CONTENTS

NUMBER 1, JULY 1969

IMMUNOCHEMISTRY

Development of Human Complement System. Philip Fireman, Dolores A. Zuchowski and Paul M. Taylor ................................................................. 25

Inactivation of Bacteriophage T4, of Poly-d-alanyl Bacteriophage and of Penicilloyl Bacteriophage by Immunospecifically Isolated IgM and IgG Antibodies. Joseph Haimovich and Michael Sela ................................................................................ 45

A Simplified Procedure for the Preparation of Immunoglobulin-Class-Specific Antisera. Christopher S. Henney and Kimishige Ishizaka ................................................... 56

Immuno-Precipitates of Some Purified and Unpurified Human Plasma Proteins with Monospecific and Polyvalent Human Plasma Protein Antisera. M. Ceska .......................................................... 100


“Sandwich” Solid Phase Radioimmunoassay for the Quantitative Determination of Human Immunoglobulins. Sydney E. Salmon, Gail Mackey and H. Hugh Fudenberg ................ 129

IMMUNOGENETICS

Genetic Control of the Immune Response in Mice. I. Segregation Data and Localization to the Fifth Linkage Group of a Gene Affecting Antibody Production. David L. Gasser ..... 66

Immunochemistry and Genetics of a “New” Allotypic Specificity A24 of Rabbit \(\gamma G\) Immunoglobulins: Recombination in Somatic Cells. S. Dubiski .................................... 120

CELLULAR IMMUNOLOGY

Genetic Factors in Leucocyte Responses to Endotoxin: Further Studies in Mice. Barnet M. Sultzer .................................................................................... 32

Lysosome Stabilization by Leukocyte Granule Membrane Antiserum. Robert H. Persellin .... 39

Effects of Temperature upon “Naturally Occurring” Blood Group Agglutinins in Fresh Water Catfish. William J. Kuhns, Ross F. Nigrelli and Joseph V. Chuba ............................. 62

A Role of Macrophages in the Stimulation of Immune Responses by Adjuvants. Emil R. Unanue, Brigitte A. Askonas and Anthony C. Allison ............................................... 71

The Effect of Carrageenan on Delayed Hypersensitivity Reactions. Howard J. Schwartz and Sidney Leskowitz ........................................ 87

IMMUNOPATHOLOGY

Antibody in Nasal Secretions after Intramuscular Injection of Influenza Virus Vaccine in Persons with Chronic Bronchopulmonary Disease. Robert H. Alford ............................... 20

Tolerance Induction with Thymus Grafts in Neonatally Thymectomized Mice. O. Stutman, E. J. Yunis and R. A. Good ............................................................... 92

A Graft vs. Host Reaction in a Xenogeneic Combination: The Reaction of Murine Cells in Rats. Wasfy Saleh, Lloyd D. MacLean and Julius Gordon ........................................ 114

MICROBIAL AND VIRAL IMMUNOLOGY

Delayed Hypersensitivity and Inhibition of Macrophage Spreading: in Vivo and in Vitro Studies of Tuberculin and Streptococcal Hypersensitivities in Guinea Pigs. Dragan Dekaris, Robert M. Fauve and Marcel Raynaud .......................................................... 1

Identification of an Antigen and Specific Antibody in the Sera of Chickens Infected with Plasmodium gallinaceum. A. R. Smith, J. D. Lykins, E. W. Voss and M. Ristie .............................................................. 6

Serologic Activity of Antigen Isolated from the Body Fluid of Ascaris suum. José Oliver-González, Patricia Hurbrink, Encarnita Conde and Irving G. Kagan ........................................ 15

The Immunologic Response of the Mouse to Aerosols of an Attenuated Encephalomyocarditis Virus Strain. Catherine M. Prato and Thomas G. Akers .................................. 79

A Study of the Neutralization of Rhinoviruses by Means of a Plaque-Reduction Test. Milan Flala .......................... 107
## COMMUNICATIONS

**"In Vitro" Cell Reactions in Delayed Hypersensitivity.** S. B. Salvin and Jane Nishio .......... 138

**Specific Antisera to Cls: Detection of Different Electrophoretic Species of Cls.** Kazuyoshi Nagaki and Robert M. Stroud .................................................. 141

**Identification of IgA in Rat Serum and Secretions.** D. R. Nash, J. P. Vaerman, H. Basín and J. F. Heremans ................................................................. 145

### NUMBER 2, AUGUST 1969

#### IMMUNOCHEMISTRY

- **Antimucoprotein Antibodies and Their Specificity.** Mary Rolicka and James T. Park ........... 196
- **Human IgG and IgA Diphtheria Antitoxins in Serum, Nasal Fluids and Saliva.** Richard W. Newcomb, Kimishige Ishizaka and Bonita L. DeVald ........................................ 215
- **Immunochromical Studies of the Phytogeumagglutinin, Concanavalin A.** Donald A. Person and Harold Markowitz ................................................................. 225
- **The Production of Tolerance to Human Erythrocytes in the Rat with Cytosine Arabinoside or Cyclophosphamid.** Robert O. Gordon, Mady E. Wade and Malcolm S. Mitchell ......................... 233
- **Characterization of Human Precipitating Antibody to Inhaled Antigens.** Jordan N. Fink, Thomas Tebo and Joseph J. Barboriak .............................................. 244

**Human Lymphocyte Membrane (HL-A) Allotutorins: Isolation, Purification and Properties.** Dean L. Mann, G. Nicholas Rogentine, John L. Fahey and Stanley Nathenson .......................... 282

**Interaction of Concanavalin with Polysaccharides of Histoplasma capsulatum.** Harold Markowitz .................................................................................................. 308

**Studies on the Antigenicity of Bacterial Ferredoxins. I. The Effect of Modification of Cysteinyl Residues on the Antigenicity of Clostridium pasteurianum Ferredoxin.** Rodney M. Nitz, Barbara Mitchell, Julia Gerwing and John Christensen ......................................... 319

**Characterization of the Serum and Secretory Immune Systems of the Cow and Sheep.** Albert L. Sullivan, Robert A. Prendergast, Lucyn Jones Antunes, Arthur M. Silverstein and Thomas B. Tomasi, Jr. ................................................................................ 334

**Metabolic Studies of a Heavy Chain Disease Protein.** Daniel Ein and Thomas A. Waldmann .................................................................................................. 345

#### IMMUNOGENETICS

- **Identification and Genetic Control of Two New Low-Density Lipoprotein Allotypes: Phenogroups at the Lpq Locus.** John J. Albers and Sheldon Dray ..................... 155
- **Allelic Exclusion and Phenogroup Expression in Individual Molecules of Rabbit Low-Density Lipoprotein Allotypes.** John J. Albers and Sheldon Dray .......... 163

#### CELLULAR IMMUNOLOGY

- **Lymphocyte in Vitro Cytotoxicity: Correlation of Derepression with Release of Lymphotoxin from Human Lymphocytes.** Terry W. Williams and Gale A. Granger ....................................................... 170
- **Capillary Tube Migration for Detection of Human Delayed Hypersensitivity: Difficulties Encountered with "Buffy Coat" Cells and Tuberculin Antigen.** H. Benfer Kaltreider, David Soghor, Janie B. Taylor and John L. Decker ................................................. 179
- **The Suppressive Effect of Rauscher Leukemia Virus on the Secondary Antibody Response of Spleen Cells Cultured in Cell-Impermeable Diffusion Chambers.** Luis Borella ................................. 185
- **Studies on the Mechanisms of Resistance to Phylogenetically Diverse Intracellular Organisms.** Joel Ruskin, Jean McIntosh and Jack S. Remington ........................................ 252
- **Specificity of the Immunosuppression Caused by Passive Administration of Antibody.** Jean-Charles Cerottini, Patricia J. McConahey and Frank H. Dixon ......................................................... 268
- **Studies on the Radioensive Phase of the Antibody Response in Rabbits. II. Recovery and the Secondary Response.** James F. Pribnow and Myron S. Silverman ......................................................... 276
- **The Effect of Dose of Antigen on Protein and DNA Synthesis in Antibody-Forming Cells.** Sohei Shinka and Jonathan W. Uhr ........................................................................ 300
- **Leukemia L 1210 Homograft in Swiss Mice: Immunologie, Cellular and Chemotherapeutic Responses.** Herbert N. Prince and E. Grunberg ............................................. 324
- **A Study of the Kinetics of the Anti-Dinitrophenyl Antibody Response at the Cellular Level.** H. Francis Havas and Tomáš Hraba ................................................................ 349
Antibody Formation against 2,4-Dinitrophenyl-Hapten at the Cellular Level. Hemolytic Plaque- in-Gel Assay for Lymphoid Cells Producing Anti-2,4-Dinitrophenyl-Hapten Antibody. His- ashi Yamada and Atsuko Yamada ......................................................... 357

IMMUNOPATHOLOGY

Complement (C')-Coated Red Blood Cells following Infection with the Virus of Equine Infectious Anemia. T. C. McGuire, J. B. Henson and D. Burger ................................................................. 293

Studies on Lymphocyte Transformation in Nephrotoxic Serum Nephritis of the Rat. Hermut Warnatz, Friedrich Scheiffarth and Friedrich Hagel ....................................... 364

MICROBIAL AND VIRAL IMMUNOLOGY

Cross-Reactions among Group A Streptococci. II. Further Analysis of Antigens Related to Type- Specificity and Protection. Grove G. Wiley and Pauline N. Bruno ......................... 149

Assessment of a Bacterial Adherence Colony (BAC) Method for Enumeration of Antibody-Form- ing Cells to E. coli Somatic Antigen. Herman Friedman, Jerry Allen and Maurice Landy.... 204

Comparative Immune Response to Amphibian Cytoplasmic Viruses Assayed by the Complement- Fixation and Gel Immunodiffusion Tests. Suzanne Kaminski, H Fred Clark and David T. Karzon ................................................................................... 260

COMMUNICATIONS

Susceptibility of Chincoteague Ponies to Antigenically Dissimilar Strains of Human Type A2 In- fluenza Virus. Julius A. Kasel, Robert V. Fulk and Edward W. Harvey .................... 369

Effect of Antimacrophage Serum on Antibody Production and Phagocytosis in Mice. Bertie F. Argyris and Diane H. Plotkin ............................................................. 372

High Efficiency of SAC[14C]24h Conversion to S* with EDTA-Treated Rat Serum. Yuro Miyakawa, Teruaki Sekine, Kohkichi Shimada and Kusuya Nishioka .... 374


The Use of Affinity Chromatography for the Specific Purification of Antibodies and Antigens. Leon Wofsy and Benjamin Burr ....................................................................... 380

Enhancing Antibody. II. Specificity and Heterogeneity. Barry Zimmerman and Joseph D. Feldman .................................................................................. 383

NUMBER 3, SEPTEMBER 1969

IMMUNOCHEMISTRY

The Effect of Carbamylation, Amidination and Benzylation on the Ability of Rabbit γG Anti- body to Produce Passive Cutaneous Anaphylaxis in Guinea Pig and Rabbit Skin. Stanley Cohen, Lawrence Feinman and Elmer L. Becker ........................................... 387

The Latency Requirements and Rate of Evolution of Passive Cutaneous Anaphylactic Reactions Produced by Untreated and Carbamylated Rabbit γG Antibody. Lawrence Feinman, Stanley Cohen and Elmer L. Becker ............................................................. 395

Non-Complement-Fixing IgM Antibodies in the Guinea Pig. William D. Linscott and Stephen S. Hansen ................................................................................................. 423

The Immunoglobulins of Equine Colostrum and Parotid Fluid. Robert J. Genco, Lewis Yecies and Fred Karush ................................................................................................. 437

Immunoglobulin E in the Monkey. Kimishige Ishizaka, Teruko Ishizaka and Tomio Tada .... 445

Protein A from Staphylococcus aureus. IX. Complement-Fixing Activity of Protein A-IgG Com-plexes. J. Sjöquist and G. Stålenheim ..................................................................... 467

Complement : Chemical Coupling of a Functionally Active Component to Erythrocytes in the Absence of Antibody. William D. Linscott, W. Page Faulk and Philip J. Perucza ........... 474

Quantitative Studies of the Specificity of Anti-Pneumococcal Antibodies, Types III and VIII. IV. Binding of Labeled Hexasaccharides Derived from S3 by Anti-S3 Antibodies and Their Fab Fragments. Moshe Katz and A. M. Pappenheimer, Jr. ...................................................... 491

Immunologic and Immunochemical Studies on the Gar, Lepisosteus platyrhincus. I. Immune Re- sponses and Characterization of Antibody. Claire M. Bradshaw, L. William Clem and M. Michael Sigel ................................................................................................. 496
<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Specificity of the Early Immune Response. I. A Comparison of the Specificity of Delayed Hypersensitivity and Humoral Responses following Immunization with Human γG Globulin.</td>
<td>Christopher S. Henney</td>
<td>519</td>
</tr>
<tr>
<td>Multi-Compartment Distribution Analysis of Antibrain Radioantibodies in Density Gradients.</td>
<td>Eugene D. Day and Sylvester Lassiter</td>
<td>550</td>
</tr>
<tr>
<td>Immunoglobulins of the Rhesus Monkey (Macaca mulatta). IV. Characteristics of the Primary and Secondary Responses of the Rhesus Monkey to Heterologous Serum Protein Antigens.</td>
<td>James D. Lakin, Roy Patterson and Jacob J. Pruzansky</td>
<td>577</td>
</tr>
<tr>
<td>Immune Mechanisms of Reversed Type Reaginic Hypersensitivity.</td>
<td>Kimishige Ishizaka and Teruko Ishizaka</td>
<td>588</td>
</tr>
<tr>
<td>Differentiation of Human IgM Subclasses by the Ability to Interact with a Factor Resembling the First Component of Complement.</td>
<td>Malcolm R. Mackenzie, Noel L. Warner, William D. Linscott and H. Hugh Fudenberg</td>
<td>607</td>
</tr>
<tr>
<td>The Effect of the Amount of Mycobacterial Adjuvants on the Immune Response of Strain 2, Strain 13 and Hartley Strain Guinea Pigs to DNP-PLL and DNP-GL.</td>
<td>Ira Green, Baruj Benacerraf and Sanford H. Stone</td>
<td>403</td>
</tr>
<tr>
<td>Differences between Populations of Fresh Water Catfish Defined by Blood Group Antigens and Antibodies.</td>
<td>William J. Kuhns, Ross F. Nigrelli and Joseph V. Chuba</td>
<td>454</td>
</tr>
<tr>
<td>Effects of Radiation on the Initial and Anamnestic IgM Hemolysin Responses in Rabbits; Antigen Injection after X-Rays.</td>
<td>William H. Taliaferro and Lucy Graves Taliaferro</td>
<td>559</td>
</tr>
<tr>
<td>Factors in Delayed Sensitivity: Lymphocyte and Macrophage Cytotoxins in the Tuberculin Reaction.</td>
<td>E. R. Heise and R. S. Weiser</td>
<td>570</td>
</tr>
<tr>
<td>A Neutrophil Chemotactic Factor Derived from C5 upon Interaction of Guinea Pig Serum with Endotoxin.</td>
<td>R. Snyderman, H. S. Shin, J. K. Phillips, H. Gewurz and S. E. Mergenhagen</td>
<td>413</td>
</tr>
<tr>
<td>Persistence of the Autoimmune Pathogenetic Process in Experimental Autologous Immune Complex Nephritis.</td>
<td>Thomas S. Edgington, Sun Lee and Frank J. Dixon</td>
<td>528</td>
</tr>
<tr>
<td>Rabbit Autoantibodies to Aorta.</td>
<td>Hans W. Intorp and Felix Milgrom</td>
<td>544</td>
</tr>
<tr>
<td>Distribution Analysis of Brain-Localized Radioantibodies after Zonal Ultracentrifugation in a Sucrose Density-Gradient.</td>
<td>Eugene D. Day and Lewis C. Rigsbee</td>
<td>556</td>
</tr>
<tr>
<td>Specific Role of Each Human Leukocyte Type in Viral Infections. III. 17D Yellow Fever Virus Replication and Interferon Production in Homogeneous Leukocyte Cultures Treated with Phytohemagglutinin.</td>
<td>E. Frederick Wheelock and Robert Edelman</td>
<td>429</td>
</tr>
<tr>
<td>Immunosuppression by Leukemia Viruses. III. Adoptive Transfer of Antibody-Forming Cells to Friend Disease Virus-Infected Mice.</td>
<td>Walter S. Ceglowski and Herman Friedman</td>
<td>460</td>
</tr>
<tr>
<td>Particulate and Soluble Antigens of Rickettsia tsutsugamushi in the Complement Fixation Test.</td>
<td>Akira Shishido, Michiko Hikita, Takeshi Sato and Seiya Kohn</td>
<td>480</td>
</tr>
<tr>
<td>Mechanism of Bacteriophage T4 Neutralization by Rabbit Immunoglobulin and Its Proteolytic Digestion Fragments.</td>
<td>G. W. Stemke</td>
<td>596</td>
</tr>
<tr>
<td>Production of Anti-Hapten Antibodies by Several Classes of Lower Vertebrates.</td>
<td>Gerrie A. Leslie and L. William Clem</td>
<td>613</td>
</tr>
<tr>
<td>Ultrastructural Identification of Possible Sites of Antigen Processing in Macrophages.</td>
<td>Phillip J. Catanzaro, Richard C. Graham, Jr. and Howard J. Schwartz</td>
<td>618</td>
</tr>
</tbody>
</table>
Insoluble Immunoadsorbents Containing Anti-IgE: Removal of Reaginic Activity and Subsequent Elution. K. Ito, K. Wicher and C. E. Arbesman .......................................................... 622

Determination of Antibody-Hapten Equilibrium Constants by an Ammonium Sulfate Precipitation Technique. Yehudit Stupp, Takeshi Yeshida and William E. Paul ................................. 625

NUMBER 4, OCTOBER 1969

IMMUNOCHEMISTRY

7S, 7S/2 and IgM Immunoglobulins in the Deer Mouse (Peromyscus maniculatus). John E. Coe .................................................. 639


Protein-Carbohydrate Interaction. XIX. The Interaction of Concanavalin A with IgM and the Glycoprotein Phytohemagglutinins of the Waxbean and the Soybean. I. J. Goldstein, Lucy L. So, Yvonne Yang and Q. C. Callies ................................. 695

Studies on the Immunochemical Properties of Aggregates and Subunits of Fc of Rabbit \( \gamma \)G Globulins. Kenneth Amiraian and Zoltan Ovary .................................................. 716

Immunoenzymology of AMP-Deaminase. Donald Selig and Oscar P. Chilson ............................. 725


Effect of 2-Mercaptoethanol on 7S Rabbit Antibodies to Various Homologous and Heterologous Antigens. Constance E. Brinckerhoff, Robert C. Brown and Noel R. Rose ............................................ 757

Varying Specificity of Systemic Lupus Erythematosus Sera for Histone Fractions and a Periodate-Sensitive Antigen Associated with Histone. B. David Stollar ................................................. 804

The Binding Reactions of Antibodies Specific for the 2,6-Dinitrophenyl Group. J. Russell Little, Wayne Border and Ralph Freidin .................................................. 809

Differences in Anti-Protein A Activity among IgG Subgroups. Göran Kronvall and Ralph C. Williams, Jr .................................................. 828

IMMUNOGENETICS

Allotype Suppression with Anti-b5 Antiserum in \( b^5b^7 \) Homozygous Rabbits Fostered in Uteri of \( b^5b^5 \) Homozygous Mothers: Compensation by Allotypes at Other Loci. John L. Vice, William L. Hunt and Sheldon Dray .................................................. 629

Identification and Genetic Control of the f4 and f5 Rabbit \( \gamma \)A Immunoglobulin Allotypes. Pheno- groups at the f Locus. Thomas P. Conway, Sheldon Dray and Edward A. Lichter .................................................. 662

CELLULAR IMMUNOLOGY

Studies on Heterologous Antilymphocyte and Antithymocyte Sera. IV. Further Evidence for a Preferential Effect on Antigen-Sensitive Cells. Rolf F. Barth .................................................. 648

Recruitment and Proliferation of Immunocompetent Cells during the Log Phase of the Primary Antibody Response. Eugene H. Perkins, Toshikiko Sado and T. Makinodan .................................................. 668

Gamma Globulin Synthesis in Mixed Cultures of Allogeneic Lymphoid Cells. R. V. Petrov and A. A. Mikhailova .................................................. 679

Ontogenesis of Immune Capability of Murine Bone Marrow Cells and Spleen Cells against Transplantation Antigens. Mortimer M. Bortin, Alfred A. Rimm and Edward C. Saltzein .................................................. 683

Effects of Antithymus Serum on Thymic Lymphopoiesis: A Radioautographic Study. Hiroshi Nagaya and Herbert O. Sicker .................................................. 778

Isoenzyme Differences between a Human Diploid Cell Line, WI-38, and SV\( _{40} \) Transformed WI-38. Eleanor M. Bartholomew, William R. Bartholomew and Noel R. Rose .................................................. 787

Impaired Activation of Thymus Lymphocytes by Phytohemagglutinin. D. R. Forsdyke .................................................. 818


IMMUNOPATHOLOGY

Enhanced Humoral Immunity in Mice Infected with Attenuated Venezuelan Equine Encephalitis Virus. R. J. Howard, C. P. Craig, G. S. Trevino, S. F. Dougherty and S. E. Mergenhagen .................................................. 699
## CONTENTS

**Spontaneous Thyroiditis in the Obese Strain of Chickens. I. Demonstration of Circulating Auto-antibodies.** Ernest Witebsky, Joseph H. Kite, Jr., Georg Wick and Randall K. Cole ........... 708

**Immunofluorescence Studies on the Anatomic Distribution of the Soluble Antigen Responsible for the Production of Nephrotic Serum Nephritis.** Toshihiko Nagasawa and Seiichi Shibata

**Experimental Murine Amyloid. IV. Amyloidosis and Immunoglobulins.** James T. Willerson, Richard Asofsky and Werner F. Barth .......................................................... 741

**Rhaginie Type of Antibody in Mice Stimulated by Extracts of Bordetella pertussis.** C. R. Clausen, J. Munoz and R. K. Bergman ............................................................. 768

**Studies of Cyclophosphamide Suppression of Experimental Allergic Encephalomyelitis in Wistar Rats.** Philip Y. Paterson and Margaret A. Hanson .................................................. 795

### MICROBIAL AND VIRAL IMMUNOLOGY

**In Vitro Immune Responses of Rabbits with Persistent Adenovirus Type 5 Infection.** Rhoda A. Reddick and Stanley S. Lefkowitz ......................................................... 687

**Immunosuppression by Antigen-Associated Human Serum Alpha-One Protein.** H. Y. Whang, D. Chun and E. Neter ........................................................................ 824

**Induction of Delayed Hypersensitivity to Influenza and Mumps Viruses in Mice.** Stephen M. Feinstone, Edwin H. Beachey and Michael W. Rytel ....................................... 844

**Studies on the Neutralization of Japanese Encephalitis Virus. II. Variations in Reaction Properties of Virus to Antibody during Replication in PS Cell Cultures.** Yoshikatsu Ozaki and Keiko Kumagai ........................................................................... 850

### COMMUNICATIONS

**Coproantibodies to Milk: Identification by Radioimmunoelectrophoresis.** B. Kletter, S. Freier, A. M. Davies and I. Gery ............................................................. 857

**The Use of Concanavalin A for Distinguishing IgM from IgG Antibody-Producing Cells.** Albert A. Nordin, Humberto Cosenza and Walter Hopkins .................................................. 859

**Purification of the First Component of Complement by Zonal Ultracentrifugation.** Harvey R. Colten, Howard E. Bond, Tibor Borsos and Herbert J. Rapp ............................................. 862

**Chlorphenesin: A New Inhibitor of IgE-Mediated Histamine Release.** Lawrence M. Lichtenstein and N. Franklin Adkinson ................................................................. 866

**Immunologic Cross-Reactivity of Escherichia coli B Envelope Glycoproteins with Some Animal and Plant Cell Membrane Proteins.** Shinichi Okuda and George Weinbaum .................................................. 869

**Myeloma Proteins with Anti-Hapten Antibody Activity: L-2,4-Dinitrophenyl Lysine Binding by the Protein Produced by Mouse Plasmacytoma MOPC-460.** Bernard M. Jaffe, Herman N. Eisen, Ernest S. Simms and Michael Potter .................................................................................. 872

**A Small Molecular Weight Permeability Factor in Guinea Pig Serum: Adsorption to Antigen-Antibody Aggregates.** Henry Z. Movat, Mary P. Treloar and Yuko Takeuchi ........................................................................ 875

**IMMUNOCHEMISTRY**

**Studies on Passive Hemagglutination. I. Titration of “Early” and “Late” Antibodies with Tanned Red Cells Sensitized with Native or Denatured Bovine Serum Albumin.** Gerald Wolberg, Chi Tan Liu and Frank L. Adler ................................................................. 879

**Immunoochemical Studies on the Poly-$\gamma$-$\delta$-Glutamyl Capsule of Bacillus anthracis. VI. The in Vivo Fate and Distribution in Immunized Rabbits of the Polypeptide in Immunogenic and Nonimmunogenic Forms.** Georges E. Roelants, Laura F. Whitten, Ann Hobson and Joel W. Goodman .......................................................................................................................... 937

**Two Anticomplementary Factors in Cobra Venom: Hemolysis of Guinea Pig Erythrocytes by One of Them.** Mark Ballow and Charles G. Cochrane ........................................................................ 944

**Anti-Thymus Cytotoxicity: Identification and Isolation of Rat Thymus-Specific Membrane Antigens and Purification of the Corresponding Antibodies.** R. Bachvaroff, F. Galdiero and P. Grabar .................................................................................................................. 953

## NUMBER 5, NOVEMBER 1969

**Isolation and Characterization of Free $\lambda$-Chain of Immunoglobulin Produced by an Established Cell Line of Human Myeloma Cell Origin. II. Identity of $\lambda$-Chains in Cells and in Medium.** Y. Matsuoka, Y. Yagi, G. E. Moore and D. Pressman .................................................. 962
Comparison of Various Avian and Mammalian IgG Immunoglobulins for Salt-Induced Aggregation. Ralph T. Kubo and Albert A. Benedict ............................................. 1022
Distribution of Antigen-Binding Sites on Rabbit IgM Subunits. J. E. Coligan and D. C. Bauer. 1038
Comparison of the Effects of Divalent Ion Chelating Agents on Complement-Mediated Hemolysis in Rabbit and Human Serum. Samuel R. Marney, Jr. and Roger M. de Prez. 1044
Reaginic Antibody against Insulin: Demonstration of Antigenic Distinction between Native and Extracted Insulin. Roy Patterson, Guillermo Lucena, Robert Metz and Mary Roberts ...... 1061
The Antigenic Subunits of Influenza Viruses. II. The Spectrum of Cross Reactions. S. Fazekas de St. Groth. 1107
Inhibitor of Human C3 Associated with Preparations of C3 Dissociated from C3-Zymosan Complex. Livia Blum ......................................................................... 1116
Structural Localization of Isotypic Markers on Mouse Myeloma γG Globulins. G. A. Medgyesi, G. Gorini and G. Doria ................................................................... 1125
Heterogeneity of Mouse Myeloma γG Globulins as Revealed by Enzymatic Proteolysis. G. Gorini, G. A. Medgyesi and G. Doria ...................................................... 1132

IMMUNOGENETICS

Studies on the Polylysine Immune Responder Gene: The Rank Order of Immunogenicity of Dinitrophenyl Conjugates of Basic Homopolyamino Acids in Guinea Pigs. Bernard B. Levine. 931
On Mouse Complement: Genetic Variants. L. T. Rosenberg and D. K. Tachibana. 1143

CELLULAR IMMUNOLOGY

Immunosuppression by Antibody: Localization of Site of Action. R. J. W. Ryder and Robert S. Schwartz. 970
Assay for the Immunosuppressive Capacity of Antilymphocyte Serum. I. Evidence for Opsonization. William John Martin. 979
Assay for the Immunosuppressive Capacity of Antilymphocyte Serum. III. Opsonizing Activity of Anti-Human Lymphocyte Serum. William John Martin. 1000
An Immunofluorescence Study of the in Vitro Interaction between Lymphoid Cells and Target Cells. Junius M. Clark and Leon Weiss. 1006
In Vitro Studies with ‘Transfer Factor’: Transfer of the Cell-Migration Inhibition Correlate of Delayed Hypersensitivity in Humans with Cell Lysates from Humans Sensitized to Histoplasin, Cocciidiodin, or PPD. Ronald E. Paque, Peter J. Kiiskern, Sheldon Dray and Peter Baram. 1014
Evaluation of the Immunosuppressive Properties of Ribonuclease Complexes. Robert C. Davis, Sidney R. Cooperband and John A. Mannick. 1029
Surface Antigens on Interspecies Hybrid Cells. Kyoichi Kano, Wanda Baranska, Barbara B. Knowles, Hilary Koprowski and Felix Milgrom. 1050
Studies of Lymphocyte Culture: Products of Sensitive Lymphocyte-Antigen Interaction. Lynn E. Spitler and H. S. Lawrence. 1072
Blastogenesis of Lymphocytes Induced by PPD-Primed X-Irradiated Autologous Lymphocytes. Shinpei Kasakura. 1078

MICROBIAL AND VIRAL IMMUNOLOGY

An Active Interferon Inducer Obtained from Hemophilus influenzae Type B. Erik De Clercq and Thomas C. Merigan. 899
The IgM Response of Children to Salmonella typhosa Vaccine. I. Measurements of Anti-Typhoid Concentrations and Their Proportions of Total Serum IgM Globulins. William A. Altemeier, III, Joseph A. Bellanti and Edward L. Buescher. 917
The IgM Response of Children to Salmonella typhosa Vaccine. II. Comparison of Amounts of IgM
Specific for the Somatic, Flagellar and Vi Antigens. William A. Altemeier, III, Joseph A. Bellanti and Edward L. Buescher ........................................................ 924

The Toxicity of Meningopneumonitis Organisms (Chlamydia psittaci) at Different Stages of Development. George Christoffersen and G. P. Manire ........................................ 1085

Serologic Classification of Chimpanzee Adenoviruses by Hemagglutination and Hemagglutination Inhibition. William D. Hills and Rosanne Goodman................................. 1089

Aerosol Immunization of Humans with Tetanus Toxoid. F. M. Wigley, S. H. Wood and R. H. Waldman ................................................................................. 1096

The Antigenic Subunits of Influenza Viruses. I. The Homologous Antibody Response. S. Fazekas de St. Groth, R. G. Webster and F. M. Davenport........................................ 1099

COMMUNICATIONS


Further Evidence of the Role of γ1 Guinea Pig Antibodies in Mediating Passive Cutaneous Anaphylaxis (PCA). Victor Nussenzweig, Baruj Benacerraf and Zoltan Ovary ................ 1152

Differentiation of Cross-Reacting Simian Cytomegalovirus Strains by Late 19S Rabbit Neutralizing Antibodies. Berge Hampar, Lidia M. Martos, Dharam V. Ablashi, Robert F. Sigüenza and Gladys A. Wells ...................................................................... 1155

The Use of Egg Albumin Conjugates for the Purification of Antibody. Halina Szafran, Sam M. Beiser and Barnard F Erlanger .............................................................................. 1157

Erratum ...................................................................................... 1154

NUMBER 6, DECEMBER 1969

IMMUNOCHEMISTRY

Differences in Antigenicity of Human IgG Produced by Three Established Lymphocytoid Cell Lines from a Single Individual. Y. Matsuoka, Y. Yagi, G. E. Moore and D. Pressman..... 1176

Locally Produced Antibody in Human Gastrointestinal Secretions. George W. Kriebel, Jr., Sumner C. Kraft and Richard M. Rothberg ......................................................... 1268

Reactivity of Polymer (19S) and Monomer (7S) Forms of γM with Anti-γM Serum. Gerald J. Gleich and David A. Loegering ............................................................ 1294

Immunogenicity of Hemoceylinins and Their Subunits. Alfred A. Amkraut, Arthur Malley and Donald Begley ...................................................................................... 1301

Properties of Purified Mouse Homocytotropic Antibody. Thomas A. McVeigh, Jr. and Edward W. Voss, Jr. ...................................................................................... 1349

Structural and Antigenic Relationships between Avian Immunoglobulins. Gerrie A. Leslie and Albert A. Benedict .................................................................................. 1356


Different Specificities in Antiserum Prepared against Escherichia coli Tryptophan Synthetase α Subunit. Terence M. Murphy and Stanley E. Mills ........................................... 1377

The Reaction of Immunoglobulin-Coated Bentonite and Radioiodinated Antigen as a Basis for Antibody Detection and Antigen Binding. William C. Cheng and David W. Talmage ...... 1385

IMMUNOGENETICS

Identification and Genetic Control of Two Rabbit Immunoglobulin Allotypes at a Second Light Chain Locus, the c Locus. Alice Gilman-Sachs, Rose G. Mage, Glendowlyn O. Young, Cornelius Alexander and Sheldon Dray .................................................. 1159

Conversion of Non-Immune Spleen Cells by Ribonucleic Acid of Lymphoid Cells from an Immunized Rabbit to Produce γM Antibody of Foreign Light Chain Allotype. Clara Bell and Sheldon Dray ................. 1196

CELLULAR IMMUNOLOGY

Human Lymphocyte Response to Phytomitogens in Vitro: Normal, Agammaglobulinemic and Paraproteinemic Individuals. Steven D. Douglas, Roberta M. Kamin and H. Hugh Fudenberg .............................................................................. 1185
Adoptive Transfer of Immunologic Tolerance into Normal Mice. Alfred J. Crowle and C. C. Hu........... 1242
The Production in Chickens of Antibody by Spontaneous Escape following Immunologic Tolerance. C. H. Tempelis and Mary Lofty Rodrick............................. 1254
The Effects of Heterologous Antithymocyte Sera in Mice. IV. Alteration of the Growth Rate of Plasma Cell Tumors. Mark A. Mandel and Jerome J. DeCosse............. 1288
Quantitative and Qualitative Studies on the Primary Antibody Response to Pneumococcal Polysaccharides at the Cellular Level. Philip J. Baker and Philip W. Stashak.............. 1342
Fate of Antigen in Delayed Hypersensitivity and Arthus Reactions. Abraham H. Eisen.................. 1395
The Effect of Heterologous Antigenic Stimulation on Antibody Synthesis in Vitro. Robert G. Krueger.......................................................... 1411

IMMUNOPATHOLOGY

The Presence of Anti-Glomerular Basement Membrane Antibodies in Peripheral Blood. J. J. McPhaul, Jr. and Frank J. Dixon............................ 1168
Impaired Lymphocyte Transformation in Ataxia-Telangiectasia in Part Due to a Plasma Inhibitory Factor. Dale E. McFarlin and Joost J. Oppenheim.................. 1172
Passive Transfer of Experimental Allergic Encephalomyelitis: Mechanisms of Suppression. George A. Falk, Marian W. Kies and Ellsworth C. Alvord, Jr.............. 1248
Cyclophosphamide Inhibition of Experimental Allergic Encephalomyelitis and Cellular Transfer of the Disease in Lewis Rats. Philip Y. Paterson and Margaret A. Hanson.............. 1311

MICROBIAL AND VIRAL IMMUNOLOGY

Mechanisms of Endotoxin Tolerance. V. Specificity of the Early and Late Phases of Pyrogenic Tolerance. Sheldon E. Greisman, Edward J. Young and Frank A. Carozza, Jr........ 1223
Alterations in Host Responses to Experimental Candida albicans Infections by Bacterial Endotoxin. Larry J. Wright, Harry R. Kimball and Sheldon M. Wolff..................... 1276
Antiphagocytic Effects of Staphylococcal Protein A. John H. Dossett, Göran Kronvall, Ralph C. Williams, Jr. and Paul G. Quie.................................................. 1405

COMMUNICATIONS

Identification of IgA in Several Mammalian Species. J. P. Vaerman, J. F. Heremans and G. Van Kerckhoven.............................................................. 1421
Role of Serum Protective Factor (SPF) in Langat Virus Infection of Neonatally Thymectomized, Cyclophosphamide-Treated, or Anti-Lymphocyte-Treated Mice. Inderjit S. Thind and Winston H. Price......................................................... 1424
Cutaneous Basophilic Hypersensitivity: A New Interpretation of the Jones-Mote Reaction. Hal B. Richerson, Harold F. Dvorak and Sidney Leskowitz.......................... 1431
Thymus-Derived Cells in the Early Phase of Delayed Tuberculin Reactions. R. Michael Williams and Byron H. Waksman................................................. 1435