CONTENTS

5115 Fragmentation of the 95,000-dalton transmembrane poly peptide in human erythrocyte membranes. Arrangement of the fragments in the lipid bilayer.
L. Kurt Drickamer

5194 Escherichia coli tyrosine transfer ribonucleic acid genes. Nucleotide sequences of their promoters and of the regions adjoining C-C-A ends.
Takao Sekiya, Roland Contreras, Hans Küpper, Arthur Landy, and H. Gobind Khurana

Robert Hershfield and Frederic M. Richards

5149 Incorporation of 1515H215C15C15C15C15C-14C14C14C14C14C-citrate into glycero lipids via acetyl CoA ends. Nucleotide phosphate in untransformed and viral-transformed BHK-21/C13 fibroblasts.
Robert J. Pollock, Amiya K. Hajra, and Bernard W. Agrawal

5155 Effect of a supernatant protein on microsomal squalene epoxidase and 2,3-oxidosqualene-lanosterol cyclase.
Yeheskel A. Soal and Konrad E. Bloch

5161 Phospholipid-protein interactions in the Ca2+-adenosine triphosphatase of sarcoplasmic reticulum.
Aileen F. Knowles, Esther Eyton, and Efraim Racker

Robert J. Schwartz, Robert W. Kafka, Richard E. Buller, William T. Schrader, and Bert W. O'Malley

5178 Progesterone-binding components of chick oviduct. In vitro effect of receptor subunits on gene transcription.
Richard E. Baier, Robert J. Schwartz, William T. Schrader, and Bert W. O'Malley

5187 Titration behavior of individual tyrosine residues of myoglobin from sperm whale, horse, and red kangaroo. Application of natural abundance carbon 13 nuclear magnetic resonance spectroscopy.
David J. Wilbur and Adam Allerhand

5195 Two substrate binding sites on tryptophanyl transfer ribonucleic acid synthetase of Escherichia coli.
Karl H. MuENCH

5200 Studies on the α-adrenergic activation of hepatic glucose output. I. Studies on the α-adrenergic activation of phosphorylase and glycogen synthesis in isolated rat liver parenchymal cells.

5209 Studies on the α-adrenergic activation of hepatic glucose output. II. Investigation of the roles of adenosine 3':5'-monophosphate and adenosine 3':5'-monophosphate-dependent protein kinase in the actions of phenylephrine in isolated hepatocytes.
Alan D. Cherrington, Françoise D. Assimacopoulos, Sandra C. Harper, Jackie D. Corbin, Charles R. Park, and John H. Exton

5219 Control of mutation frequency by bacteriophage T4 DNA polymerase. I. The CR129 antimitator DNA polymerase is defective in strand displacement.
Frances D. Gillin and Nancy G. Nossal

5225 Control of mutation frequency by bacteriophage T4 DNA polymerase. II. Accuracy of nucleotide selection by the LSS mutator, CR129 antimitator, and wild type phenotypes DNA polymerases.
Frances D. Gillin and Nancy G. Nossal

5233 Human plasma lipoproteins as accelerators of prothrombin activation.
S. Paul Bagaj, Judith A. K. Harmony, Martino Martinez-Carrion, and Francis J. Castellino

α-Hydroxylation of lignoceric and nervonic acids in the brain. Effects of altered thyroid function on postnatal development of the hydroxylase activity.
Saad Murad, Geneva D. Strycharz, and Yasuo Kishimoto

Structure of ATP citrate lyase from rat liver. Physicochemical studies and proteolytic modification.
Manoranjan Singh, E. Glen Richards, Amal Mukherjee, and Paul A. Serre

Effect of catons and anions on the steady state kinetics of energy-dependent Ca2+ transport in rat liver mitochondria.
Susan M. Hutson, Douglas R. Pfeiffer, and Henry A. Lardy

On the mechanism of regulation of α oxidation of fatty acids.
Ingemar Björkhem

Reactivity of the phosphopryridoxal groups of cystathionase.
Troy Beeler and J. E. Churchich

Corticosteroid-binding proteins in human colostrum and milk and rat milk.
Donna W. Payne, Li-Hia Peng, William H. Pearlman, and Luther M. Talbert

Digestion of native collagen, denatured collagen, and collagen fragments by extracts of rat liver lysosomes.
John W. Coffey, Christia Fiedler-Nugs, Alex G. Georgiadis, and Richard A. Salvador

Modification of the 5' terminus of mRNA by a RNA (guanine-7)-methyltransferase from HeLa cells.
Marcia J. Ensinger and Bernard Moss

Carbohydrate structure of glycoproteins isolated from an hepatic membrane-binding protein specific for asialoglycoproteins.
Toshihiko Kawasaki and Gilbert Ashwell

Oligopeptide transport in pruline peptidase mutants of Salmonella typhimurium.
Margaret Belynda Jackson, Jeffrey M. Becker, Alvin S. Steinfield, and Fred Naidor

In vitro activation of rat liver phenylalanine hydroxylation by phosphorylation.
Jean-Pierre Abitbol, Sheldon Mustien, Norman Chang, and Seymour Kaufman

Oxidative phosphorylation in right-side-out membrane vesicles from Escherichia coli.
Tomofusa Tsuchiya

Purification of intact Old Yellow Enzyme using an affinity chromatographic step.
Aaron S. Abramovitz and Vincent Massey

Interaction of phenols with Old Yellow Enzyme. Physical evidence for charge-transfer complexes.
Aaron S. Abramovitz and Vincent Massey

Some properties of a detergent-solubilized NADPH-cytochrome c reductase purified by biochemical affinity chromatography.
Yukio Yasui, Atsushi and Betty Sue Siler Masters

Characterization of calcium binding to adipocyte plasma membranes.
Jay M. McDonald, David E. Bruns, and Leonard Jarett

Reduced nicotinamide adenine dinucleotide phosphate, a structural and conformational probe of chicken liver fatty acid synthetase.
K. R. Srinivasan and Surinder Kumar

Deacetylation reaction catalyzed by Salmonella phage c511 and its baseplate parts.

Full Instructions to Authors will be found in THE JOURNAL, 251, 1 (1976), and reprints may be obtained on request from the editorial office.
Shintaro Izawa and Shiro Kanegasaki  
5366 Ethanol metabolism by a transplantable hepatocellular carcinoma. Role of microsomes and mitochondria.  
Arthur L. Cederbaum, Frederick F. Becker, and Emanuel Rubin  
5375 Physical properties of antitumor glutaminase-asparaginase from Pseudomonas \textit{TA}.  
John S. Holcenberg, David C. Teller, and Joseph Roberts  
5381 Interaction of human interferons with immobilized hydrophobic amino acids and dipeptides.  
Eugene Sulkowski, Mary W. Davey, and William A. Carter  
5386 Identification of the covalently bound flavin of thiamin dehydrogenase.  
William C. Kenney, Dale E. Edmondson, and Richard L. Seng  
5391 Chemical properties of two antigens controlled by the major histocompatibility complex of the chicken.  
Andrew Ziegler and Richard Pink  
5397 Association of the \( A_k \) locus with specific changes in metyrapone and ethylisocyanide binding to mouse liver microsomes.  
Georg F. Kahl, Regine Kahl, Kenji Kumaki, and Daniel W. Nebert  
5408 Phosphorylation of rat liver ribonucleic acid polymerase I by nuclear protein kinases.  
James Hirach and Orlando J. Martelo  

5414 Mechanism of ATP hydrolysis by sarcoplasmic reticulum and the role of phospholipids.  
Hiroshi Nakamura, Robert L. Filka, Ricardo Boland, and Anthony N. Martonosi  

COMMUNICATIONS  
5424 Mechanism of ATP hydrolysis by sarcoplasmic reticulum and the role of phospholipids.  
Paul D. Wagner and Ralph G. Yount  
5427 Rapid purification of detergent-solubilized HLA antigen by affinity chromatography employing anti-\( \beta\)-microglobulin serum.  
Richard J. Robb, Jack L. Strominger, and Dean L. Mann  

ADDITIONS AND CORRECTIONS  
Joel Bockaert, Mary Hunzicker-Dunn, and Lutz Birnbaumer  
Laurence P. Aggerbeck, Ferenc J. Kezdy, and Angelo M. Scanu  

THE JOURNAL OF BIOLOGICAL CHEMISTRY  
GENERAL INFORMATION  
MANUSCRIPT SUBMISSION AND PAGE CHARGES  

Submit manuscripts of full papers in duplicate and Communications in triplicate to  
Editor, The Journal of Biological Chemistry  
9650 Rockville Pike  
Bethesda, Maryland 20014, U.S.A.  

Each manuscript submitted must be accompanied by a remittance of $25 in the form of a check (or institutional purchase order) to cover the manuscript handling charge levied by the JOURNAL. The editorial review of manuscripts will be initiated only upon receipt of this payment. A revised manuscript received later than six months after the last decision letter (three months in the case of Communications) will be treated as a new submission requiring payment of a new handling charge in addition to other charges.  

Accepted manuscripts will be published with the implicit understanding that the authors will pay a charge of $40 per published page (manuscript supplements and repository items excluded). Under exceptional circumstances, when no source of grant or other support exists, the author(s) of accepted manuscripts may apply for a grant-in-aid to Chairman, Publications Committee, American Society of Biological Chemists, Inc., 9650 Rockville Pike, Bethesda, Maryland 20014.  

Queries on matters of general editorial policy, requests for reprints of the "Instructions to Authors," or of the "Editorial Policy and Practice," or for permission to reproduce any part of a previously published article should be directed to the Journal Editorial Office in Bethesda. (Telephone 301-530-7150).  

Address all correspondence relative to subscriptions, subscription fulfillment, and orders for back copies to: The Journal of Biological Chemistry, 428 East Preston Street, Baltimore, Maryland 21202, U.S.A. Requests for termination of paid and duly entered subscriptions will be honored with proportional refunds less a $10 cancellation charge.  

Published semimonthly by the American Society of Biological Chemists, Inc. Annual volume: $200, United States; $210, other countries. Single copy $8.50. Special subscription rates are available to members, graduate students, and postdoctoral fellows for personal use only. Qualifying forms are available from the Bethesda Office. Second class postage paid at Baltimore, Maryland 21202, U.S.A., and at additional mailing offices.