

CONTENTS OF VOLUME 203

No. 1, SEPTEMBER 1977

Modification of Airway Smooth Muscle Responses in the Guinea Pig by Hydrocortisone, <i>in Vitro</i> and <i>in Vivo</i> . CHARLES BRINK, PAMELA RIDGWAY AND JAMES S. DOUGLAS .....	1
Mechanism of Isoproterenol-Induced Desensitization of Tracheal Smooth Muscle. CHIH-SHION LIN, LEON HURWITZ, JOHN JENNE AND BARRY P. AVNER .....	12
Inactivation of Norepinephrine in an Isolated Vein. FERNANDO BRANDÃO .....	23
Histamine Mediation in Muscular Vasodilatation Induced by <i>Beta</i> Adrenoceptor Stimulation in Dogs. FRANCO RENGO, BRUNO TRIMARCO, MASSIMO CHIARIELLO, MASSIMO VOLPE, BRUNO RICCIARDELLI, GERARDO RASETTI AND LUIGI SACCA .....	30
Dilatation of the Mesenteric Vascular Bed of the Dog Produced by a Peptide, Urotensin I. KEITH MACCANNELL AND KARL LEDERIS .....	38
Evidence for a Centrally Mediated Hypotensive Effect of <i>Escherichia Coli</i> Endotoxin in the Anesthetized Dog. DAVID E. DOBBINS, DOUGLAS L. MARCINIAK, EDWARD F. GERSABECK, JAMES J. MACIEJKO AND GEORGE J. GRAGA .....	47
Facilitation of Chemoreceptor-Induced Reflex Vasoconstriction by Intravertebral Arterial Administration of Clonidine. EDMUND J. SYBERTZ AND BEN G. ZIMMERMAN .....	56
Central Nervous System Sites Involved in the Cardiovascular Effects of Picrotoxin. JOSEPH A. DiMICCO, BETTY L. HAMILTON AND RICHARD A. GILLIS .....	64
Effect of <i>Ortho</i> -Iodo Sodium Benzoate on Hemoglobin-Oxygen Affinity in Normal and Ischemic Myocardium. GARRETT J. GROSS, DAVID C. WARTIER AND HAROLD F. HARDMAN .....	72
Hemodynamic and Natriuretic Effects of Bumetanide and Furosemide in the Cat. PETER A. FRIEDMAN AND FRANCOISE ROCH-RAMEL .....	82
The Effect of Bumetanide on Cation Transport in Human Red Blood Cells. HERBERT LUBOWITZ .....	92
The Mode of Action of Bumetanide: Inhibition of Chloride Transport across the Amphibian Cornea. M. CHRISTINE MCGAHAN, THOMAS YORIO AND P. J. BENTLEY .....	97
Effects of Adrenalectomy and Adrenergic Antagonists on Potassium Metabolism. RAYMOND H. LOCKWOOD AND BERT K. B. LUM .....	103
Pharmacodynamic Analysis of the Rat Isolated Vas Deferens after Transplantation to Intestinal Wall. N. H. JURKIEWICZ, A. JURKIEWICZ, C. B. GOMES AND J. G. AUCÉLIO .....	112
Dose-Response Behavior on the Isolated Rat Uterus of Oxytocin Analogs with Modifications at Binding Sites. CLARK W. SMITH, SUSANNA CHAN AND RODERICH WALTER .....	120
Central and Peripheral Adrenergic Mechanisms Regulating Gastric Secretion in the Rat. I. YAMAGUCHI, J. HIROI AND S. KUMADA .....	125
Effects of 6-Hydroxydopamine on the Development of the <i>Beta</i> Adrenergic Receptor/Adenylate Cyclase System in Rat Cerebral Cortex. T. KENDALL HARDEN, BARRY B. WOLFE, JONATHAN R. SPORN, BRAD K. POULOS AND PERRY B. MOLINOFF .....	132
Is Calcium the Final Mediator of Exocytosis in the Rat Parotid Gland? JAMES W. PUTNEY, JR., STUART J. WEISS, BARBARA A. LESLIE AND SUSAN H. MARIER .....	144
Adjuvant Polyarthritis. II. Suppression by Tilorone. YI-HAN CHANG .....	156
Relationships, among the Steroids, of Anti-inflammatory Properties and Inhibition of Prostaglandin Production and Arachidonic Acid Release by Transformed Mouse Fibroblasts. STANELY TAM, SU-CHEN L. HONG AND LAWRENCE LEVINE .....	162
Temporal Pattern and Reversal of Impaired Hepatic Mono-oxygenases by Phenobarbital in Rats with Developing and Established Adjuvant Disease. PERSHOTTAM P. MATHUR, ROBERT D. SMYTH, CHARLOTTE M. WITMER, GARY S. CARR AND NELSON H. REAVEY-CANTWELL .....	169
Pharmacokinetics of Some Homologous Series of Barbiturates in the Intact Rat and in the Isolated Perfused Rat Liver. TJONG DING YIH AND JACQUES M. VAN ROSSUM .....	184
Enflurane Metabolism in Rats and Man. BEN A. HITT, RICHARD I. MAZZE, WILLIAM J. BEPPU, WENDELL C. STEVENS AND EDMOND I. EGER, II .....	193
Radioimmunoassay for Normeperidine: Studies on the N-Dealkylation of Meperidine and Anileridine. DAVID S. FREEMAN, HILDA B. GJIKI AND HELEN VAN VUNAKIS .....	203
Opiate Tolerance: Independence from Immunological Mechanisms. CLARAMAE H. MILLER, WALLACE D. WINTERS AND ELIEZER BENJAMINI .....	213
Naloxone Antagonizes Narcotic Self-blockade of Emesis in the Cat. DONALD J. COSTELLO AND HERBERT L. BORISON .....	222
Phenytoin Teratogenesis: Correlation between Embryopathic Effect and Covalent Binding of Putative Arene Oxide Metabolite in Gestational Tissue. FRED MARTZ, CONRAD FAILINGER, III AND DAVID A. BLAKE .....	231
A Comparison of Thalidomide and Pentobarbital—New Methods for Identifying Novel Hypnotic	

Drugs. R. C. A. FREDERICKSON, I. H. SLATER, W. E. DUSENBERRY, C. R. HEWES, G. T. JONES AND R. A. MOORE .....	240
--	-----

## No. 2, NOVEMBER, 1977

An Extracorporeal Complexing Hemodialysis System for the Treatment of Methylmercury Poisoning. II. <i>In Vivo</i> Applications in the Dog. P. J. KOSTYNIAK, T. W. CLARKSON AND A. H. ABBASI .....	253
Renal Tubular Sodium and Phosphate Transport: Inhibitory Mechanisms of Proximally Active Agents in the Dog. JULES B. PUSCHETT, JOHN SZRAMOWSKI, NAWAF NSEIR AND MARTIN KUHRMAN .....	264
The Interaction of Ethacrynic Acid, Dihydroethacrynic Acid and Certain Thiol Adducts of Ethacrynic Acid with Bovine Serum Albumin. DANIEL A. KOEHEL, SANDRA A. SMITH AND EDWARD J. CAFRUNY. See corrected article, p. 738	
Stimulating Effects of $\gamma$ -Hydroxybutyrate on Dopamine Release from the Caudate Nucleus and the Substantia Nigra of the Cat. A. CHÉRAMY, A. NIEOULLON AND J. GLOWINSKI .....	283
Development of Tolerance to the Disruptive Effects of Cocaine on Repeated Acquisition and Performance of Response Sequences. DONALD M. THOMPSON .....	294
Ketamine Self-Administration by the Rhesus Monkey. J. EDWARD MORETON, RICHARD A. MEISCH, LINDA STARK AND TRAVIS THOMPSON .....	303
Dose Preference during Pentobarbital Self-Administration by Humans. ROY PICKENS, MARILYN R. CUNNINGHAM, LEONARD L. HESTON, ELKE ECKERT AND LINDA K. GUSTAFSON .....	310
The Effects of 6-Hydroxydopamine on Tolerance to and Dependence on Ethanol. BORIS TABAKOFF AND R. F. RITZMANN .....	319
Studies on Tolerance. II. The Effect of Timing on Inhibition of Tolerance to Morphine by Cycloheximide. MICHAEL P. FEINBERG AND JOSEPH COCHIN .....	332
The Effect of Maternally Administered Methadone on Brain Development in the Off-spring. MARVIN A. PETERS .....	340
Circling Behavior and Stereotypy Induced by Intranigral Opiate Microinjections. EDGAR T. IWAMOTO AND E. LEONG WAY .....	347
The Purification of Antimorphine Antibodies by Affinity Chromatography. MARY CLARE WALKER AND ERIC J. SIMON .....	360
First-Pass Effect of Nalorphine in Rats. KIKUO IWAMOTO AND CURTIS D. KLAASSEN .....	365
Effect of Alteration of Metabolism on the Analgesic Activity, Toxicity Distribution and Excretion of <i>l</i> - $\alpha$ -Acetylmethadol in the Rat. DAVID L. ROERIG, ANDREW T. HASEGAWA AND RICHARD I. H. WANG	377
Inhibition of Hepatic Microsomal Enzymes by Chloramphenicol. H. RICHARD ADAMS, ELIZABETH L. ISAACSON AND BETTIE SUE SILER MASTERS .....	388
The Hepatic Microsomal Mixed-Function Oxidase System in Man: Cofactor Effects and the Influence of Cholestasis. NASIM AHMAD AND MARTIN BLACK .....	397
The <i>In Vitro</i> Metabolism of Halothane (2-Bromo-2-Chloro-1,1,1-Trifluoroethane) by Hepatic Microsomal Cytochrome P-450. DALJI KARASHIMA, YOICHIRO HIROKATA, AKIO SHIGEMATSU AND TETSUJI FURUKAWA .....	409
The Contribution of Cholinergic Postganglionic Neurotransmission to Contractions of Rabbit Detrusor. J. W. DOWNIE AND D. M. DEAN .....	417
Acetylcholine Stimulation of the Sympathetic Ganglia: Effects of Taurine and Nicotinic and Muscarinic Ganglion Block. JAMES G. HILTON .....	426
Radioimmunoassay of Atropine in Plasma. ROBERT J. WURZBURGER, RUSSELL L. MILLER, HAROLD G. BOXENBAUM AND SYDNEY SPECTOR .....	435
Effect of Dipivalyl Derivatives of Catecholamines on Cardiovascular Function in the Conscious Dog. BIN C. WANG, DON D. BLOXHAM AND KENNETH L. GOETZ .....	442
The Effects of Temperature Acclimation on Monoamine Metabolism. GEORGE B STEFANO AND EDWARD J. CATAPANE .....	449
The Effect of Temperature on Cardiac Adrenoceptors. TERRY T. MARTINEZ AND JOHN H. McNEILL ...	457
Correlation of Ouabain-Induced Arrhythmia and Nonuniformity in the Histamine-Evoked Discharge of Cardiac Sympathetic Nerves. CLAIRE M. LATHERS, JAY ROBERTS AND GERALD J. KELLIHER ...	467
The Influence of Prostaglandins E <sub>1</sub> and E <sub>2</sub> on Ouabain Cardiotoxicity in the Cat. JOHN C. SOMBERG, HELENE BOUNOUS, NORMAN CAGIN, CONSTANTINE ANAGNOSTOPOULOS AND BARRIE LEVITT .....	480
Renin Inhibitory Effect of 2-[4-(4'-Chlorophenoxy)Phenoxyacetyl]amino]-Ethylphosphorylethanolamine (PE-104) <i>in Vitro</i> and <i>in Vivo</i> . KANOO HOSOKI, MIZUO MIYAZAKI AND KENJIRO YAMAMOTO ..	485

## No. 3, DECEMBER 1977

Stereoselective Metabolism, Pharmacokinetics and Biliary Elimination of Phenylethylhydantoin (Nirvanol) in the Dog. ADRIAN KÜFFER, JOHANNES BIRCHER AND RUDOLF PREISIG .....	493
--	-----

Plasma Protein Binding and Metabolic Clearance of Phenytoin in the Rat. WAYNE A. COLBURN AND MILO GIBALDI .....	500
Effect of the Duration of Infusion on the Disposition of Lidocaine in Dogs. J. LELORIER, R. MOISAN, J. GAGNE AND G. CAILLE .....	507
The Pharmacology of SC-27166: A Novel Antidiarrheal Agent. ESAM Z. DAJANI, ROBERT G. BIANCHI, PETER F. EAST, JAMES L. BLOSS, GILBERT W. ADELSTEIN AND CHUNG H. YEN .....	512
Antidiarrheal and Central Nervous System Activities of SC-27166 (2-[3-(5-Methyl-1,3,4-Oxadiazol-2-yl)-3,3-Diphenylpropyl]-2-Azabicyclo[2.2.2]Octane). A New Antidiarrheal Agent, Resulting from Binding to Opiate Receptor Sites of Brain and Myenteric Plexus. CARL R. MACKERER, LINDA R. BROUGHAM, PETER F. EAST, JAMES L. BLOSS, ESAM Z. DAJANI AND GEORGE A. CLAY .....	527
Nitrous Oxide Analgesia: Reversal by Naloxone and Development of Tolerance. BARRY A. BERKOWITZ, A. DONALD FINCK AND S. H. NGAI .....	539
Morphine Decreases Luteinizing Hormone by an Action on the Dypothalamic-Pituitary Axis. THEODORE J. CICERO, THOMAS M. BADGER, CAROL E. WILCOX, ROY D. BELL AND EDWARD R. MEYER ..	548
A Benzo[a]Quinolizine Derivative with a Neuroleptic-Like Action on Cerebral Monoamine Turnover. A. SANER AND A. PLETSCHER .....	556
Autoradiographic Localization of [ <sup>3</sup> H]Reserpine Binding Sites in Rat Brain. L CHARLES MURRIN, S. J. ENNA AND MICHAEL J. KUHAR .....	564
Vesicular and Juxtavesicular Serotonin Effects of Lysergic Acid Diethylamide and Reserpine. ANGELOS E. HALARIS AND DANIEL X. FREEDMAN .....	575
Adrenal Origin of the Increase in Plasma Dopamine $\beta$ -Hydroxylase and Catecholamines Induced by Hemorrhagic Hypotension in Dogs. L. CUBEDDU, X., E. SANTIAGO, R. TALMACIU AND G. PINARDI	587
The Effect of Monoamine Oxidase and Catchol O-Methyltransferase Inhibitors on the Accumulation and Metabolism of [ <sup>3</sup> H]Norepinephrine by the Adventitia and Media of Rabbit Aorta. JEROME A. LEVIN AND SUSAN E. WILSON .....	598
Control of Cyclic Adenosine 3':5'-Monophosphate-Evaluating Effect of Adenosine in C-1300 Murine Neuroblastoma in Tissue Culture. RICHARD D. GREEN .....	610
Studies on the Uptake and Binding of Propranolol by Rat Tissues. DENNIS W. SCHNECK, J. FREDERICK PRITCHARD AND ARTHUR H. HAYES, JR. ....	621
Cytotoxic Activity of Alkylating Agents in the Presence of Centrophenoxine and Its Hydrolysis Products. N. E. SLADEK .....	630
A pH-Dependent, Carrier-Mediated Transport System for the Folate Analog, Amethopterin, in Rat Jejunum. W. B. STRUM .....	640
Effect of Indomethacin and Aspirin on Gastric Blood Flow and Acid Secretion. JOHN F. GERKENS, DAVID G. SHAND. CHARLES FLEXNER, ALAN S. NIES, JOHN A. OATES AND JOANN L. DATA .....	646
Effects of 4-Aminopyridine at the Frog Neuromuscular Junction. JORGE MOLGO, MADELEINE LEMEIGNAN AND PAUL LECHAT .....	653
Endocardial Viability Ratio on Effect of Nitroglycerin and Propranolol on Regional Myocardial Blood Flow in Intact Canine Hearts. GARRETT J. GROSS AND DAVID C. WARLTIER .....	664
Development of the Positive Inotropic Action of Ouabain: Effects of Transmembrane Sodium Movement. TAI AKERA, MARK K. OLGAARD, KYOSUKE TEMMA AND THEODORE M. BRODY .....	675
Direct Effects of the Monovalent Cation Ionophores Monensin and Nigericin on Myocardium. JOHN L. SUTKO, HENRY R. BESCH, JR., JOHN C. BAILEY, GERALD ZIMMERMAN AND AUGUST M. WATANABE	685
Pharmacologic Studies on W10,294A, A New Bronchodilator. R. E. GILES, J. C. WILLIAMS AND M. P. FINKEL .....	701
Tetrachlorodibenzo- <i>p</i> -Dioxin Induction of Renal Microsomal Enzyme Systems: Ultrastructural Effects on Pars Recta (S <sub>3</sub> ) Proximal Tubule Cells of the Rat Kidney. BRUCE A. FOWLER, GARY E. R. HOOK AND GEORGE W. LUCIER .....	712
Pharmacologic Stimulation of Erythrocyte 2,3-Diphosphoglycerate Production <i>in Vivo</i> . LORNA G. MOORE, GEORGE J. BREWER, FRED J. OELSHLEGEL, JR., LUCIA F. BREWER AND ERIC B. SCHOOMAKER	722
Effect of Ring Substitution on the Metabolic Fate and Anti-inflammatory Activity of Some Prodicolic Acid Analogs. W. T. ROBINSON, R. R. MARTEL, E. FERDINANDI AND M. KRAML .....	729
Errata .....	737
The Interaction of Ethacrynic Acid, Dihydroethacrynic Acid and Certain Thiol Adducts of Ethacrynic Acid with Bovine Serum Albumin. DANIEL A. KOECHEL, SANDRA A. SMITH AND EDWARD J. CAFRUNY .....	738
Index, Volume 203, October-December 1977 .....	749