

# The Journal of PHARMACOLOGY AND EXPERIMENTAL THERAPEUTICS

## CONTENTS

<b>Impairment of Behavior and Acetylcholine Metabolism in Thiamine Deficiency.</b> L. L. Barclay, G. E. Gibson and J. P. Blass	537
<b>Evidence for a Functional Cholinergic Innervation of Cerebral Arteries.</b> Sue Piper Duckles	544
<b>The Effects of Disobutamide on Electrophysiologic Properties of Canine Cardiac Purkinje Fibers and Papillary Muscle.</b> Mary L. Dohrmann, Frank E. Harrell, Jr. and Harold C. Strauss	549
<b>Induction Effect of Phenobarbital on the Carbamazepine to Carbamazepine-10,11-Epoxy Pathway in Rhesus Monkeys.</b> I. H. Patel, P. Wedlund and R. H. Levy	555
<b>Effects of Quinidine on the Cardiac-Glycoside Sensitivity of Guinea-Pig and Rat Heart.</b> Dong-Hee Kim, Tai Akera and Theodore M. Brody	559
<b>The Direct Myocardial Energetic Response to Nitroglycerin in the Rabbit Heart.</b> Kenneth M. Borow, James F. Spann and Richard L. Coulson	566
<b>p-Chloro-N-Methylaniline Demethylase Activity in Liver and Extrahepatic Tissues of the Human Fetus and in Chick Embryo Liver.</b> Arleen B. Rifkind and Tonia Petschke	572
<b>Central Effects of Morphine, Levorphanol, (-)-Methadone and the Opioid-Like Peptides <math>\beta</math>-Endorphin and D-Alanine<sub>2</sub>-Methionine Enkephalinamide on Urine Volume Outflow and Electrolytes.</b> J. Pablo Huidobro-Toro and F. Huidobro	579
<b>Inhibition of Ouabain of Parathyroid Hormone-Stimulated Bone Resorption.</b> Nancy S. Krieger and Armen H. Tashjian, Jr.	586
<b>The Response and Sensitivity to Histamine of Respiratory Tissue from Normal and Ovalbumin-Sensitized Guinea Pigs: Effects of Cyclooxygenase and Lipoxygenase Inhibition.</b> Charles Brink, Pamela G. Duncan and James S. Douglas	592
<b>Radioimmunoassay and Pharmacokinetic Profile of Bupropion in the Dog.</b> Robert F. Butz, David H. Schroeder, Richard M. Welch, Nariman B. Mehta, Arthur P. Phillips and John W. A. Findlay	602
<b>Effects of Combinations of Phencyclidine and Pentobarbital on Fixed-Interval Performance in Rhesus Monkeys.</b> William L. Woolverton and Robert L. Balster	611
<b>Endogenous Opioid Peptide Inhibition of the Central Actions of Angiotensin.</b> J. Y. Summy-Long, L. C. Keil, K. Deen, L. Rosella and W. B. Severs	619
<b>Opiate Regulation of Angiotensin-Induced Drinking and Vasopressin Release.</b> J. Y. Summy-Long, L. C. Keil, K. Deen and W. B. Severs	630
<b>pH-Dependent Activity of H<sub>1</sub>- and H<sub>2</sub>-Histamine Receptors in Guinea-Pig Gallbladder.</b> W. W. La Morte, S. J. Hingston and W. E. Wise	638
<b>Neurotensin-Induced Antinociception in Mice: Antagonism by Thyrotropin-Releasing Hormone.</b> Albert J. Osbahr III, Charles B. Nemeroff, Daniel Luttinger, George A. Mason and Arthur J. Prange, Jr.	645
<b>Quaternary Naltrexone: Evidence for the Central Mediation of Discriminative Stimulus Effects of Narcotic Agonists and Antagonists.</b> Rita J. Valentino, Seymore Herling, James H. Woods, Fedor Medzihradsky and Herbert Merz	652
<b>Presynaptic Dopamine Receptor Stimulation in the Cardiovascular Actions of Lergotrile.</b> Richard J. Barrett and Mustafa F. Lokhandwala	660
<b>Effects of Ethanol Dependence on Chronic Spinal Rats Monitored by Spontaneous Hind Leg Movements.</b> Masako Nozaki, Geoffrey Ling and Michiko Okamoto	666
<b>Mechanisms of the Natriuretic and Diuretic Effects of Prostaglandin F<sub>2α</sub>.</b> Thomas E. Zook and Jack W. Strandhoy	674
<b>Alterations in Drug Distribution and Clearance Due to Obesity.</b> Darrell R. Abernethy, David J. Greenblatt, Marcia Divoll, Jerold S. Harmatz and Richard I. Shader	681
<b>Effects of <i>in Vivo</i> Amphetamine Administration on Dopamine Synthesis Regulation in Rat Brain Striatal Synaptosomes.</b> Robert L. Patrick, Alan L. Berkowitz and Anne C. Regenstein	686

Contents Continued on *iv*

<b>Characteristics of Binding of [<sup>3</sup>H]Ouabain to Smooth Muscle Sodium-Potassium Adenosine Triphosphatase and Quantitation of Sodium-Potassium Pump Sites.</b> William T. Gerthoffer and Julius C. Allen	692
<b>Glutathione and <math>\gamma</math>-Glutamyl Cycle Enzymes in Human Fetal Liver.</b> Douglas Rollins, Agne Larsson, Bengt Steen, Kamala Krishnaswamy, Lars Hagenfeldt, Peter Moldéus and Anders Rane	697
<b>Tissue Concentration of Na<sup>+</sup>,K<sup>+</sup>-Adenosine Triphosphatase and the Positive Inotropic Action of Ouabain in Guinea-Pig Heart.</b> Satoshi Yamamoto, Tai Akera, Dong-Hee Kim and Theodore M. Brody	701
<b>Positive Inotropic Action of <i>p</i>-Chloromercuribenzoate in Isolated Guinea-Pig Heart: Influence of Membrane Stabilizing Agents.</b> Kyosuke Temma, Tai Akera, Theodore M. Brody and Hiroshi Kondo	708
<b>Evidence for a Presynaptic Inhibitory Action of 5-Hydroxytryptamine in a Mammalian Sympathetic Ganglion.</b> N. J. Dun and A. G. Karczmar	714
<b>Effects of Gallamine Triethiodide on Membrane Currents in Amphibian and Mammalian Peripheral Nerve.</b> K. J. Smith and C. L. Schauf	719
<b>Potassium-Induced Release of [<sup>3</sup>H]Catecholamine from Brain: Effects of the Pre-Exposure to Catecholamine Uptake Inhibitors.</b> Dorothy Dembiec and Gerald Cohen	727
<b>The Effect of Phencyclidine on the Turnover Rate of Acetylcholine in Various Regions of Rat Brain.</b> T. F. Murray and D. L. Cheney	733
<b>The Effects of <i>p</i>-Chloroamphetamine Administration on Locomotor Activity and Serotonin in Neonatal and Adult Rats.</b> James B. Lucot, Joel Horwitz and Lewis S. Seiden	738
<b>Unexpected Differences between Mazindol and Its Homologs on Biochemical and Behavioral Responses.</b> Richard E. Heikkila, Felicitas S. Cabbat, Lawrence Manzino, Ronald G. Babington and William J. Houlihan	745
<b>The Effect of Captopril and Ascorbic Acid on Nonenzymatic Methionine Enkephalin Inactivation in the Guinea-Pig Ileum.</b> R. Greenberg, E. H. O'Keefe and M. J. Antonaccio	750
<b>A New Radioimmunoassay for Haloperidol: Direct Measurement of Serum and Striatal Concentrations.</b> Robert J. Wurzburger, Russell L. Miller, Eugene A. Marcum, Wayne A. Colburn and Sydney Spector	757
<b>Dose-Dependent Pharmacokinetics of Metoclopramide in Rat: An Effect of Hamoperfusion?</b> Yun K. Tam, James E. Axelson, Barbara McErlane, Roberta Ongley and John D. E. Price	764
<b>Temperature Dependence of Ethanol Depression in Mice.</b> Richard D. Malcolm and Ronald L. Alkana	770
<b>Influence of Protein Deficiency on Lysosome Stabilizing and Paw Edema Suppressant Activity of Steroidal and Nonsteroidal Anti-Inflammatory Agents in Rats.</b> T. L. Yue and D. R. Varma	776
<b>Canrenone as a Partial Agonist at the Digitalis Receptor Site of Sodium-Potassium-Activated Adenosine Triphosphatase.</b> P. Finotti and P. Palatini	784
<b>Radioimmunoassay of 5-Hydroxyindole Acetic Acid Using an Iodinated Derivative.</b> J. J. Puizillout and M. A. Delaage	791
<b>Characterization of Glucagon-Induced Changes in Rate, Contractility and Cyclic Levels in Isolated Cardiac Preparations of the Rat and Guinea Pig.</b> Kathleen M. MacLeod, Robert L. Rodgers and John H. McNeill	798
<b>Evidence for a Synergistic Interaction between Phenytoin and Phenobarbital in Experimental Animals.</b> Yoshinobu Masuda, Yuzo Utsui, Yuko Shiraiishi, Tadahiko Karasawa, Kouichi Yoshida and Masanao Shimizu	805
<b>Structure-Activity Relationship for Grayanotoxin Derivatives in Frog Skeletal Muscle.</b> Tetsuya Masutani, Issei Seyama, Toshio Narahashi and Junkichi Iwasa	812
<b>Effect of Antimorphine Antibodies on an <i>in Vitro</i> Correlate of Antagonist-Precipitated Opiate Abstinence.</b> Anthony K. Killian, Charles R. Schuster and Bruce H. Wainer	820
<b>Nicotine Action on Rat Colon.</b> Carmelo Romano	828
<b>The Actions of Xylamine on Central Noradrenergic Neurons.</b> Mark W. Dudley, Larry L. Butcher, R. Craig Kammerer and Arthur K. Cho	834
<b>Intracortical Spread of Exogenous Catecholamines: Effective Concentration for Modifying Cortical Plasticity.</b> Takuji Kasamatsu, Toru Itakura and Gösta Jonsson	841
<b><i>In Vivo</i> and <i>in Vitro</i> Antiarrhythmic and Arrhythmogenic Effects of N-Acetyl Procainamide.</b> Kenneth H. Dangman and Brian F. Hoffman	851
<b>Conjugation of <i>p</i>-Nitrophenol in the Perfused Rat Liver: The Effect of Substrate Concentration and Carbohydrate Reserves.</b> Lester A. Reinke, Steven A. Belinsky, Roxanne K. Evans, Frederick C. Kauffman and Ronald G. Thurman	863
<b>Erratum</b>	871
<b>Index, Volume 217, April-June, 1981</b>	873