

CONTENTS OF VOLUME 8

NUMBER 1, JANUARY 1972

| | |
|---|-----|
| AVRAM GOLDSTEIN—An Acknowledgment | i |
| BO HELLMAN, LARS-ÅKE IDAHL, ÅKE LERNMARK, JANOVE SEHLIN, ERNST SIMON, AND INGE-BERT TÄLJEDAL. The Pancreatic β -Cell Recognition of Insulin Secretagogues. I. Transport of Mannoheptulose and the Dynamics of Insulin Release.. | 1 |
| S. P. BANERJEE, S. M. E. WONG, V. K. KHANNA, AND A. K. SEN. Inhibition of Sodium- and Potassium-Dependent Adenosine Triphosphatase by <i>N</i> -Ethylmaleimide. I. Effects on Sodium-Sensitive Phosphorylation and Potassium-Sensitive Dephosphorylation..... | 8 |
| S. P. BANERJEE, S. M. E. WONG, AND A. K. SEN. Inhibition of Sodium- and Potassium-Dependent Adenosine Triphosphatase by <i>N</i> -Ethylmaleimide. II. Effects on Sodium-Activated Transphosphorylation..... | 18 |
| ATSUNOBU YODA AND LOWELL E. HOKIN. Studies on the Characterization of the Sodium-Potassium Transport Adenosine Triphosphatase. VII. Effects of Ligands on Fluorescence Due to Interaction of the Enzyme with a Fluorescent Derivative of Hellebrigenin..... | 30 |
| B. D. ROUFOGALIS AND E. E. QUIST. Relative Binding Sites of Pharmacologically Active Ligands on Bovine Erythrocyte Acetylcholinesterase..... | 41 |
| SVANTE B. ROSS, RICHARD WEINSHILBOUM, PERRY B. MOLINOFF, ELLIOT S. VESELL, AND JULIUS AXELROD. Electrophoretic Properties of Dopamine β -Hydroxylase in Several Tissues from Three Species..... | 50 |
| R. E. HANDSCHUMACHER AND C. GAUMOND. Modification of L-Asparaginase by Subunit Cross-linking with Dimethylsuberimidate..... | 59 |
| JOHN FOK AND MICHAEL WARING. Breakdown of Pulse-Labeled RNA in <i>Bacillus megaterium</i> , Revealed by Exposure to the Antibiotics Mithramycin, Chromomycin, and Nogalamycin..... | 65 |
| ESTHER BRESLOW AND RODERICH WALTER. Binding Properties of Bovine Neurophysins I and II: An Equilibrium Dialysis Study..... | 75 |
| V. S. PAI AND E. W. MAYNERT. Interactions of Catecholamines with Adenosine Triphosphate in Solutions and Adrenal Medullary Granules..... | 82 |
| E. W. MAYNERT, B. H. MOON, AND V. S. PAI. Insoluble Solid Complexes of Norepinephrine and Adenosine Triphosphate..... | 88 |
| HIROSHI TERADA AND SABURO MURAOKA. Physicochemical Properties and Uncoupling Activity of 3'-Substituted Analogues of <i>N</i> -Phenylanthranilic Acid..... | 95 |
| SHORT COMMUNICATION | |
| C. A. BUSH, A. PESCE, M. GAIZUTIS, AND V. NAIR. Binding and Circular Dichroism Studies on Interactions of Lysergic Acid Diethylamide with Deoxyribonucleic Acid..... | 104 |

NUMBER 2, MARCH 1972

| | |
|--|-----|
| MOU-TUAN HUANG AND ARTHUR P. GROLLMAN. Effects of Aurintricarboxylic Acid on Ribosomes and the Biosynthesis of Globin in Rabbit Reticulocytes..... | 111 |
| K. C. AGARWAL AND R. E. PARKS, JR. Adenosine Triphosphate-Guanosine 5'-Phosphate Phosphotransferase. IV. Isozymes in Human Erythrocytes and Sarcoma 180 Ascites Cells..... | 128 |

| | |
|---|-----|
| DAVID N. SKILLETER, ROBERT J. DUMMEL, AND ERNEST KUN. Studies with Specific Enzyme Inhibitors. XIV. The Effects of Enzymatically Synthesized (–)- <i>erythro</i> -Fluoromalic Acid on Malate Dehydrogenase and on Anion Carriers of Liver Mitochondria..... | 139 |
| STANLEY C. PENZOTTI, JR. AND ELWOOD TITUS. Evidence for Two Forms of Fluoride-Treated Sodium- and Potassium-Dependent Adenosine Triphosphatase..... | 149 |
| J. M. TRIFARÓ AND M. WARNER. Membranes of Adrenal Chromaffin Granules: Solubilization and Partial Characterization of the Mg ⁺⁺ -Dependent Adenosine Triphosphatase..... | 159 |
| G. GOUGH, M. HELEN MAGUIRE, AND FYLIA PENGLIS. Analogues of Adenosine 5'-Diphosphate–New Platelet Aggregators. Influence of Purine Ring and Phosphate Chain Substitutions on the Platelet-Aggregating Potency of Adenosine 5'-Diphosphate..... | 170 |
| JOHN B. SCHENKMAN. The Effect of Temperature and Substrates on Component Reactions of the Hepatic Microsomal Mixed-Function Oxidase..... | 178 |
| B. STRIPP, N. ZAMPAGLIONE, M. HAMRICK, AND J. R. GILLETTE. An Approach to Measurement of the Stoichiometric Relationship between Hepatic Microsomal Drug Metabolism and the Oxidation of Reduced Nicotinamide Adenine Dinucleotide Phosphate..... | 189 |
| DAVID J. LORUSSO AND JOHN W. SUTTIE. Warfarin Binding to Microsomes Isolated from Normal and Warfarin-Resistant Rat Liver..... | 197 |
| RICHARD M. PHILPOT AND ERNEST HODGSON. The Effect of Piperonyl Butoxide Concentration on the Formation of Cytochrome P-450 Difference Spectra in Hepatic Microsomes from Mice..... | 204 |
| ENRIQUE OCHOA, SARA FISZER DE PLAZAS, AND EDUARDO DE ROBERTIS. Conductance Changes Produced by <i>l</i> -Norepinephrine on Liquid Membranes Containing a Proteolipid from the Bovine Spleen Capsule..... | 215 |
| A. W. CUTHBERT AND P. Y. D. WONG. The Role of Calcium Ions in the Interaction of Amiloride with Membrane Receptors..... | 222 |
| J. BOCKAERT, M. IMBERT, S. JARD, AND F. MOREL. [³ H] Oxytocin Binding Sites in the Isolated Frog Skin Epithelium: Relation to the Physiological Response..... | 230 |
| RICHARD HEIKKILA AND GERALD COHEN. Further Studies on the Generation of Hydrogen Peroxide by 6-Hydroxydopamine Potentiation by Ascorbic Acid..... | 241 |
| YUKIO SUGIURA AND HISASHI TANAKA. Evidence for a Ternary Complex Containing Albumin, Copper, and Penicillamine..... | 249 |

NUMBER 3, MAY 1972

| | |
|---|-----|
| P. PARTINGTON, J. FEENEY, AND A. S. V. BURGEM. The Conformation of Acetylcholine and Related Compounds in Aqueous Solution as Studied by Nuclear Magnetic Resonance Spectroscopy..... | 269 |
| J. L. COUBEILS AND B. PULLMAN. Quantum-Mechanical Study of the Conformational Properties of Drugs with Local Anesthetic Action..... | 278 |
| D. COLQUHOUN AND J. M. RITCHIE. The Kinetics of the Interaction between Tetrodotoxin and Mammalian Nonmyelinated Nerve Fibers..... | 285 |
| WALLACE DAIRMAN AND SIDNEY UDENFRIEND. Studies on the Mechanism of L-3,4-Dihydroxyphenylalanine-Induced Decrease in Tyrosine Hydroxylase Activity... | 293 |
| KENNETH M. TAYLOR AND SOLOMON H. SNYDER. Histamine Methyltransferase: Inhibition and Potentiation by Antihistamines..... | 300 |
| ROLAND D. CIARANELLO, HANS J. DANKERS, AND JACK D. BARCHAS. The Enzymatic Formation of Methanol from <i>S</i> -Adenosylmethionine by Various Tissues of the Rat | 311 |

| | |
|---|-----|
| EDWARD A. BARKER AND EDWARD A. SMUCKLER. Altered Microsome Function during Acute Thioacetamide Poisoning. | 318 |
| D. L. CINTI AND J. B. SCHENKMAN. Hepatic Organelle Interaction. I. Spectral Investigation during Drug Biotransformation. | 327 |
| D. L. CINTI, A. RITCHIE, AND J. B. SCHENKMAN. Hepatic Organelle Interaction. II. Effect of Tricarboxylic Acid Cycle Intermediates on <i>N</i> -Demethylation and Hydroxylation Reactions in Rat Liver. | 339 |
| RAY W. FULLER, HAROLD D. SNODDY, AND WILLIAM W. BROMER. Increase of Hepatic L-Phenylalanine:Pyruvate Aminotransferase by Glucagon in Rats: Possible Role of Adenosine Cyclic 3',5'-Monophosphate as a Mediator. | 345 |
| ALY NAHAS AND MORRIS FRIEDKIN. Lack of Intracellular Conversion of Dihydrohomofolate to Tetrahydrohomofolate in Leukemia Cells with High Levels of Dihydrofolate Reductase. | 353 |
| RICHARD L. MOMPALER. Kinetic and Template Studies with 1- β -D-Arabinofuranosylcytosine 5'-Triphosphate and Mammalian Deoxyribonucleic Acid Polymerase. | 362 |
| SHORT COMMUNICATIONS | |
| BERNARD PULLMAN AND PHILIPPE COURRIÈRE. On the Conformation of Acetylcholine and Acetylthiocholine. | 371 |
| D. W. NEBERT, W. F. BENEDICT, J. E. GIELEN, F. OESCH, AND J. W. DALY. Aryl Hydrocarbon Hydroxylase, Epoxide Hydrase, and 7,12-Dimethylbenz[<i>a</i>]anthracene-Produced Skin Tumorigenesis in the Mouse. | 374 |
| ELIHU N. GOREN AND ORA M. ROSEN. Inhibition of a Cyclic Nucleotide Phosphodiesterase from Beef Heart by Catecholamines and Related Compounds. | 380 |
| NUMBER 4, JULY 1972 | |
| Z. HUSZTI. Kinetic Studies on Rat Brain Monoamine Oxidase. | 385 |
| C. R. CREVELING, N. MORRIS, H. SHIMIZU, H. H. ONG, AND J. DALY. Catechol <i>O</i> -Methyltransferase. IV. Factors Affecting <i>m</i> - and <i>p</i> -Methylation of Substituted Catechols. | 398 |
| ALFRED G. GILMAN AND BRUCE K. SCHRIER. Adenosine Cyclic 3',5'-Monophosphate in Fetal Rat Brain Cell Cultures. I. Effect of Catecholamines. | 410 |
| H. ROOS AND K. PFLEGER. Kinetics of Adenosine Uptake by Erythrocytes and the Influence of Dipyrindamole. | 417 |
| DAVID V. GODIN AND THERESE WAN Ng. Trinitrobenzenesulfonic Acid: A Possible Chemical Probe to Investigate Lipid-Protein Interactions in Biological Membranes. | 426 |
| MICHEL HOSPITAL, BERNARD Busetta, ROBERT BUCOURT, HADASSA WEINTRAUB, AND ETIENNE-EMILE BAULIEU. X-ray Crystallography of Estrogens and Their Binding to Receptor Sites. | 438 |
| MASAYUKI TAKECHI, KYOZO HAYASHI, AND TOYOSAKU SASAKI. The Amino Acid Sequence of Cytotoxin II from the Venom of the Indian Cobra (<i>Naja naja</i>). | 446 |
| L. R. YOUNGER, R. SALOMON, R. W. WILSON, A. C. PEACOCK, AND H. V. GELBOIN. Effects of Polycyclic Hydrocarbons on Ribonucleic Acid Synthesis in Rat Liver Nuclei and Hamster Embryo Cells. | 452 |
| RAYMOND J. KENT AND CHARLES HEIDELBERGER. Fluorinated Pyrimidines. XL. The Reduction of 5-Fluorouridine-5'-Diphosphate by Ribonucleotide Reductase. | 465 |
| SHORT COMMUNICATION | |
| T. B. OKARMA, P. TRAMELL, AND S. M. KALMAN. Inhibition of Sodium- and Potassium-Dependent Adenosine Triphosphatase by Digoxin Covalently Bound to Sepharose. | 476 |

NUMBER 5, SEPTEMBER 1972

| | |
|---|-----|
| JORDAN L. HOLTZMAN AND MATTHEW L. CARR. Inhibition by Deuterated Water of the Mixed-Function Oxidases of Hepatic Microsomes of the Male Rat..... | 481 |
| ANTHONY Y. H. LU AND SUSAN B. WEST. Reconstituted Liver Microsomal Enzyme System That Hydroxylates Drugs, Other Foreign Compounds, and Endogenous Substrates. III. Properties of the Reconstituted 3,4-Benzpyrene Hydroxylase System..... | 490 |
| PAUL A. FRIEDMAN, TOM LLOYD, AND SEYMOUR KAUFMAN. Production of Antibodies to Rat Liver Phenylalanine Hydroxylase: Cross-reactivity with Other Pterin-Dependent Hydroxylases..... | 501 |
| ROLAND D. CIARANELLO, JEFFREY N. DORNBUSCH, AND JACK D. BARCHAS. Regulation of Adrenal Phenylethanolamine <i>N</i> -Methyltransferase Activity in Three Inbred Mouse Strains..... | 511 |
| A. GUIDOTTI, BENJAMIN WEISS, AND E. COSTA. Adenosine 3',5'-Monophosphate Concentrations and Isoproterenol-Induced Synthesis of Deoxyribonucleic Acid in Mouse Parotid Gland..... | 521 |
| CHARLES W. HAIDLE, K. KAY WEISS, AND M. TIEN KUO. Release of Free Bases from Deoxyribonucleic Acid after Reaction with Bleomycin..... | 531 |
| MOU-TUAN HUANG AND ARTHUR P. GROLLMAN. Mode of Action of Tylocrebrine: Effects on Protein and Nucleic Acid Synthesis..... | 538 |
| HERBERT E. KANN, JR. AND KURT W. KOHN. Effects of Deoxyribonucleic Acid-Reactive Drugs on Ribonucleic Acid Synthesis in Leukemia 1210 Cells..... | 551 |
| SIDNEY SHIFRIN AND BARBARA G. SOLIS. Reaction of <i>N</i> -Acetylimidazole with <i>L</i> -Asparaginase..... | 561 |
| THOMAS NOGRADY, PAVEL D. HRDINA, AND GEORGE M. LING. Investigation into the Association between Serotonin and Adenosine Triphosphate <i>in Vitro</i> by Nuclear Magnetic Resonance and Ultraviolet Spectroscopy..... | 565 |
| GABOR KATO. Acetylcholinesterase. I. A Study by Nuclear Magnetic Resonance of the Binding of Inhibitors to the Enzyme..... | 575 |
| GABOR KATO. Acetylcholinesterase. II. A Study by Nuclear Magnetic Resonance of the Acceleration of Acetylcholinesterase by Atropine and Inhibition by Eserine | 582 |
| SHORT COMMUNICATIONS | |
| M. J. JUNG AND B. BELLEAU. Purification and Fractionation of Acetylcholinesterase into Sub-species by Affinity Chromatography on a <i>d</i> -Tubocurarine-Sepharose Column..... | 589 |
| ROBERT KATZ AND ARTHUR E. JACOBSON. Chemical Structure-Activity Correlation in the <i>O</i> -Methylation of Substituted Catechols by Catechol <i>O</i> -Methyltransferase..... | 594 |

NUMBER 6, NOVEMBER 1972

| | |
|--|-----|
| B. A. WINTER AND A. GOLDSTEIN. A Photochemical Affinity Labeling Reagent for the Opiate Receptor(s)..... | 601 |
| B. PULLMAN AND P. COURRIÈRE. Further Molecular Orbital Studies on the Conformation of Acetylcholine and Its Derivatives..... | 612 |
| H. A. LESTER. Blockade of Acetylcholine Receptors by Cobra Toxin: Electrophysiological Studies..... | 623 |
| H. A. LESTER. Vulnerability of Desensitized or Curare-Treated Acetylcholine Receptors to Irreversible Blockade by Cobra Toxin..... | 632 |

| | |
|--|-----|
| P. D. LOTLIKAR, S. FUKUDA, AND N. YAMAMOTO. Effects of the Carcinogen 2-Acetylaminofluorine and Its Derivatives on Bacteria and Bacteriophages | 645 |
| D. W. NEBERT, J. E. GIELEN, AND F. M. GOUJON. Genetic Expression of Aryl Hydrocarbon Hydroxylase Induction III. Changes in the Binding of <i>n</i> -Octylamine to Cytochrome P-450 | 651 |
| F. M. GOUJON, D. W. NEBERT, AND J. E. GIELEN. Genetic Expression of Aryl Hydrocarbon Hydroxylase Induction. IV. Interaction of Various Compounds with Different Forms of Cytochrome P-450 and the Effect of Benzo[<i>a</i>]pyrene Metabolism <i>in Vitro</i> | 667 |
| J. S. WOLD AND W. J. STEELE. Alterations in Liver Nuclear RNA of Rats Treated with Phenobarbital | 681 |
| S. J. SMITH, R. N. HILL, T. A. GLEESON, AND E. S. VESELL. Evidence for Post-transcriptional Stabilization of Ribosomal Precursor RNA by Phenobarbital | 691 |
| R. I. GLAZER AND A. C. SARTORELLI. The Effect of Phenobarbital on the Synthesis of Nascent Protein on Free and Membrane-Bound Polyribosomes of Normal and Regenerating Liver | 701 |
| M. R. FRANKLIN. The Incomplete Conversion of Hepatic Cytochrome P-450 to P-420 by Mercurials | 711 |
| M. R. FRANKLIN. The Conversion of Hepatic Cytochrome P-450 in Normal, Phenobarbital, and 3-Methylcholanthrene Pretreated Animals | 722 |
| D. KESSEL, J. DEACON, B. COFFEY, AND A. BAKAMJIAN. Some Properties of a Pyrimidine Phosphoribosyltransferase from Murine Leukemia Cells | 731 |
| K. SLAVÍK, R. ČIHAŘ, J. SOUČEK, E. HERMANOVÁ, K. PŘISTOUPILOVÁ, AND V. SLAVÍKOVÁ. Isohomoaminopterin and Isohomofolic Acid. Synthesis and Basic Biochemical and Biological Properties | 740 |
| J. G. BRAND AND T. Y. TORIBARA. Induced Conformational Changes in Novobiocin | 751 |
| B. HELLMAN, Å. LERNMARK, J. SEHLIN, AND I.-B. TALJEDÅL. The Pancreatic β -Cell Recognition of Insulin Secretagogues V. Binding and Stimulatory Action of Phlorizin | 759 |
| T. DEGUCHI AND J. BARCHAS. Effect of Chlorophenylalanine on Hydroxylation of Tryptophan in Pineal and Brain of Rats | 770 |
| SHORT COMMUNICATION | |
| C. VILCHEZ, M. M. PIRAS, AND R. PIRAS. Adrenal Corticosteroids and the Response to Epinephrine or Electrical Stimulation of the Enzymes of Glycogen Metabolism in Rat Skeletal Muscle | 780 |
| J. M. PRIVES, M. J. REITER, D. A. COWBURN, AND A. KARLIN. Interactions of a Cobra Neurotoxin and Affinity Labels of the Acetylcholine Receptor in the Electroplex | 786 |