

# CONTENTS OF VOLUME 219

No. 1, October 1981

The Lung Parenchymal Strip: A Reappraisal. CHARLES BRINK, PAMELA DUNCAN AND JAMES S. DOUGLAS	1
Acute Effect of Ethanol on Hepatic First-Pass Elimination of Propoxyphene in Rats. TAKAYOSHI OGUMA AND GERHARD LEVY	7
Dose- and Time-Dependent Elimination of Acetaminophen in Rats: Pharmacokinetic Implications of Cosubstrate Depletion. RAYMOND E. GALINSKY AND GERHARD LEVY	14
Alterations in Prejunctional Adrenoceptor Function in Guinea-Pig and Rat Vas Deferens after Chronic Ganglionic Blockade. ROBERT D. SAX AND THOMAS C. WESTFALL	21
The Nuclear Envelope as a Site of Glucuronyltransferase in Rat Liver: Properties of and Effect of Inducers on Enzyme Activity. T. H. ELMAMLOUK, H. MUKHTAR AND J. R. BEND	27
The Metabolism and Excretion of Styrene Oxide-Glutathione Conjugates in the Rat and by Isolated Perfused Liver, Lung and Kidney Preparations. JOHN W. STEELE, BORIS YAGEN, OSCAR HERNANDEZ, RICHARD H. COX, BRIAN R. SMITH AND JOHN R. BEND	35
Effect of Heparin or Salicylate Infusion on Serum Protein Binding and on Concentrations of Phenytoin in Serum, Brain and Cerebrospinal Fluid of Rats. RUBY C. CHOU AND GERHARD LEVY	42
Acetaminophen as an Internal Standard for Calibrating <i>in Vivo</i> Electrochemical Electrodes. MICHAEL E. MORGAN AND CURT R. FREED	49
Effect of Volume Expansion and Furosemide Diuresis on the Renal Clearance of Digoxin. THOMAS P. GIBSON AND ANTONIO P. QUINTANILLA	54
Conditioned Taste Aversion and Operant Behavior in Rats: Effects of Cocaine, Apomorphine and Some Long-Acting Derivatives. G. D. D'MELLO, D. M. GOLDBERG, S. R. GOLDBERG AND I. P. STOLERMAN	60
Structural Specificity in the Renal Tubular Transport of Tyrosine. WALTER M. WILLIAMS AND KEE C. HUANG	69
The Effect of Metabolic Inhibitors on Strophanthidin-Induced Arrhythmias and Contracture in Cardiac Purkinje Fibers. MOHIT L. BHATTACHARYYA AND MARIO VASSALLE	75
Pharmacological Evidence for a Role of Brain Serotonin in the Maintenance of Plasma Renin Activity in Unanesthetized Rats. LOUIS D. VAN DE KAR, CHARLES W. WILKINSON AND WILLIAM F. GANONG	85
Electrophysiological Response of Cerebellar Purkinje Neurons to Leukotriene D <sub>4</sub> and B <sub>4</sub> . MICHAEL R. PALMER, W. RODNEY MATHEWS, BARRY J. HOFFER AND ROBERT C. MURPHY	91
Evidence for the Transsynaptic Activation of Tyrosine Hydroxylase in Rabbit Portal Vein Mediated through a Cyclic AMP-Independent Mechanism. GLENN S. TAKIMOTO AND NORMAN WEINER	97
Calcium Content and Contracture in Isolated Muscle of Malignant Hyperthermia Pigs. T. E. NELSON AND A. B. CHAUSMER	107
The Measurement of Antagonist Potency and the Importance of Selective Inhibition of Agonist Uptake Processes. TERRY P. KENAKIN AND DEBORAH BEEK	112
The Effect of Chronic Lithium Treatment on Rat Pineal N-Acetyltransferase Rhythm. EITAN FRIEDMAN AND FRANK D. Yocca	121
<i>In Vivo</i> Effects of the Cytochrome P-450 Suicide Substrate 2-Isopropyl-4-Pentenamide (Allylisopropylacetamide) on the Disposition and Metabolic Pattern of Propranolol. BERNIE SILBER, BRUCE A. MICO, PAUL R. ORTIZ DE MONTELLANO, DANIELE M. DOLS AND SIDNEY RIEGELMAN	125
Aberrant Pharmacokinetics of Harmol in the Perfused Rat Liver Preparation: Sulfate and Glucuronide Conjugations. K. SANDY PANG, HENK KOSTER, INA C. M. HALSEMA, EGBERT SCHOLTENS AND GERARD J. MULDER	134
The Pharmacokinetics of Metoclopramide in Rats with Experimental Renal and Hepatic Dysfunction. YUN K. TAM, JAMES E. AXELSON, BARBARA McERLANE, RAM P. KAPIL, K. WAYNE RIGGS, ROBERTA ONGLEY AND JOHN D. E. PRICE	141
Mechanism of the Inhibitory Action of Phenelzine on Microsomal Drug Metabolism. SAMAR F. MUAKKASSAH AND WILLIAM C. T. YANG	147
Potency, Duration of Action and pA <sub>2</sub> in Man of Intravenous Naloxone Measured by Reversal of Morphine-Depressed Respiration. ROBERT D. KAUFMAN, MARGRIT L. GABATHULER AND J. WELDON BELLVILLE	156
The Involvement of the Sodium-Potassium Pump in Postjunctional Supersensitivity of the Guinea-Pig Vas Deferens as Assessed by [ <sup>3</sup> H]Ouabain Binding. STANLEY K. WONG, DAVID P. WESTFALL, JEFFREY S. FEDAN AND WILLIAM W. FLEMING	163
Differential Antagonism by Metergoline of the Behavioral Effects of Indolealkylamine and Phenethylamine Hallucinogens in the Rat. R. L. COMMISSARIS, W. H. LYNES, K. E. MOORE AND R. H. RECH	170
Modification of Environmentally Cued Tolerance to Ethanol in Mice. CHRISTINE L. MELCHIOR AND BORIS TABAKOFF	175
Relationship between Cyclic Guanosine 3':5'-Monophosphate Formation and Relaxation of Coronary Arterial Smooth Muscle by Glyceryl Trinitrate, Nitroprusside, Nitrite and Nitric Oxide: Effects of Methylene Blue and Methemoglobin. CARL A. GRUETTER, DARLENE Y. GRUETTER, JEFFREY E. LYON, PHILIP J. KADOWITZ AND LOUIS J. IGNARRO	181
Studies on the Interaction of Propranolol and Tetrodotoxin on <i>dV/dt</i> <sub>max</sub> of Canine Purkinje Fiber Action Potentials. MARIA A. CORDOVA, ERVIN E. BAGWELL AND GEORGE E. LINDENMAYER	187
The Binding and Analgesic Properties of a <i>Sigma</i> Opiate, SKF 10,047. GAVRIL W. PASTERNAK, MARY CARROLL-BUATTI AND KATHARYN SPIEGEL	192
Effects of Chlordiazepoxide and <i>d</i> -Amphetamine on Responding of Squirrel Monkeys Maintained under Concurrent or Second-Order Schedules of Response-Produced Food or Electric Shock Presentation. J. E. BARRETT, J. O. VALENTINE AND J. L. KATZ	199
Practolol Metabolism. III. Irreversible Binding of [ <sup>14</sup> C]Practolol Metabolite(s) to Mammalian Liver Microsomes. T. C. ORTON AND C. LOWERY	207
Central Cardiovascular Effects of Taurine: Comparison with Homotaurine and Muscimol. PASCAL BOUSQUET, JOSIANE FELDMAN, ROGER BLOCH AND JEAN SCHWARTZ	213
Cardiovascular Effects of Lysophosphatidic Acid and Its Structural Analogs in Rats. AKIRA TOKUMURA, TETSUYA KUME, KENJI FUKUZAWA AND HIROAKI TSUKATANI	219

Adrenochrome-Induced Coronary Artery Constriction in the Rat Heart. M. KARMAZYN, R. E. BEAMISH, L. FLIEGEL AND N. S. DHALLA	225
Cardiac Responsiveness to <i>Alpha</i> and <i>Beta</i> Adrenergic Amines: Effects of Carbachol and Hypothyroidism. WILLIAM W. SIMPSON, ROBERT L. RODGERS AND JOHN H. MCNEILL	231
Evidence Against the Presence of Presynaptic Inhibitory Adenosine Receptors in the Cat Nictitating Membrane. M. A. LUCHELLI-FORTIS, B. B. FREDHOLM AND S. Z. LANGER	235
Beneficial Effects of a New Carbacyclin Derivative, ZK 36 374, in Acute Myocardial Ischemia. KARSTEN SCHRÖR, RALF OHLENDORF AND HARALD DARIUS	243
The Ontogeny of the Autonomic Innervation and Contractile Response of the Rabbit Urinary Bladder. ROBERT M. LEVIN, S. BRUCE MALKOWICZ, DAVID JACOBOWITZ AND ALAN J. WEIN	250
Change in Sensitivity to Insulin Hypoglycemic Convulsions after Gold Thioglucose Treatment: Time Course of Development. JOAN L. LUBY, JOHN F. HOLLIDAY, KATHY W. FISH AND MARY ANN MARRAZZI	258
Effect of 4-Aminopyridine on Nerve Terminal Action Potentials. ELLEN S. BURLEY AND ROBERT S. JACOBS	268
Morphine: A Dual Effect at the Canine Choledochoduodenal Junction. ELSIE ERNEST JOHNSON	274

## No. 2, November 1981

Levels of Acetaminophen and Its Metabolites in Mouse Tissues After a Toxic Dose. L. J. FISCHER, M. D. GREEN AND A. W. HARMAN	281
Effect of a Prostaglandin F <sub>2a</sub> Analog on Gastric Emptying and Secretion in Rhesus Monkeys. P. T. SHEA-DONOHUE, D. NOMPLEGGI AND A. DUBOIS	287
<i>Alpha</i> Adrenergic Receptor Subtypes in Rabbit Uterus: Mediation of Myometrial Contraction and Regulation by Estrogens. BRIAN B. HOFFMAN, THOMAS N. LAVIN, ROBERT J. LEFKOWITZ AND ROBERT R. RUFFOLO, JR.	290
Possible Regulatory Role of Dynorphin on Morphine- and $\beta$ -Endorphin-Induced Analgesia. F. CANKAT TULUNAY, MIN-FENG JEN, JAW-KANG CHANG, HORACE H. LOH AND NANCY M. LEE	296
Endogenous Prostacyclin Contributes to the Efficacy of a Thromboxane Synthetase Inhibitor for Preventing Coronary Artery Thrombosis. JAMES W. AIKEN, RONALD J. SHEBUSKI, OLGA V. MILLER AND ROBERT R. GORMAN	299
The Disposition of Acyclovir in Different Species. PAULO DE MIRANDA, HARVEY C. KRASNY, DONNA A. PAGE AND GERTRUDE B. ELION	309
Chloramphenicol Succinate Pharmacokinetics in <i>Macaca nemestrina</i> : Dose Dependency Study. JEFFREY R. KOUP, ALLAN WEBER AND ARNOLD L. SMITH	316
<i>Alpha</i> Adrenergic-Mediated Renin Release is Prostaglandin-Dependent. RICHARD D. OLSON, ALAN S. NIES AND JOHN G. GERBER	321
Effect of Prostacyclin and 9 $\alpha$ ,11 $\alpha$ -Epoxymethanoprostaglandin H <sub>2</sub> on Calcium and Magnesium Fluxes and Tension Development in Canine Intralobar Pulmonary Arteries and Veins. STAN GREENBERG	326
Cyclic Guanosine 3':5'-Monophosphate Accumulation and <sup>45</sup> Ca-Uptake by Rat Superior Cervical Ganglia during Preganglionic Stimulation. ROBERT L. VOLLE, LINDA F. QUENZER, BRIAN A. PATTERSON, KARIM A. ALKADHI AND EDWARD G. HENDERSON	338
Effects of Intraventricular Morphine and Enkephalins on Schedule-Controlled Behavior in Nondependent, Morphine-Dependent and Postdependent Rats. LINDA S. BRADY AND STEPHEN G. HOLTZMAN	344
Reduction of Plasma Urate Levels in the Cockerel with Polyethylene Glycol-Uricase. ABRAHAM ABUCHOWSKI, DENNIS KARP AND FRANK F. DAVIS	352
A Comparison of the Behavioral Effects of <i>l</i> - and <i>dl</i> -Cathinone and <i>d</i> -Amphetamine. CHRIS E. JOHANSON AND CHARLES R. SCHUSTER	355
Nantradol Hydrochloride: Pharmacokinetics and Behavioral Effects after Acute and Chronic Treatment. HUGH M. MCLHENNY, RICHARD W. MAST, ROSS JOHNSON AND GEORGE M. MILNE	363
Adenosine Regulation of Cyclic 3',5'-Adenosine Monophosphate Formation in Rat Spinal Cord. DAVID J. JONES	370
Attenuation by Arachidonic Acid of the Effect of Vasoconstrictor Stimuli in the Canine Kidney. H. SUŠIĆ AND K. U. MALIK	377
Role of Reducing Equivalents from Fatty Acid Oxidation in Mixed-Function Oxidation: Studies with 2-Bromooctanoate in the Perfused Rat Liver. MARION DANIS, FREDERICK C. KAUFFMAN, ROXANNE K. EVANS AND RONALD G. THURMAN	383
Pharmacological and Therapeutic Properties of Carrier Bound Methotrexate against Tumor Confined to a Third Space Body Compartment. BARBARA C. F. CHU AND STEPHEN B. HOWELL	389
<i>Beta</i> Adrenergic Blockade with Propranolol in Conscious Euthyroid and Thyrotoxic Calves: Dosage Requirements and Effects on Heart Rate and Left Ventricular Performance. STEVEN GOLDMAN, MARCEY OLAJOS, HENRY PIENIASZEK, DONALD PERRIER, MICHAEL MAYERSOHN AND EUGENE MORKIN	394
Renal <i>Alpha</i> -1 and <i>Alpha</i> -2 Adrenergic Receptors: Biochemical and Pharmacological Correlations. JAMES M. SCHMITZ, ROBERT M. GRAHAM, ARTHUR SAGALOWSKY AND WILLIAM A. PETTINGER	400
The Role of Volume Depletion, Antidiuretic Hormone and Angiotensin II in the Furosemide-Induced Decrease in Mesenteric Conductance in the Dog. SUSAN L. SCHMITT, KEVIN TAYLOR, ROBERT SCHMIDT, DIANNA VAN ORDEN AND HAROLD E. WILLIAMSON	407
Comparative Effect of Ibuprofen on Endothelial and Platelet Prostaglandin Synthesis. WILLIAM M. PARKS, JOHN C. HOAK AND ROBERT L. CZERVIONKE	415
Effects of Nitroprusside-Induced Hypotension on Sympathetic Nerve Activity, Tyrosine Hydroxylase Activity and [ <sup>3</sup> H]Norepinephrine Uptake in Rabbit Vascular Tissues. GLENN S. TAKIMOTO AND NORMAN WEINER	420
Heavy Metal Inhibition of <i>p</i> -Aminohippurate Transport in Flounder Renal Tissue: Sites of H <sub>2</sub> Cl <sub>2</sub> Action. DAVID S. MILLER	428
Renal Tubule Transport and Electrolyte Effects of Amiloride in the Chicken. KAMEL BESSEGHIR AND BARBARA RENNICK	435
Inhibition of Bradykinin Stimulation of Renal Medullary Prostaglandin E <sub>2</sub> Synthesis by Phosphodiesterase Inhibitors. NEVILLE S. RAPP, TERRY V. ZENSER, MICHAEL B. MATTAMMAL AND BERNARD B. DAVIS	442

<i>Alpha</i> and <i>Beta</i> Adrenergic Effects of the Stereoisomers of Dobutamine. ROBERT R. RUFFOLO, JR., TERRI A. SFRADLIN, G. DONALD POLLACK, JAMES E. WADDELL AND PATRICK J. MURPHY	447
Histamine H <sub>2</sub> -Receptor Antagonism by Propantheline and Derivatives. LINDSAY B. HOUGH AND LOUIS A. BARKER	453
Fluoride Inhibition of the Hydro-Osmotic Response of the Toad Urinary Bladder to Antidiuretic Hormone. THOMAS YORIO, RICHARD SINCLAIR AND SHERYL HENRY	459
Kinetics of Sodium Channel Modification by the Insecticide Tetramethrin in Squid Axon Membranes. ALBERT E. LUND AND TOSHIO NARAHASHI	464
The Histamine-Like Effects of Tolazoline and Clonidine: Evidence against Direct Activity at Histamine Receptors. TERRY P. KENAKIN AND JAMES A. ANGUS	474
Inferences of the Nature of the Apical Sodium Entry Site in Frog Skin Epithelium. DALE JOHN BENOS AND JEFFREY W. H. WATTHEY	481
The Septal-Hippocampal Cholinergic Pathway: Role in Antagonism of Phenobarbital Anesthesia and Regulation by Various Afferents. N. BRUNELLO AND D. L. CHENEY	489
Cyclic AMP, Morphine, Met-Enkephalin and Neuronal Firing. DAVID A. HOSFORD AND HENRY J. HAIGLER	496
Ethacrynic Acid Inhibits Transcellular NaCl Reabsorption in Dog Kidneys in Doses of 1 to 10 mg·kg <sup>-1</sup> and Proximal Bicarbonate-Dependent Reabsorption at Higher Doses. PETTER A. STEEN, ANDERS HARTMANN AND FREDRIK KIIL	505
Heart Rate Lowering Effects of N,N-di- <i>n</i> -Propyl-Dopamine in Rats: Evidence for Stimulation of Central Dopamine Receptors Leading to Inhibition of Sympathetic Tone and Enhancement of Parasympathetic Outflow. ICILIO CAVERO, FRANÇOISE LEFÈVRE-BORG AND ROBERTO GOMENI	510
Long-Term Effects of Captopril on Cellular Sodium Content and Mechanical Properties of Aortic Smooth Muscle from Spontaneously Hypertensive Rats. KATSUAKI ITO, HIROYUKI KOIKE, MASAOKI MIYAMOTO, HIROSHI OZAKI, TADASHI KISHIMOTO AND NORIMOTO URAKAWA	520
Effects of Ryanodine on the Ionic Currents and the Calcium Conductance in Crab Muscle Fibers. CHRISTIANE GOBLET AND YVONNE MOUNIER	526
Morphine-Like Action of Enkephalin Analog FK 33-824 on Motility of the Isolated Rat Colon. U. SCHEURER, E. DRACK, L. VARGA AND F. HALTER	534
Pre- and Postsynaptic <i>Alpha</i> Adrenoceptor Selectivity Studies with Yohimbine and Its Two Diastereoisomers Rauwolfscine and Corynanthine in the Anesthetized Dog. N. B. SHEPPERSON, NICOLE DUVAL, R. MASSINGHAM AND S. Z. LANGER	540
Functional Opiate Receptors in the Guinea-Pig Ileum, Their Differentiation by Means of Selective Tolerance Development. RÜDIGER SCHULZ, MICHAEL WÜSTER, PATRICIA RUBINI AND ALBERT HERZ	547
Pharmacological Studies of Sensitized Canine Pulmonary Blood Vessels. SIOW-KEE KONG AND NEWMAN L. STEPHENS	551
Effects of Troleandomycin Administration on Cholesterol 7 $\alpha$ -Hydroxylase Activity and Bile Secretion in Rats. MICHELE LE DAFNIET, DOMINIQUE PESSAYRE, LOETITIA LE QUERNEC AND SERGE ERLINGER	558
Bromobenzene Epoxidation Leading to Binding on Macromolecular Protein Sites. SERRINE S. LAU AND VINCENT G. ZANNONI	563
Effects of Rubidium on Contractility and Sodium Pump Activity in Guinea-Pig Ventricle. ROBERT G. KNIGHT AND THOMAS M. NOSEK	573
Interaction between Impulse-Flow and $\Delta^9$ -Tetrahydrocannabinol Within the Septal-Hippocampal Cholinergic Pathway of Rat Brain. CHARLES LINDAMOOD III AND BRENDA K. COLASANTI	580

### No. 3, December 1981

Isolated Parietal Cells: Histamine Response and Pharmacology. ELIZABETH DIAL, W. JOSEPH THOMPSON AND GARY C. ROSENFELD	585
Inhibition of Intestinal Secretion in the Dog: A New Approach for the Management of Diarrheal States. GARY W. GULLIKSON, ESAM Z. DAJANI AND ROBERT G. BIANCHI	591
Sex-Dependent Metabolism and Biliary Excretion of [2,4- <sup>14</sup> C]Dinitrotoluene in Isolated Perfused Rat Livers. JAMES A. BOND, MICHELE A. MEDINSKY, JOHN G. DENT AND DOUGLAS E. RICKERT	598
Neuropharmacological Characterization of a Taurine Antagonist. GEORGE G. YARBROUGH, DILIP K. SINGH AND DAVID A. TAYLOR	604
Modulation of Sodium Channels of Squid Nerve Membranes by Grayanotoxin I. ISSEI SEYAMA AND TOSHIO NARAHASHI	614
The Effect of Dietary Lipid on the Binding of [ <sup>3</sup> H]Dihydroalprenolol and Adenylate Cyclase Activity in Rat Atria. LEON C. WINCE AND CHARLES O. RUTLEDGE	625
Biotransformation and Biological Activity of N-(4-Hydroxyphenyl)Retinamide Derivatives in Rodents. BRIAN N. SWANSON, DIANNE L. NEWTON, PETER P. ROLLER AND MICHAEL B. SPORN	632
The Mechanism and Site of Action of Ketamine on Skeletal Muscle. MOHAMMED A. MALEQUE, JORDAN E. WARNICK AND EDSON X. ALBUQUERQUE	638
Pharmacological Evaluation in Conscious Dogs of Factors Involved in the Renal Vasodilator Effect of Captopril. P. C. WONG, B. G. ZIMMERMAN, E. KRAFT, G. KOUNENIS AND P. FRIEDMAN	646
A Microelectrophysiological Analysis of the Pharmacodynamic Basis for Quinidine-Propranolol Antiarrhythmic Potentiation. D. H. S. IANSMITH, J. P. BANDURA AND C. B. NASH	651
Prostaglandin Endoperoxide Synthetase-Dependent Cooxidation of Acetaminophen to Intermediates which Covalently Bind <i>in Vitro</i> to Rabbit Renal Medullary Microsomes. JEFF A. BOYD AND THOMAS E. ELING	659
Dose-Dependent Pharmacokinetics and Renal Handling of Zomepirac in Rhesus Monkeys. PATRICK J. O'NEILL, KARL A. YORGEY AND LINDA A. MCKOWN	665
Nonlinear Pharmacokinetics of Misonidazole and Desmethylmisonidazole in the Isolated Perfused Rat Liver. M. E. MCMANUS, A. MONKS, J. M. COLLINS, R. WHITE AND B. M. STRONG	669
Collagen Lysyl Oxidase Activity in the Lung Increases during Bleomycin-Induced Lung Fibrosis. DAVID F. COUNTS, JOHN N. EVANS, THOMAS A. DIPETRILLO, KENNETH M. STERLING, JR. AND JASON KELLEY	675

Differential Effects of Ibuprofen and Indomethacin in the Regional Circulation of the Dog. LARRY P. FEIGEN, LUCY W. KING, JAMA RAY, WILLIAM BECKETT AND PHILIP J. KADOWITZ	679
Cardiovascular Effects of a 4'-Methylthio Analog of Propranolol. MICHAEL P. RUSSELL, PHILIP J. PRIVITERA, THOMAS WALLE, NORTON P. PEET, PERRY V. HALUSHKA AND THOMAS E. GAFFNEY	685
Comparative Interaction of Sulfinpyrazone and Phenylbutazone with Racemic Warfarin: Alteration <i>in Vivo</i> of Free Fraction of Plasma Warfarin. ROBERT A. O'REILLY AND DARKLIS A. GOULART	691
Aging and the Regulation of Striatal Dopaminergic Mechanisms in Mice. PATRICK K. RANDALL, JAMES A. SEVERSON AND CALEB E. FINCH	695
Modulation of the Stimulation-Evoked Release of [ <sup>3</sup> H]Dopamine in the Rabbit Retina. M. L. DUBOCOVICH AND N. WEINER	701
Antipsychotic Drug Effects on Dopamine and Serotonin Receptors: <i>In Vitro</i> Binding and <i>in Vivo</i> Turnover Studies. NICHOLAS G. BACOPOULOS	708
Effects of Papaverine on Ca <sup>++</sup> -Dependent Action Potentials in Guinea-Pig Myocardium Depolarized by Potassium. MICHAEL C. SANGUINETTI AND THEODORE C. WEST	715
Relationship between Cyclooxygenase Activity (COA) Inhibition and Stimulation of Ventilation by Salicylate. SAMUEL T. KUNA AND SANFORD LEVINE	723
Adjuvant Polyarthritis. VI. Effect of Oxonate-Induced Hyperuricemia on the Development of Acute Inflammation, Immune Response and Adjuvant Arthritis. YI-HAN CHANG AND RODNEY BLUESTONE	731
Microsomal Nitroreductase Activity of Rabbit Kidney and Bladder: Implications in 5-Nitrofurantoin-Induced Toxicity. TERRY V. ZENSER, MICHAEL B. MATTAMMAL, MARK O. PALMIER AND BERNARD B. DAVIS	735
Concentration-Dependence of Disopyramide Binding to Plasma Protein and Its Influence on Kinetics and Dynamics. JOHN J. LIMA, HARRISIOS BOUDOULAS AND MARVIN BLANFORD	741
Adrenergic Nerve-Blocking Activity of a new Guanidine Derivative. S. M. KIRPEKAR, A. G. GARCIA AND J. C. PRAT	748
Inhibition of the Expression of the "A" System of Amino Acid Transport by Anti-Inflammatory Drugs during Cell Culture Growth and Mitogenic Stimulation of Thymus Lymphocytes. BARBARA M. BAYER, ALVAIR P. ALMEIDA AND MICHAEL A. BEAVEN	752
Selectivity of Some <i>Alpha</i> Adrenoceptor Agonists for Peripheral <i>Alpha</i> -1 and <i>Alpha</i> -2 Adrenoceptors in the Normotensive Rat. J. C. A. VAN MEEL, A. DE JONGE, P. B. M. W. M. TIMMERMANS AND P. A. VAN ZWIETEN	760
Valproic Acid and Its Metabolites: Placental Transfer, Neonatal Pharmacokinetics, Transfer <i>via</i> Mother's Milk and Clinical Status in Neonates of Epileptic Mothers. H. NAU, D. RATING, S. KOCH, I. HAÜSER AND H. HELGE	768
Hypothermia Induced in Rabbits by Intracerebroventricular Taurine: Specificity and Relationships with Central Serotonin (5-HT) Systems. GIAMPIETRO SPARAGLI, VINCENZO CARLÁ, MAURIZIO MAGNANI AND ALESSANDRO GALLI	778
The Influence of Continuous Infusion and Sudden Withdrawal of Azepevole (B-HT 933) on Blood Pressure and Heart Rate in the Spontaneously Hypertensive and Normotensive Rat. Suppression of the Withdrawal Response by Morphine. MARTIN J. M. C. THOOLEN, PIETER P. B. M. W. M. TIMMERMANS AND PIETER A. VAN ZWIETEN	786
Effects of 4-Aminopyridine on the Adrenergic Nerve Terminals of Rabbit Arteries. SHINOBU IKUSHIMA, IKUNOBU MURAMATSU AND MOTOHATSU FUJIWARA	792
<i>Beta</i> Adrenoceptor Interaction of Full and Partial Agonists in the Cat Heart and Soleus Muscle. A. HEDBERG AND H. MATTSSON	798
Difference in Site and Time Course of Coronary Dilating Effects of Trapidil, Nitroglycerin and Dipyridamole in Anesthetized Dogs. KATSUHIKO NOGUCHI, HITONOBU TOMOIKE, HISATSUNE OOTSUBO, KIKUO SAKAI AND MOTOOMI NAKAMURA	809
Mode of Action of Prilocaine on Sarcoplasmic Reticulum in Skinned Skeletal Muscle Fibers. KOICHI SAIDA AND AKITOSHI SUZUKI	815
Inhibition of Rat Liver Aldehyde Dehydrogenase by Carbon Tetrachloride. J. J. HJELLE, J. H. GRUBBS, D. G. BEER AND D. R. PETERSON	821
Erratum	827
Index, Volume 219, October-December, 1981	829

# The Journal of PHARMACOLOGY AND EXPERIMENTAL THERAPEUTICS

VOLUME 219  
OCTOBER 1981  
NUMBER 1

## CONTENTS

<b>The Lung Parenchymal Strip: A Reappraisal.</b> Charles Brink, Pamela Duncan and James S. Douglas .....	1
<b>Acute Effect of Ethanol on Hepatic First-Pass Elimination of Propoxyphene in Rats.</b> Takayoshi Oguma and Gerhard Levy .....	7
<b>Dose- and Time-Dependent Elimination of Acetaminophen in Rats: Pharmacokinetic Implications of Cosubstrate Depletion.</b> Raymond E. Galinsky and Gerhard Levy .....	14
<b>Alterations in Prejunctional Adrenoceptor Function in Guinea-Pig and Rat Vas Deferens after Chronic Ganglionic Blockade.</b> Robert D. Sax and Thomas C. Westfall .....	21
<b>The Nuclear Envelope as a Site of Glucuronyltransferase in Rat Liver: Properties of and Effect of Inducers on Enzyme Activity.</b> T. H. Elmamlouk, H. Mukhtar and J. R. Bend .....	27
<b>The Metabolism and Excretion of Styrene Oxide-Glutathione Conjugates in the Rat and by Isolated Perfused Liver, Lung and Kidney Preparations.</b> John W. Steele, Boris Yagen, Oscar Hernandez, Richard H. Cox, Brian R. Smith and John R. Bend .....	35
<b>Effect of Heparin or Salicylate Infusion on Serum Protein Binding and on Concentrations of Phenytoin in Serum, Brain and Cerebrospinal Fluid of Rats.</b> Ruby C. Chou and Gerhard Levy .....	42
<b>Acetaminophen as an Internal Standard for Calibrating <i>in Vivo</i> Electrochemical Electrodes.</b> Michael E. Morgan and Curt R. Freed .....	49
<b>Effect of Volume Expansion and Furosemide Diuresis on the Renal Clearance of Digoxin.</b> Thomas P. Gibson and Antonio P. Quintanilla .....	54
<b>Conditioned Taste Aversion and Operant Behavior in Rats: Effects of Cocaine, Apomorphine and Some Long-Acting Derivatives.</b> G. D. D'Mello, D. M. Goldberg, S. R. Goldberg and I. P. Stolerman .....	60
<b>Structural Specificity in the Renal Tubular Transport of Tyrosine.</b> Walter M. Williams and Kee C. Huang .....	69
<b>The Effect of Metabolic Inhibitors on Strophanthidin-Induced Arrhythmias and Contracture in Cardiac Purkinje Fibers.</b> Mohit L. Bhattacharyya and Mario Vassalle .....	75
<b>Pharmacological Evidence for a Role of Brain Serotonin in the Maintenance of Plasma Renin Activity in Unanesthetized Rats.</b> Louis D. Van De Kar, Charles W. Wilkinson and William F. Ganong .....	85
<b>Electrophysiological Response of Cerebellar Purkinje Neurons to Leukotriene D<sub>4</sub> and B<sub>4</sub>.</b> Michael R. Palmer, W. Rodney Mathews, Barry J. Hoffer and Robert C. Murphy .....	91
<b>Evidence for the Transsynaptic Activation of Tyrosine Hydroxylase in Rabbit Portal Vein Mediated through a Cyclic AMP-Independent Mechanism.</b> Glenn S. Takimoto and Norman Weiner .....	97
<b>Calcium Content and Contracture in Isolated Muscle of Malignant Hyperthermia Pigs.</b> T. E. Nelson and A. B. Chausmer .....	107
<b>The Measurement of Antagonist Potency and the Importance of Selective Inhibition of Agonist Uptake Processes.</b> Terry P. Kenakin and Deborah Beek .....	112
<b>The Effect of Chronic Lithium Treatment on Rat Pineal N-Acetyltransferase Rhythm.</b> Eitan Friedman and Frank D. Yocca .....	121
<b><i>In Vivo</i> Effects of the Cytochrome P-450 Suicide Substrate 2-Isopropyl-4-Pentenamide (Allylisopropylacetamide) on the Disposition and Metabolic Pattern of Propranolol.</b> Bernie Silber, Bruce A. Mico, Paul R. Ortiz de Montellano, Danielle M. Dols and Sidney Riegelman .....	125
<b>Aberrant Pharmacokinetics of Harmol in the Perfused Rat Liver Preparation: Sulfate and Glucuronide Conjugations.</b> K. Sandy Pang, Henk Koster, Ina C. M. Halsema, Egbert Scholtens and Gerard J. Mulder .....	134
<b>The Pharmacokinetics of Metoclopramide in Rats with Experimental Renal and Hepatic Dysfunction.</b> Yun K. Tam, James E. Axelson, Barbara McErlane, Ram P. Kapil, K. Wayne Riggs, Roberta Ongley and John D. E. Price .....	141

contents continued on iv

<b>Mechanism of the Inhibitory Action of Phenelzine on Microsomal Drug Metabolism.</b> Samar F. Muakkassah and William C. T. Yang	147
<b>Potency, Duration of Action and pA<sub>2</sub> in Man of Intravenous Naloxone Measured by Reversal of Morphine-Depressed Respiration.</b> Robert D. Kaufman, Margrit L. Gabathuler and J. Weldon Bellville	156
<b>The Involvement of the Sodium-Potassium Pump in Postjunctional Supersensitivity of the Guinea-Pig Vas Deferens as Assessed by [<sup>3</sup>H]Ouabain Binding.</b> Stanley K. Wong, David P. Westfall, Jeffrey S. Fedan and William W. Fleming	163
<b>Differential Antagonism by Metergoline of the Behavioral Effects of Indolealkylamine and Phenethylamine Hallucinogens in the Rat.</b> R. L. Commissaris, W. H. Lyness, K. E. Moore and R. H. Rech	170
<b>Modification of Environmentally Cued Tolerance to Ethanol in Mice.</b> Christine L. Melchior and Boris Tabakoff	175
<b>Relationship between Cyclic Guanosine 3':5'-Monophosphate Formation and Relaxation of Coronary Arterial Smooth Muscle by Glyceryl Trinitrate, Nitroprusside, Nitrite and Nitric Oxide: Effects of Methylene Blue and Methemoglobin.</b> Carl A. Gruetter, Darlene Y. Gruetter, Jeffrey E. Lyon, Philip J. Kadowtiz and Louis J. Ignarro	181
<b>Studies on the Interaction of Propranolol and Tetrodotoxin on <i>dV/dt</i><sub>max</sub> of Canine Purkinje Fiber Action Potentials.</b> Maria A. Cordova, Ervin E. Bagwell and George E. Lindenmayer	187
<b>The Binding and Analgesic Properties of a <i>Sigma</i> Opiate, SKF 10,047.</b> Gavril W. Pasternak, Mary Carroll-Buatti and Katharyn Spiegel	192
<b>Effects of Chlordiazepoxide and <i>d</i>-Amphetamine on Responding of Squirrel Monkeys Maintained under Concurrent or Second-Order Schedules of Response-Produced Food or Electric Shock Presentation.</b> J. E. Barrett, J. O. Valentine and J. L. Katz	199
<b>Practolol Metabolism. II. Irreversible Binding of [<sup>14</sup>C]Practolol Metabolite(s) to Mammalian Liver Microsomes.</b> T. C. Orton and C. Lowery	207
<b>Central Cardiovascular Effects of Taurine: Comparison with Homotaurine and Muscimol.</b> Pascal Bousquet, Josiane Feldman, Roger Bloch and Jean Schwartz	213
<b>Cardiovascular Effects of Lysophosphatidic Acid and Its Structural Analogs in Rats.</b> Akira Tokumura, Tetsuya Kume, Kenji Fukuzawa and Hiroaki Tsukatani	219
<b>Adrenochrome-Induced Coronary Artery Constriction in the Rat Heart.</b> M. Karmazyn, R. E. Beamish, L. Fliegel and N. S. Dhalla	225
<b>Cardiac Responsiveness to <i>Alpha</i> and <i>Beta</i> Adrenergic Amines: Effects of Carbachol and Hypothyroidism.</b> William W. Simpson, Robert L. Rodgers and John H. McNeill	231
<b>Evidence Against the Presence of Presynaptic Inhibitory Adenosine Receptors in the Cat Nictitating Membrane.</b> M. A. Luchelli-Fortis, B. B. Fredholm and S. Z. Langer	235
<b>Beneficial Effects of a New Carbacyclin Derivative, ZK 36 374, in Acute Myocardial Ischemia.</b> Karsten Schrör, Ralf Ohlendorf and Harald Darius	243
<b>The Ontogeny of the Autonomic Innervation and Contractile Response of the Rabbit Urinary Bladder.</b> Robert M. Levin, S. Bruce Malkowicz, David Jacobowitz and Alan J. Wein	250
<b>Change in Sensitivity to Insulin Hypoglycemic Convulsions after Gold Thioglucose Treatment: Time Course of Development.</b> Joan L. Luby, John F. Holliday, Kathy W. Fish and Mary Ann Marrazzi	258
<b>Effects of 4-Aminopyridine on Nerve Terminal Action Potentials.</b> Ellen S. Burley and Robert S. Jacobs	268
<b>Morphine: A Dual Effect at the Canine Choledochoduodenal Junction.</b> Elsie Ernest Johnson	274