mustafa	943
Stereoselective Sulfation of <i>R,S</i>-4'-Hydroxypropranolol by Canine Hepatic Cytosol and Partially Purified Phenolsulfotransferases. David D. Christ and Thomas Walle	949
Rat Vascular Tissue Contains a Neutral Endopeptidase Capable of Degrading Atrial Natriuretic Peptide. Paul P. Tamburini, James A. Koehn, James P. Gilligan, Doeg Charles, Randi A. Palmesino, Robin Sharif, Colin McMartin, Mark D. Erion and Mark J. S. Miller	956

[³H]Zacopride Binding to 5-Hydroxytryptamine₂ Sites on Partially Purified Rabbit Enteric Neuronal Membranes. John C. Gordon, Dana S. Barefoot, Nathan S. Sarbin and Lawrence M. Pinkus	962
Effects of Paraventricular Hypothalamic Microinfusions of Kainic Acid on Cardiovascular and Renal Excretory Function in Conscious Rats. Changbae Jin and Robin William Rockhold	969
Spontaneous EEG Changes During Tobacco Abstinence and Nicotine Substitution in Human Volunteers. Wallace B. Pickworth, Ronald I. Herning and Jack E. Henningfield	976
Cyclooxygenase Inhibition in Lungs or in Neutrophils Attenuates Neutrophil-Dependent Edema in Rat Lungs Perfused with Phorbol Myristate Acetate. Laurie Carpenter-Deyo and Robert A. Roth	983
Different Mechanisms of Antagonism by Methocitramine of Two Neuronal Muscarinic Receptor-Mediated Second Messenger Responses. Norman H. Lee, Allison D. Fryer, Carlos Forray and Esam E. El-Fakahany	992
Depressor and Natriuretic Effects of M&B 22,948, a Guanosine Cyclic 3',5'-Monophosphate-Selective Phosphodiesterase Inhibitor. E. G. McMahon, M. A. Palomo, P. Mehta and G. M. Olins	1000
5-Hydroxytryptamine₂ Receptor Antagonist Activity of the Acid Metabolite (1-Isopropyl Dihydrolysergic Acid) of the Ergoline Ester, Serdexole (LY281067). Marlene L. Cohen, C. John Parli and Ray W. Fuller	1006
Permissive Role of Prostanoids in Acetylcholine-Induced Cerebral Vasoconstriction. W. M. Armstead, R. Mirro, D. W. Busija and C. W. Leffler	1012
Anti-Ischemic and Vasorelaxant Effects of the New Benzazepine Calcium Channel Blocker SQ 31,765. Gary J. Grover, Charles S. Parham, Paul G. Sleph and Suzanne Moreland	1020
Splanchnic Tissues are a Major Part of the Rapid Distribution Spaces of Inulin, Urea and Theophylline. Grzegorz S. Sedek, Tsuen Ih Ruo, Marilyn C. Frederiksen, James W. Frederiksen, Shou-Ren Shih and Arthur J. Atkinson, Jr.	1026
Pharmacodynamic Modeling of Verapamil Effects Under Steady-State and Nonsteady-State Conditions. Janice B. Schwartz, Davide Verotta and Lewis B. Sheiner	1032
Dissociation between Muscarinic Receptor-Mediated Inhibition of Adenylate Cyclase and Autoreceptor Inhibition of [³H]Acetylcholine Release in Rat Hippocampus. Thomas W. Vickroy and Evelyn D. Cadman	1039
Intracerebroventricular Physostigmine-Induced Analgesia: Enhancement by Naloxone, β-Funaltrexamine and Nor-binaltorphimine and Antagonism by Dynorphin A (1-17). James M. Fujimoto and Jodie J. Rady	1045
Opioid Drug Discrimination in Humans: Stability, Specificity and Relation to Self-Reported Drug Effect. Warren K. Bickel, George E. Bigelow, Kenzie L. Preston and Ira A. Liebson	1053
Selective Inhibition of Excitatory Amino Acids by Divalent Cations. A Novel Means for Distinguishing N-Methyl-D-Aspartic Acid-, Kainate- and Quisqualate-Mediated Actions in the Mouse Spinal Cord. Carl S. Hornfeldt and Alice A. Larson	1064
Altered Hepatic Junctional Permeability, Bile Acid Excretion and Glutathione Efflux during Oxidant Challenge. Nazzareno Ballatori and Anh T. Truong	1069
Angiotensin II Vascular Receptors in Fowl Aorta: Binding Specificity and Modulation by Divalent Cations and Guanine Nucleotides. John N. Stallone, Hiroko Nishimura and Mahesh C. Khosla	1076
Interactions of Noncompetitive Inhibitors with Nicotinic Receptors in the Rat Brain. Haruhiko Takayama, Maria Dorota Majewska and Edythe D. London	1083
Morphine (Intracerebroventricular) Activates Spinal Systems to Inhibit Behavior Induced by Putative Pain Neurotransmitters. Gary E. DeLander and Jeffrey J. Wahl	1090
Sympoadrenal, Cardiovascular and Blood Gas Responses to Highly Selective μ and δ Opioid Peptides. J. A. Kiritsy-Roy, L. Marson and G. R. Van Loon	1096
Comparative Electroencephalographic and Behavioral Effects of Phencyclidine, (+)-SKF 10,047 and MK-801 in Rats. Karen L. Marquis, Nicole C. Paquette, Richard P. Gussio and J. Edward Moreton	1104
AY-31,906, A Novel High Ceiling Diuretic: Characterization of Its Relative Potassium-Sparing Actions in Rats and Dogs. Dennis M. Ackerman, Mary M. Brady, Ann G. MacLean and Theodore M. Smith	1113
Extracellular Magnesium and Cardiotonic Steroid Toxicity in Isolated Myocardial Preparations. Ronny Kafiluddi, Richard H. Kennedy and Ernst Seifen	1120
Noncyclic Vasopressin Analogs are Effective Diuretics in Conscious Rats. Catherine F. T. Uyehara, Stephen Caltabiano, Lewis B. Kinter and Miklos Gellai	1128
Effect of the Novel Cholecystokinin Receptor Antagonist CR-13 92 on Cholecystokinin-Induced Antroduodenal and Pyloric Motor Activity <i>in Vivo</i>. H.-D. Allescher, E. E. Daniel, J. E. T. Fox, F. Kostolanska and L. A. Rovati	1134
Aspartate-Releasing Nerve Terminals in Rat Striatum Possess D-2 Dopamine Receptors Mediating Inhibition of Release. Guido Maura, Roberta Carbone and Maurizio Raiteri	1142
Differential Antagonism of α-1 and α-2 Adrenoceptor-Mediated Vasoconstrictor Responses by a Vasodilator Peptide, Urotensin I: Comparison with Nifedipine. Gert R. Bolt, Hiroo Itoh, Karl Lederis and Keith L. MacCannell	1147
Furosemide Directly Stimulates Prostaglandin E₂ Production in the Thick Ascending Limb of Henle's Loop. Akihiko Miyanoshita, Mitsuo Terada and Hitoshi Endou	1155
Differential Effects of Phorbol Ester on Prefrontal Cortex and Striatal Dopamine Terminals: Dependence on Rate and Duration of Stimulation. Reiza K. Talmaciu, Irene S. Hoffmann and Luigi X. Cubeddu	1160
Antiarrhythmic Properties of Tetrodotoxin Against Occlusion-Induced Arrhythmias in the Rat: A Novel Approach to the Study of the Antiarrhythmic Effects of Ventricular Sodium Channel Blockade. Shlomo Abraham, Gregory N. Beatch, Bernard A. MacLeod and Michael J. A. Walker	1166

Effects of Nicorandil on Cytosolic Calcium Concentrations in Quin2-loaded Rat Aortic Vascular Smooth Muscle Cells in Primary Culture. Hisashi Kai, Hideo Kanaide and Motoomi Nakamura	1174
Acetylcholinesterase Reactivators Antagonize Epileptiform Bursting Induced by Paraoxon in Guinea Pig Hippocampal Slices. W. Endres, A. Spuler and G. ten Bruggencate	1181
Lipolytic Action of a New <i>Alpha</i>-2 Adrenergic Antagonist of the Piperazinopyrimidine Family: RP 55462. Jean-Sébastien Saulnier-Blache, Mohammed Taouis, Michèle Dazats, André Uzan, Michel Berlan and Max Lafontan	1187
Mechanism of Lipolytic Action of a New <i>Alpha</i>-2 Adrenergic Antagonist of the Piperazinopyrimidine Family: RP 55 462. Jean-Sébastien Saulnier-Blache, Mohammed Taouis, Michèle Dazats, André Uzan, Michel Berlan and Max Lafontan	1193
Pharmacokinetics and Pharmacodynamics of Recombinant Human Granulocyte-Colony Stimulating Factor after Intravenous and Subcutaneous Administration in the Rat. Hideji Tanaka, Yuji Okada, Mayumi Kawagishi and Tomonobu Tokiwa	1199
Characterization and Distribution of P₂-Purinoceptor Subtypes in Rat Pulmonary Vessels. S. F. Liu, D. G. McCormack, T. W. Evans and P. J. Barnes	1204
Renal Handling of Enalapril and Enalaprilat: Studies in the Isolated Red Blood Cell-Perfused Rat Kidney. Inés A. M. de Lannoy, Rita Nespeca and K. Sandy Pang	1211
The Binary Toxin Produced by <i>Clostridium botulinum</i> Enters Cells by Receptor-Mediated Endocytosis to Exert Its Pharmacologic Effects. Lance L. Simpson	1223
Adenosine A₁ Receptor Activation Mediates Suppression of (-)-Bicuculline Methiodide-Induced Seizures in Rat Prepiriform Cortex. Paul H. Franklin, Ge Zhang, Eric D. Tripp and Thomas F. Murray	1229
Evidence from Functional and Autoradiographic Studies for the Presence of Tubular Dopamine-1 Receptors and Their Involvement in the Renal Effects of Fenoldopam. Sharath S. Hegde, Alberto Ricci, Francesco Amenta and Mustafa F. Lokhandwala	1237
Erratum	1246
Index, Volume 251, October-December 1989	1248