

# CONTENTS OF VOLUME 13

NUMBER 1, JANUARY 1977

J. O. DOLLY, E. X. ALBUQUERQUE, J. M. SARVEY, B. MALLICK AND E. A. BARNARD. Binding of Perhydro-histronicotoxin to the Postsynaptic Membrane of Skeletal Muscle in Relation to Its Blockade of Acetylcholine-Induced Depolarization .....	1
R. F. NOVAK, I. M. KAPETANOVIC AND J. J. MIEYAL. Nuclear Magnetic Resonance Studies of Substrate-Hemoprotein Complexes in Solution. I. The Interaction of Xylidine with Myoglobin, Hemoglobin and Cytochrome P450 .....	15
THÉRÈSE DI PAOLO, LEMONT B. KIER AND LOWELL H. HALL. Molecular Connectivity and Structure-Activity Relationship of General Anesthetics .....	31
HÅKAN BERGSTRAND, JAN KRISTOFFERSSON, BRITTA LUNDQUIST AND ANNIKA SCHURMANN. Effects of Antiallergic Agents, Compound 48/80, and Some Reference Inhibitors on the Activity of Partially Purified Human Lung Tissue Adenosine Cyclic 3',5'-Monophosphate and Guanosine Cyclic 3',5'-Monophosphate Phosphodiesterases .....	38
PAULINE LERNER, MATTHEW M. AMES AND WALTER LOVENBERG. The Effect of Ethylene Glycol Bis( $\beta$ -aminoethyl ether)- <i>N,N'</i> -tetraacetic Acid and Calcium on Tyrosine Hydroxylase Activity .....	44
JAMES S. WOODS. Heme Regulation of Cytochrome Oxidase Synthesis in Fetal Rat Liver .....	50
MARK R. MONTGOMERY AND DOMINICK L. CINTI. Pyridine Nucleotide-Dependent Electron Transport in Kidney Cortex Microsomes: Interaction with Desaturase and Other Microsomal Mixed-Function Oxidases .....	60
NIGEL A. BROWN, EBERHARD JÄHNCHEN, WALTER E. MÜLLER AND UWE WOLLERT. Optical Studies on the Mechanism of the Interaction of the Enantiomers of the Anticoagulant Drugs Phenprocoumon and Warfarin with Human Serum Albumin .....	70
BARBARA C. F. CHU AND JOHN M. WHITELEY. High Molecular Weight Derivatives of Methotrexate as Chemotherapeutic Agents .....	80
WILLIAM ANTHOLINE, JUDITH KNIGHT, HARRY WHELAN AND DAVID H. PETERING. Studies of the Reaction of 2-Formylpyridine Thiosemicarbazone and Its Iron and Copper Complexes with Biological Systems .....	89
DONALD J. BEDNARCZYK AND FEDOR MEDZIHRADSKY. Mechanism of Chloroquine Transport in the Isolated Retina .....	99
LYNDA S. KOEHLER, WINIFRED CURLEY AND KARL A. KOEHLER. Solvent Effects on Halothane: $^{19}\text{F}$ Nuclear Magnetic Resonance in Solvents and Artificial Membranes .....	113
MARY SUE COLEMAN AND JOHN J. HUTTON. Effects of Antineoplastic and Immunosuppressant Drugs on Deoxyribonucleic Acid-Polymerizing Enzymes of Rat Thymus and Spleen .....	122
K. FICKENTSCHER, A. KIRFEL, G. WILL AND F. KÖHLER. Stereochemical Properties and Teratogenic Activity of Some Tetrahydrophthalimides .....	133
DONALD FOSTER AND KHALIL AHMED. Solvent Effects of Hydrolysis of the Phosphoenzyme Intermediate in Sodium- and Potassium-Dependent Adenosine Triphosphatase: Correlations with Stimulation of Potassium-Dependent <i>p</i> -Nitrophenyl Phosphatase .....	142
MORLEY D. HOLLENBERG. Steroid-Stimulated Amino Acid Uptake in Cultured Human Fibroblasts Reflects Glucocorticoid and Anti-inflammatory Potency ..	150
PETER C. WILL, JAMES W. LONGWORTH, EMILY T. BRAKE AND JOHN S. COOK. Analysis of Intracellular Drug (Ouabain) Sequestration as a Mechanism of Detoxification .....	161
LUIGI CUBEDDU X. AND ALBA M. VARGAS. Effects of Sodium Chloride on Phenylethanolamine <i>N</i> -Methyltransferase Activity .....	172
SHORT COMMUNICATION	
SIXTO GARCÍA-CASTIÑEIRAS, JOHN I. WHITE AND EFRÁIN TORO-GOYCO. Inhibition of Sodium- and Potassium-Dependent Adenosine Triphosphatase by Serotonin .....	181

NUMBER 2, MARCH 1977

F. PETER GUENGERICH AND STEVEN D. AUST. Activation of the Parasympathomimetic Alkaloid Slaframine by Microsomal and Photochemical Oxidation . . . . .	185
T. UEMURA, E. CHIESARA AND D. COVA. Interaction of Epinephrine Metabolites with the Liver Microsomal Electron Transport System . . . . .	196
PIETRO PALATINI. Mechanism of Inhibition of Sodium- and Potassium-Dependent Adenosine Triphosphatase by Tricyclic Antipsychotics . . . . .	216
HERMAN MEISNER. Displacement of Free Fatty Acids from Albumin by Chlorophenoxyisobutyrate . . . . .	224
JOANNE K. KELLEHER. Tubulin Binding Affinities of Podophyllotoxin and Colchicine Analogues . . . . .	232
ROBERT A. GROSS AND RICHARD B. CLARK. Regulation of Adenosine 3',5'-Monophosphate Content in Human Astrocytoma Cells by Isoproterenol and Carbachol . . . . .	242
WAYNE HOSS AND CONSTANCE SMILEY. Immobilization of Opiates by Membrane Lipids . . . . .	251
ALAN R. BOOBIS, DANIEL W. NEBERT AND JAMES S. FELTON. Comparison of $\beta$ -Naphthoflavone and 3-Methylcholanthrene as Inducers of Hepatic Cytochrome(s) P-448 and Aryl Hydrocarbon (Benzo[a]pyrene) Hydroxylase Activity . . . . .	259
JOHN E. BIAGLOW, BIRGIT JACOBSON, CLIVE L. GREENSTOCK AND JAMES RALEIGH. Effect of Nitrobenzene Derivatives on Electron Transfer in Cellular and Chemical Models . . . . .	269
JAKOB SCHMIDT. Drug Binding Properties of an $\alpha$ -Bungarotoxin-Binding Component from Rat Brain . . . . .	283
CHHABIRANI MUKHERJEE AND ROBERT J. LEFKOWITZ. Regulation of <i>Beta</i> Adrenergic Receptors in Isolated Frog Erythrocyte Plasma Membranes . . . . .	291
LEWIS T. WILLIAMS AND ROBERT J. LEFKOWITZ. Molecular Pharmacology of <i>Alpha</i> Adrenergic Receptors: Utilization of [ <sup>3</sup> H]Dihydroergocryptine Binding in the Study of Pharmacological Receptor Alterations . . . . .	304
MARGUERITE LUCAS AND JOËL BOCKAERT. Use of (-)-[ <sup>3</sup> H]Dihydroalprenolol to Study <i>Beta</i> Adrenergic Receptor-Adenylate Cyclase Coupling in C6 Glioma Cells: Role of 5'-Guanylylimidodiphosphate . . . . .	314
SHOJI KATSUKI AND FERID MURAD. Regulation of Adenosine Cyclic 3',5'-Monophosphate and Guanosine Cyclic 3',5'-Monophosphate Levels and Contractility in Bovine Tracheal Smooth Muscle . . . . .	330
D. M. JERINA, P. M. DANSETTE, A. Y. H. LU AND W. LEVIN. Hepatic Microsomal Epoxide Hydrase: a Sensitive Radiometric Assay for Hydration of Arene Oxides of Carcinogenic Aromatic Hydrocarbons . . . . .	342
ATSUNOBU YODA AND SHIZUKO YODA. Association and Dissociation Rate Constants of the Complexes between Various Cardiac Aglycones and Sodium- and Potassium-Dependent Adenosine Triphosphatase Formed in the Presence of Magnesium and Phosphate . . . . .	352
HIDEO HASHIGUCHI AND HITOSHI TAKAHASHI. Inhibition of Two Copper-Containing Enzymes, Tyrosinase and Dopamine $\beta$ -Hydroxylase, by L-Mimosine . . . . .	362

SHORT COMMUNICATIONS

ROBERT J. MICHELOT, NADINE LESKO, RICHARD W. STOUT AND JAMES K. COWARD. Effect of S-Adenosylhomocysteine and S-Tubercidinylhomocysteine on Catecholamine Methylation in Neuroblastoma Cells . . . . .	368
S. K. ARYA AND R. CHAWDA. Polyribonucleotide Inhibition of Murine Leukemia Virus Replication: Effect of Strandedness . . . . .	374
J. L. KRAUS AND J. J. YAOUANC. Inactivation of a Flavin-Linked Oxidase, <i>N,N</i> -Dimethylglycine Oxidase, <i>in Vivo</i> and <i>in Vitro</i> . . . . .	378
STEVEN P. WILSON AND NORMAN KIRSHNER. Localization of Adenylate Cyclase in Adrenal Medulla . . . . .	382

NUMBER 3, MAY 1977

JOHN E. FLETCHER AND ARTHUR A. SPECTOR. Alternative Models for the Analysis of Drug-Protein Binding . . . . .	387
---	-----

TOMIKO ASANO, YASUO OCHIAI AND HIROYOSHI HIDAKA. Selective Inhibition of Separated Forms of Human Platelet Cyclic Nucleotide Phosphodiesterase by Platelet Aggregation Inhibitors .....	400
JOSEPH A. WALDER, BRADLEY T. HYMAN, MICHAEL J. HELLER, ROXANNE Y. SHISHIDO AND IRVING M. KLOTZ. Reversible Acylation and Inhibition of Aggregation of Platelets by Substituted Maleic Anhydrides .....	407
ELIZABETH JEFFERY, ALVIN KOTAKE, ROKEA EL AZHARY AND G. J. MANNERING. Effects of Linoleic Acid Hydroperoxide on the Hepatic Monooxygenase Systems of Microsomes from Untreated, Phenobarbital-Treated, and 3-Methylcholanthrene-Treated Rats .....	415
THOMAS J. LINDELL, ROYAL ELLINGER, JAMES T. WARREN, DAVID SUNDHEIMER AND ANTHONY F. O'MALLEY. The Effect of Acute and Chronic Phenobarbital Treatment on the Activity of Rat Liver Deoxyribonucleic Acid-Dependent Ribonucleic Acid Polymerases .....	426
J. H. CHIN AND D. B. GOLDSTEIN. Effects of Low Concentrations of Ethanol on the Fluidity of Spin-Labeled Erythrocyte and Brain Membranes .....	435
S. J. ENNA AND SOLOMON H. SNYDER. Influences of Ions, Enzymes, and Detergents on $\gamma$ -Aminobutyric Acid-Receptor Binding in Synaptic Membranes of Rat Brain .....	442
DAVID C. U'PRICHARD, DAVID A. GREENBERG AND SOLOMON H. SNYDER. Binding Characteristics of a Radiolabeled Agonist and Antagonist at Central Nervous System <i>Alpha</i> Noradrenergic Receptors .....	454
A. G. LEE. Local Anesthesia: The Interaction between Phospholipids and Chlorpromazine, Propranolol, and Practolol .....	474
ERIC MAYHEW, DEMETRIOS PAPAHAJIOPOULOS, JUDITH A. O'MALLEY, WILLIAM A. CARTER AND W. J. VAIL. Cellular Uptake and Protection against Virus Infection by Polyinosinic-Polycytidylic Acid Entrapped within Phospholipid Vesicles .....	488
BARRY I. MILAVETZ, JULIUS S. HOROSZEWICZ, MARY JO EVANS, KENNETH F. MANLY, KENNETH L. RINEHART, JR., AND WILLIAM A. CARTER. Reverse Transcription, a Probe by the Immobilized Template Poly(adenylic acid)-Agarose .....	496
KARL B. FREEMAN, HASMUKH PATEL AND DIPAK HALDAR. Inhibition of Deoxyribonucleic Acid Synthesis in Ehrlich Ascites Cells by Chloramphenicol ....	504
A. J. HARMAR AND A. S. HORN. Octopamine-Sensitive Adenylate Cyclase in Cockroach Brain: Effects of Agonists, Antagonists, and Guanylyl Nucleotides .....	512
DENE E. RYAN, PAUL E. THOMAS AND WAYNE LEVIN. Properties of Purified Liver Microsomal Cytochrome P450 from Rats Treated with the Polychlorinated Biphenyl Mixture Aroclor 1254 .....	521
GEORGE A. CLAY, CARL R. MACKERER AND TENG K. LIN. Interaction of Loperamide with [ <sup>3</sup> H]Naloxone Binding Sites in Guinea Pig Brain and Myenteric Plexus .....	533
P. J. ROBERTS, G. N. WOODRUFF AND JUDITH A. POAT. Binding of a Conformationally Restricted Dopamine Analogue, 2-Amino-6,7-dihydroxy-1,2,3,4-tetrahydronaphthalene, to Receptors on Rat Brain Synaptic Membranes .....	541
JACOB RICHTER, EMMANUEL M. LANDAU AND SASSON COHEN. The Action of Volatile Anesthetics and Convulsants on Synaptic Transmission: a Unified Concept .....	548
WILLIAM O. McCLURE AND JAMES C. PAULSON. The Interaction of Colchicine and Some Related Alkaloids with Rat Brain Tubulin .....	560
<b>SHORT COMMUNICATIONS</b>	
HELEN BOYD AND T. J. MARTIN. The Effect of Propranolol on Induction of Rat Liver Tumors by a Chemical Carcinogen .....	576
GIOVANNI UGHETTO AND MICHAEL J. WARING. Conformation of the Deoxyribonucleic Acid-Binding Peptide Antibiotic Echinomycin Based on Energy Calculations .....	579

NUMBER 4, JULY 1977

S. K. ARYA. Mechanism of Polyribonucleotide Inhibition of Ribonucleic Acid Tumor Virus Replication: Effect of Poly(inosinic acid) on the Synthesis of Pro-	
--	--

viral Deoxyribonucleic Acid of Murine Leukemia Virus .....	585
HERMANN P. T. AMMON, MUHAMMAD S. AKHTAR, H. NIKLAS, AND D. HEGNER. Inhibition of <i>p</i> -Chloromercuribenzoate- and Glucose-Induced Insulin Release <i>in Vitro</i> by Methylene Blue, Diamide, and <i>tert</i> -Butyl Hydroperoxide .....	598
H. JOSEPH GOREN, LORENZO G. BAUCE, AND WYLIE VALE. Forces and Structural Limitations of Binding of Thyrotrophin-Releasing Factor of the Thyrotrophin-Releasing Receptor: the Pyroglutamic Acid Moiety .....	606
ROBERT KATZ, HERMAN J. C. YEH, AND DAVID F. JOHNSON. Interactions of Biogenic Amines with Organic Phosphate: A Proposed Model <i>in Vitro</i> for Study of Biological Interactions by <sup>31</sup> P Nuclear Magnetic Resonance .....	615
K. S. KRISHNAN AND P. BALARAM. Nuclear Magnetic Resonance Studies of the Enzymatic Hydrolysis of Acetylcholine: a Critical Comment .....	621
JACK A. HINSON, SIDNEY D. NELSON, AND JERRY R. MITCHELL. Studies on the Microsomal Formation of Arylating Metabolites of Acetaminophen and Phenacetin .....	625
LEONARD M. HJELMELAND, LEWIS ARONOW, AND JAMES R. TRUDELL. Intramolecular Determination of Substituent Effects in Hydroxylations Catalyzed by Cytochrome P-450 .....	634
ALAN J. GARBER. Inhibition by Serotonin of Amino Acid Release and Protein Degradation in Skeletal Muscle .....	640
ROBERT C. ROSENBERG AND WALTER LOVENBERG. Active Dimers of Dopamine $\beta$ -Hydroxylase in Human Plasma .....	652
JOËL PRÉMONT, MICHÈLE PEREZ, AND JOËL BOCKAERT. Adenosine-Sensitive Adenylate Cyclase in Rat Striatal Homogenates and Its Relationship to Dopamine- and Ca <sup>2+</sup> -Sensitive Adenylate Cyclases .....	662
KOJI NISHIKORI, TOICHI TAKENAKA, AND HIROO MAENO. Stimulation of Microsomal Calcium Uptake and Protein Phosphorylation by Adenosine Cyclic 3',5'-Monophosphate in Rat Uterus .....	671
S. R. NAHORSKI. Altered Responsiveness of Cerebral <i>Beta</i> Adrenoceptors Assessed by Adenosine Cyclic 3',5'-Monophosphate Formation and [ <sup>3</sup> H]Propranolol Binding .....	679
ROBERT M. LEVIN AND BENJAMIN WEISS. Binding of Trifluoperazine to the Calcium-Dependent Activator of Cyclic Nucleotide Phosphodiesterase .....	690
C. ROLAND WOLF, DANIEL MANSUY, WOLFGANG NASTAINCZYK, GENEVIÈVE DEUTSCHMANN, AND VOLKER ULLRICH. The Reduction of Polyhalogenated Methanes by Liver Microsomal Cytochrome P450 .....	698
STELIOS AKTIPIS AND NIKOS PANAYOTATOS. The Inhibitory Effect of Phenanthridines on the Synthesis of Ribonucleic Acid Catalyzed by Deoxyribonucleic Acid-Dependent Ribonucleic Acid Polymerase .....	706
D. S. R. SARMA, J. ZUBROFF, AND S. RAJALAKSHMI. Repair <i>in Vivo</i> of Liver Deoxyribonucleic Acid Damaged by Hycanthone and Related Compounds ..	719
ROBERT R. RANDO. The Fluorescent Labeling of Mitochondrial Monoamine Oxidase .....	726
KENNETH P. MINNEMAN. Postsynaptic Induction of Serotonin <i>N</i> -Acetyltransferase Activity and the Control of Cyclic Nucleotide Metabolism in Organ Cultures of the Rat Pineal .....	735
MAURIZIO RAITERI, RENATA DEL CARMINE, ALBERTO BERTOLLINI, AND GIULIO LEVI. Effect of Desmethylimipramine on the Release of [ <sup>3</sup> H]Norepinephrine Induced by Various Agents in Hypothalamic Synaptosomes .....	746
HARVEY C. KRASNY AND DAVID J. HOLBROOK, JR. Effects of Cadmium on Microsomal Hemoproteins and Heme Oxygenase in Rat Liver .....	759
W. Y. WU, L. G. ABOOD, M. GATES, AND R. W. KREILICK. Spin-Labeled Narcotics .....	766

NUMBER 5, SEPTEMBER 1977

JOHN P. BILEZIKIAN, ALLEN M. SPIEGEL, EDWARD M. BROWN AND GERALD D. AURBACH. Identification and Persistence of <i>Beta</i> Adrenergic Receptors during Maturation of the Rat Reticulocyte .....	775
JOHN P. BILEZIKIAN, ALLEN M. SPIEGEL, DONALD E. GAMMON AND GERALD D. AURBACH. The Role of Guanyl Nucleotides in the Expression of Catecholamine-Responsive Adenylate Cyclase during Maturation of the Rat Reticulocyte .....	786

VIRENDRA K. SHARMA AND SHAILESH P. BANERJEE. The Effect of 6-Hydroxydopamine on Specific [ <sup>3</sup> H]Ouabain Binding to Some Sympathetically Innervated Organs of the Cat .....	796
RONALD T. BORCHARDT, SSUAN K. BURGESS, JACK R. REID, YUEH-O LIANG AND RALPH N. ADAMS. Effects of 2- and/or 5-Methylated Analogues of 6-Hydroxydopamine on Norepinephrine- and Dopamine-Containing Neurons .....	805
PAUL E. THOMAS, ANTHONY Y. H. LU, SUSAN B. WEST, DENE RYAN, GERALD T. MIWA AND WAYNE LEVIN. Accessibility of Cytochrome P450 in Microsomal Membranes: Inhibition of Metabolism by Antibodies to Cytochrome P450 ..	819
B. GOLDBERG AND A. STERN. The Mechanism of Oxidative Hemolysis Produced by Phenylhydrazine .....	832
M. B. FEINSTEIN, M. VOLPI, S. PERRIE, A. MAKRIYANNIS AND R. I. SHA'AFI. Mechanisms of Local Anesthetic Action on the Permeability of Erythrocytes, Leukocytes, and Liposomes Containing the Erythrocyte Anion Channel Protein ..	840
RICHARD E. GALARDY AND JAMES D. JAMIESON. Photoaffinity Labeling of a Peptide Secretagogue Receptor in the Exocrine Pancreas .....	852
DAVID W. END, KENNETH THOURSEN, WILLIAM L. DEWEY AND RICHARD A. CARCHMAN. A Comparative Study of the Disposition of (-)- $\Delta^9$ -Tetrahydrocannabinol in Neuroblastoma and Glioma Cells in Tissue Culture: Relation to Cellular Impairment .....	864
NICHOLAS F. LARUSSO, MARIA TOMASZ, MIKLÓS MÜLLER AND ROSELYN LIPMAN Interaction of Metronidazole with Nucleic Acids <i>in Vitro</i> .....	872
GILLES J. LAUZON AND ALAN R. P. PATERSON. Binding of the Nucleoside Transport Inhibitor Nitrobenzylthioinosine to HeLa Cells .....	883
J. RIGA, J. J. VERBIST, J. DEGELAEN, J. P. TOLLENAERE AND M. H. J. KOCH Electron Densities in Neuroleptics by X-ray Photoelectron Spectroscopy, <sup>13</sup> C Nuclear Magnetic Resonance, and Quantum Calculations on Model Compounds .....	892
NICHOLAS R. BACHUR, SANDRA L. GORDON AND MALCOLM V. GEE. Anthracycline Antibiotic Augmentation of Microsomal Electron Transport and Free Radical Formation .....	901
F. PETER GUENGERICH. Preparation and Properties of Highly Purified Cytochrome P-450 and NADPH-Cytochrome P-450 Reductase from Pulmonary Microsomes of Untreated Rabbits .....	911
ALAN POLAND AND EDWARD GLOVER. Chlorinated Biphenyl Induction of Aryl Hydrocarbon Hydroxylase Activity: a Study of the Structure-Activity Relationship .....	924
PETER K. CHIANG, HENRY H. RICHARDS AND GIULIO L. CANTONI. S-Adenosyl-L-homocysteine Hydrolase: Analogues of S-Adenosyl-L-homocysteine as Potential Inhibitors .....	939
J. P. DAUSSE, D. DUVAL, P. MEYER, J. C. GAIGNAULT, C. MARCHANDEAU AND J. P. RAYNAUD. The Relationship between Glucocorticoid Structure and Effects upon Thymocytes .....	948
R. GRZANNA AND J. T. COYLE. Immunochemical Studies on the Turnover of Rat Serum Dopamine $\beta$ -Hydroxylase .....	956
STANLEY L. KEELY, JACKIE D. CORBIN AND THOMAS LINCOLN. $\alpha$ Adrenergic Involvement in Heart Metabolism: Effects on Adenosine Cyclic 3',5'-Monophosphate, Adenosine Cyclic 3',5'-Monophosphate-Dependent Protein Kinase, Guanosine Cyclic 3',5'-Monophosphate, and Glucose Transport .....	965
<b>SHORT COMMUNICATIONS</b>	
LUBOS TRINER, YVONNE VULLIEMOZ AND MARIAGNES VEROSKY. The Action of Halothane on Adenylate Cyclase .....	976
E. DE CLERCQ, E. KRAJEWSKA, J. DESCAMPS AND P. F. TORRENCE. Antiherpes Activity of Deoxythymidine Analogues: Specific Dependence on Virus-Induced Deoxythymidine Kinase .....	980
ANNOUNCEMENT .....	985

NUMBER 6, NOVEMBER 1977

DONALD J. BIRKETT, SHIRLEY P. MYERS, AND GILLIAN SUDLOW. Effects of Fatty Acids on Two Specific Drug Binding Sites on Human Serum Albumin .....	987
---	-----

F. PETER GUENGERICH AND THOMAS W. STRICKLAND. Metabolism of Vinyl Chloride: Destruction of the Heme of Highly Purified Liver Microsomal Cytochrome P-450 by a Metabolite .....	993
ROBERT R. RANDO AND ANN EIGNER. The Pseudoirreversible Inhibition of Monoamine Oxidase by Allylamine .....	1005
ALAN R. P. PATERSON, SHAMBU R. NAIK, AND CAROL E. CASS. Inhibition of Uridine Uptake in HeLa Cells by Nitrobenzylthioinosine and Related Compounds .....	1014
MARCO CONTI, JAMES P. HARWOOD, MARIA L. DUFAU, AND KEVIN J. CATT. Regulation of Luteinizing Hormone Receptors and Adenylate Cyclase Activity by Gonadotrophin in the Rat Ovary .....	1024
NJANOR NARAYANAN AND PRAKASH V. SULAKHE. 5'-Guanylylimidodiphosphate-Activated Adenylate Cyclase of Cardiac Sacollemma Displays Higher Affinity to Magnesium .....	1033
JEFFREY F. HARPER AND GARY BROOKER. Refractoriness to Muscarinic and Adrenergic Agonists in the Rat Parotid: Responses of Adenosine and Guanosine Cyclic 3',5'-Monophosphates .....	1048
JOHN C. LAWRENCE, JR., AND JOSEPH LARNER. Evidence for <i>Alpha</i> Adrenergic Activation of Phosphorylase and Inactivation of Glycogen Synthase in Rat Adipocytes. Effects of <i>Alpha</i> and <i>Beta</i> Adrenergic Agonists and Antagonists on Glycogen Synthase and Phosphorylase .....	1060
KYOSUKE TEMMA, TAI AKERA, THEODORE M. BRODY, AND ALBERT A. MANIAN. Hydroxylated Chlorpromazine Metabolites: Positive Inotropic Action and the Release of Catecholamines .....	1076
LESLIE A. HUSZAR, JEFFREY H. GREENBERG, AND ALAN MELLORS. Effects of $\Delta^9$ -Tetrahydrocannabinol on Lymphocyte and Synaptosomal Lysophosphatidylcholine Acyltransferase <i>in Vivo</i> .....	1086
MICHAEL M. IBA, LESTER F. SOYKA, AND MARTIN P. SCHULMAN. Characteristics of the Liver Microsomal Drug-Metabolizing Enzyme System of Newborn Rats .....	1092
DAVID C. KLEIN, JOAN L. WELLER, KENNETH L. KIRK, AND ROBERT W. HARTLEY. Incorporation of 2-Fluoro-L-Histidine Into Cellular Protein .....	1105
P. GUND, M. POE, AND K. H. HOOGSTEEEN. Calculations by Complete Neglect of Differential Overlap (CNDO/2) on Dihydrofolic Acid: Role of N(5) in Reduction by Dihydrofolate Reductase .....	1111
A. W. WOOD, W. LEVIN, A. Y. H. LU, D. RYAN, S. B. WEST, H. YAGI, H. D. MAH, D. M. JERINA, AND A. H. CONNEY. Structural Requirements for the Metabolic Activation of Benzo[ <i>a</i> ]pyrene to Mutagenic Products: Effects of Modifications in the 4,5-, 7,8-, and 9,10-Positions .....	1116
WALTER N. PIPER AND ROBERT B. L. VAN LIER. Pteridine Regulation of Inhibition of Hepatic Uroporphyrinogen I Synthetase Activity by Lead Chloride ..	1126
J. M. RITCHIE AND R. B. ROGART. Characterization of Exchange-Labeled Saxitoxin and the Origin of Linear Uptake by Excitable Tissue .....	1136
ALAN B. P. PATERSON, LORI R. BABB, JOHN H. PARAN, AND CAROL E. CASS. Inhibition of Nitrobenzylthioinosine of Adenosine Uptake by Asynchronous HeLa Cells .....	1147
ALAN H. DRUMMOND, BRUCE C. BAGULEY AND MATTHYS STAEHELIN. <i>Beta</i> Adrenergic Regulation of Glycogen Phosphorylase Activity and Adenosine Cyclic 3',5'-Monophosphate Accumulation in Control and Desensitized C-6 Astrocytoma Cells .....	1159
JONATHAN R. SPORN, BARRY B. WOLFE, T. KENDALL HARDEN AND PERRY B. MOLINOFF. Supersensitivity in Rat Cerebral Cortex: Pre- and Postsynaptic Effects of 6-Hydroxydopamine at Noradrenergic Synapses .....	1170

#### SHORT COMMUNICATION

ITSU KANO, JACQUES E. GIELEN, HARUHIKO YAGI, DONALD M. JERINA AND DANIEL W. NEBERT. Subcellular Events Occurring during Aryl Hydrocarbon Hydroxylase Induction: No Requirement for Metabolism of Polycyclic Hydrocarbon Inducer .....	1181
AUTHOR INDEX FOR VOLUME 13 .....	1187
SUBJECT INDEX FOR VOLUME 13 .....	1195