

# The Journal of PHARMACOLOGY AND EXPERIMENTAL THERAPEUTICS

## CONTENTS

Chronic Effects of Paraoxon on Transmitter Release and the Synaptic Contribution to Tolerance. Robert H. Thomsen and David F. Wilson .....	689
$\beta$ -Endorphin-Induced Stimulation of Central Sympathetic Outflow: Inhibitory Modulation by Central Noradrenergic Neurons. Nathan M. Appel and Glen R. Van Loon .....	695
Effect of Repeated Restraint Stress, Desmethylinipramine or Adrenocorticotropin on the <i>Alpha</i> and <i>Beta</i> Adrenergic Components of the cyclic AMP Response to Norepinephrine in Rat Brain Slices. Eric A. Stone, Jane E. Platt, Ariel S. Herrera and Kenneth L. Kirk .....	702
Myocardial Uptake Kinetics and Pharmacodynamics of Propafenone in the Isolated Perfused Rabbit Heart. Anne M. Gillis and Robert E. Kates .....	708
Relationship between Receptors Mediating Serotonin (5-HT) Contractions in the Canine Basilar Artery to 5-HT <sub>1</sub> , 5-HT <sub>2</sub> and Rat Stomach Fundus 5-HT Receptors. Marlene L. Cohen and Walter E. Colbert .....	713
Effect of PGD <sub>2</sub> on Cardiac Contractility: A Negative Inotropism Secondary to Coronary Vasoconstriction Conceals a Primary Positive Inotropic Action. Yuichi Hattori and Roberto Levi .....	719
Activation of <i>Alpha</i> -2 Adrenergic Receptors Augments Neurotransmitter-Stimulated cyclic AMP Accumulation in Rat Brain Cerebral Cortical Slices. Andrzej Pilc and S. J. Enna .....	725
(-)-[ <sup>3</sup> H]Desmethoxyverapamil Labels Multiple Calcium Channel Modulator Receptors in Brain and Skeletal Muscle Membranes: Differentiation by Temperature and Dihydropyridines. Ian J. Reynolds, Adele M. Snowman and Solomon H. Snyder .....	731
Effects of Propranolol on Catecholamine Synthesis and Uptake in the Central Nervous System of the Rat. Noreen Tuross and Robert L. Patrick .....	739
Relative Presynaptic and Postsynaptic Effects of Urapidil on Adrenoceptors in the Rabbit Pulmonary Artery. Robert Zelis .....	746
Hepatic UDP-Glucuronic Acid Regulation during Acetaminophen Biotransformation in Rats. Jerry J. Hjelle .....	750
Effects of Prolonged Isoproterenol Infusion on Cardiac and Vascular Responses to Adrenoceptor Agonists. J. Scott Hayes, Virginia L. Wyss, Kathryn S. Schenck and Marlene L. Cohen .....	757
Regulation of Rat Heart Membrane Adenylate Cyclase by Magnesium and Manganese. Susan F. Steinberg, Yung K. Chow and John P. Bilezikian .....	764
Structure-Activity Relationship of Lidocaine Homologs Producing Tonic and Frequency-Dependent Impulse Blockade in Nerve. Paula M. Bokesch, Claes Post and Gary Strichartz .....	773
Characterization of Substance P-Induced Contractions of Guinea-Pig Trachea. Peter E. Malo, Martin A. Wasserman, Theodore J. Torphy, Deborah J. Parris and David F. Pfeiffer .....	782
Acute, Stress-Induced Changes in the Benzodiazepine/ $\gamma$ -Aminobutyric Acid Receptor Complex Are Confined to the Chloride Ionophore. H. Havoundjian, S. M. Paul and P. Skolnick .....	787
Malotilate (Diisopropyl 1,3-Dithiol-2-Ylidenemalonate) Increases Liver <i>De Novo</i> Purine Synthesis and Amidophosphoribosyltransferase Activity. Mitsuo Itakura, Masami Tsuchiya, Kamejiro Yamashita and Toshitsugu Oda .....	794
Effect of Renal Denervation on the Antinatriuretic Response to Morphine Administration in Conscious Rats. L. A. Walker and J. C. Murphy .....	799
Inhibitory Effects of a Synthetic Atrial Peptide on Contractions and <sup>45</sup> Ca Fluxes in Vascular Smooth Muscle. Cathy J. Taylor and Kaushik D. Meisheri .....	803
Nicotine-Induced Tolerance and Receptor Changes in Four Mouse Strains. Michael J. Marks, Elena Romm, David K. Gaffney and Allan C. Collins .....	809
Desensitization of Rat Striatal Dopamine-Stimulated Adenylate Cyclase after Acute Amphetamine Administration. Joey V. Barnett and Ronald Kuczenski .....	820
Influence of Mebendazole on Insulin Secretion from Isolated Rat Islets. Walter S. Zawalich, Victoria Diaz and Susan Cote .....	826
Differential Recovery of <i>Beta</i> Adrenoceptor Antagonist and Agonist High Affinity Binding Sites in the Guinea-Pig Lung after Irreversible Blockade. Carol A. Nelson, Thomas F. Muther, Josef Pitha and Stephen P. Baker .....	830

Contents Continued on iv

This One



OFCJ-RDX-DDC6

<b>Biological Activity of the C-1, C-3, C-25, <math>\beta</math>-D-Glucopyranosides of 1,25-Dihydroxyvitamin D<sub>3</sub>.</b> James M. Londowski, Susan Bollman Kost, Werner Meier, Ludvik Labler and Rajiv Kumar .....	837
<b>Morphine Dependence and Diabetes. I. The Development of Morphine Dependence in Streptozotocin-Diabetic Rats and Spontaneously Diabetic C57BL/KsJ Mice.</b> Jennifer E. Shook and William L. Dewey .....	841
<b>Morphine Dependence and Diabetes. II. Alterations of Normorphine Potency in the Guinea-Pig Ileum and Mouse Vas Deferens and of Ileal Morphine Dependence by Changes in Glucose Concentration.</b> Jennifer E. Shook, James F. Kachur, David A. Brase and William L. Dewey .....	848
<b>Inhibition of Na<sup>+</sup> Flux in Chinese Hamster Ovary Cells and Swiss 3T3 Cells by a Potent New Derivative of Amiloride, Methylisopropyl-Amiloride.</b> Martha E. O'Donnell, Edward J. Cragoe, Jr. and John H. Becker .....	853
<b>Marihuana Smoking Suppresses Luteinizing Hormone in Women.</b> Jack H. Mendelson, Nancy K. Mello, James Ellingboe, Alice S. T. Skupny, Barbara W. Lex and Margaret Griffin .....	862
<b>Pulmonary Sequestration of Amiodarone and Desethylamiodarone.</b> Philippe Camus and Harihara M. Mehendale .....	867
<b>Thyroid Status during Postnatal Maturation of the Brain in Mice Genetically Bred for Differences in Ethanol Sensitivity.</b> Jeffrey K. Disbrow, Joseph M. Masserano and Norman Weiner .....	874
<b>Baclofen Suppresses Hippocampal Epileptiform Activity at Low Concentrations Without Suppressing Synaptic Transmission.</b> H. Scott Swartzwelder, Andrew C. Bragdon, Christopher P. Sutch, Brian Ault and Wilkie A. Wilson .....	881
<b>Leukotriene B<sub>4</sub> and 20-Hydroxyleukotriene B<sub>4</sub> Contract Guinea-Pig Trachea Strips <i>in Vitro</i>.</b> Charles Lawson, Stuart Bunting, Henry Holzgrefe and Frank Fitzpatrick .....	888
<b>Activation of Purified Soluble Guanylate Cyclase by Endothelium-Derived Relaxing Factor from Intrapulmonary Artery and Vein: Stimulation by Acetylcholine, Bradykinin and Arachidonic Acid.</b> Louis J. Ignarro, Richard G. Harbison, Keith S. Wood and Philip J. Kadowitz .....	893
<b>Canine Basilar Artery Contractions Mediated by 5-Hydroxytryptamine<sub>1A</sub> Receptors.</b> Stephen J. Peroutka, Shan Huang and George S. Allen .....	901
<b>Qualitative and Quantitative Comparison of the Cardiac Effects of Encainide and Its Three Major Metabolites in the Dog.</b> Jean-Marc Davy, Paul Dorian, Jean-Pierre Kantelip, Donald C. Harrison and Robert E. Kates .....	907
<b>Pharmacodynamics and Onset of Action of Esmolol in Anesthetized Dogs.</b> Check Y. Quon and Richard J. Gorczynski ..	912
<b>Inhibition of Renal Membrane Binding and Nephrotoxicity of Aminoglycosides.</b> P. D. Williams, G. H. Hottendorf and D. B. Bennett .....	919
<b>Behavioral and Neurochemical Evaluation of Phenylpropanolamine.</b> William L. Woolverton, Chris E. Johanson, Rene de la Garza, Susan Ellis, Lewis S. Seiden and Charles R. Schuster .....	926
<b>Comparison of Amphetamine Metabolism Using Isolated Hepatocytes from Five Species Including Human.</b> Carol E. Green, Susanna E. LeValley and Charles A. Tyson .....	931
<b>Pharmacological Properties of Acetorphan, a Parenterally Active "Enkephalinase" Inhibitor.</b> Jeanne-Marie Lecomte, Jean Costentin, Adina Vlaiculescu, Pierre Chaillet, Hélène Marçais-Collado, Catherine Llorens-Cortes, Marion Leboyer and Jean-Charles Schwartz .....	937
<b>Inhibition of Gastrointestinal Transit by Morphine in Rats Results Primarily from Direct Drug Action on Gut Opioid Sites.</b> Luciano Manara, Giancarlo Bianchi, Patrizia Ferretti and Alessandra Tavani .....	945
<b>Responses Mediated <i>Via</i> Beta-1 Adrenoceptors but not Beta-2 Adrenoceptors Exhibit Supersensitivity after Chronic Reserpine Pretreatment.</b> Paul F. Grassby and Kenneth J. Broadley .....	950
<b>Distribution and Metabolism of Nitroglycerin and Its Metabolites in Vascular Beds of Sheep.</b> P. A. Cossum, M. S. Roberts, A. C. Yong and D. Kilpatrick .....	959
<b>Uptake of Lipophilic Model Compounds into the Isolated Perfused Rat Epididymal Adipose Tissue.</b> Roger Gubser, Cristina Di Francesco and Marcel H. Bickel .....	967
<b>Ontogeny of Renal Alpha-1 and Alpha-2 Adrenoceptors in the Spontaneously Hypertensive Rat.</b> Adela Sánchez, María José Vidal, Rafael Martínez-Sierra and Jesús Sáiz .....	972
<b>Species Difference in the Muscarinic Receptors of Thoracic Aorta.</b> Kyozo Yamanaka, Shigeki Hashimoto and Ikunobu Muramatsu .....	980
<b>Modification of Serotonergic and Noradrenergic Neurotransmissions by Repeated Administration of Monoamine Oxidase Inhibitors: Electrophysiological Studies in the Rat Central Nervous System.</b> Pierre Blier, Claude de Montigny and Albert J. Azzaro .....	987
<b>Effect of Cholera Toxin and Pertussis Toxin on Opioid Tolerance and Dependence in the Guinea-Pig Myenteric Plexus.</b> Bettina Lux and Rüdiger Schulz .....	995
<b>Sodium Valproate, But Not Ethosuximide, Produces Use- and Voltage-Dependent Limitation of High Frequency Repetitive Firing of Action Potentials of Mouse Central Neurons in Cell Culture.</b> Michael J. McLean and Robert L. MacDonald .....	1001
<b>Rat Liver Microsomal Induction of the Oxidation of Drugs and Alcohols, and Sodium Dodecyl Sulfate-Gel Profiles after <i>in Vivo</i> Treatment with Pyrazole or 4-Methylpyrazole.</b> Graciela Krikun, Dennis E. Feerman and Arthur I. Cederbaum .....	1012