This information is current as of April 21, 2017.

103 (2)

*J Immunol* 1969; 103:149-385; ;
http://www.jimmunol.org/content/103/2.

citation

---

**Subscription**
Information about subscribing to *The Journal of Immunology* is online at:
http://jimmunol.org/subscription

**Permissions**
Submit copyright permission requests at:
http://www.aai.org/About/Publications/JI/copyright.html

**Email Alerts**
Receive free email-alerts when new articles cite this article. Sign up at:
http://jimmunol.org/alerts

---

*The Journal of Immunology* is published twice each month by
The American Association of Immunologists, Inc.,
1451 Rockville Pike, Suite 650, Rockville, MD 20852
All rights reserved.
Print ISSN: 0022-1767 Online ISSN: 1550-6606.
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 Penicylloyl 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

Immunoochemistry and Genetics of a “New” Allotypic Specificity A2 of Rabbit γG 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 Leukoeyte 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 Caggarenan 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 Hurlbrink, 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 Fiala .......................................................................................................................... 107
COMMUNICATIONS

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

Specific Antisera to C1q: Detection of Different Electrophoretic Species of C1q. Kazuyoshi Nagaki and Robert M. Stroud

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

NUMBER 2, AUGUST 1969

IMMUNOCHEMISTRY

Antimucopentide Antibodies and Their Specificity. Mary Rolicka and James T. Park

Human IgG and IgA Diphtheria Antitoxins in Serum, Nasal Fluids and Saliva. Richard W. Newcomb, Kimishige Ishizaka and Bonita L. DeVald

Immunochemical Studies of the Phytohemagglutinin, Concanavalin A. Donald A. Person and Harold Markowitz

The Production of Tolerance to Human Erythrocytes in the Rat with Cytosine Arabinoside or Cyclophosphamide. Robert O. Gordon, Madlyn E. Wade and Malcolm S. Mitchell

Characterization of Human Precipitating Antibody to Inhaled Antigens. Jordan N. Fink, Thomas Tebo and Joseph J. Barbioriak

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

Interaction of Concanavalin with Polysaccharides of Histoplasma capsulatum. Harold Markowitz

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 Mitchel, Julia Gerwing and John Christensen


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

IMMUNOGENETICS

Identification and Genetic Control of Two New Low-Density Lipoprotein Allotypes: Phenogroups at the Lpq Locus. John J. Albers and Sheldon Dray

Allergic Exclusion and Phenogroup Expression in Individual Molecules of Rabbit Low-Density Lipoprotein Allotypes. John J. Albers and Sheldon Dray

CELLULAR IMMUNOLOGY

Lymphocyte in Vitro Cytotoxicity: Correlation of Derepression with Release of Lymphotoxin from Human Lymphocytes. Terry W. Williams and Gale A. Granger


The Suppressive Effect of Rauscher Leukemia Virus on the Secondary Antibody Response of Spleen Cells Cultured in Cell-Impermeable Diffusion Chambers. Luis Borella

Studies on the Mechanisms of Resistance to Phylogenetically Diverse Intracellular Organisms. Joel Ruskin, Jean McIntosh and Jack S. Remington


The Effect of Dose of Antigen on Protein and DNA Synthesis in Antibody-Forming Cells. Sohei Shinka and Jonathan W. Uhr

Leukemia L 1210 Homograft in Swiss Mice: Immunologic, Cellular and Chemotherapeutic Responses. Herbert N. Prince and E. Grunberg

A Study of the Kinetics of the Anti-Dinitrophenyl Antibody Response at the Cellular Level. H. Francis Havas and Tomáš Hrabá
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. Hisashi Yamada and Atsuko Yamada ......................................................... 357

IMMUNOPATHOLOGY

Complement (C'3)-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-Forming 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 Influenza 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 SAC144r2s2e 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 Antibody 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 Complexes. 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. Perucca ........... 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 Responses and Characterization of Antibody. Claire M. Bradshaw, L. William Clem and M. Michael Sigel ........................................................ 496
CONTENTS

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. Christopher S. Henney .................................................. 519
Multi-Compartment Distribution Analysis of Antibrain Radioantibodies in Density Gradients. Eugene D. Day and Sylvester Lassiter ........................................... 550
Immunoglobulins of the Rhesus Monkey (Macaca mulatta). IV. Characteristics of the Primary and Secondary Responses of the Rhesus Monkey to Heterologous Serum Protein Antigens. James D. Lakin, Roy Patterson and Jacob J. Pruzansky ........................................... 577
Immune Mechanisms of Reversed Type Reaginic Hypersensitivity. Kimishige Ishizaka and Teruko Ishizaka ............................................................ 588
Differentiation of Human IgM Subclasses by the Ability to Interact with a Factor Resembling the First Component of Complement. Malcolm R. Mackenzie, Noel L. Warner, William D. Linscott and H. Hugh Fudenberg .................................................. 607

IMMUNOGENETICS
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. Ira Green, Baruj Benacerraf and Sanford H. Stone ........................................... 403
Differences between Populations of Fresh Water Catfish Defined by Blood Group Antigens and Antibodies. William J. Kuhns, Ross F. Nigrelli and Joseph V. Chuba ........................................... 454

CELLULAR IMMUNOLOGY
Effects of Radiation on the Initial and Anamnestic IgM Hemolysin Responses in Rabbits; Antigen Injection after X-Rays. William H. Taliaferro and Lucy Graves Taliaferro ........................................... 559
Factors in Delayed Sensitivity: Lymphocyte and Macrophage Cytotoxins in the Tuberculin Reaction. E. R. Heise and R. S. Weiser ........................................... 570

IMMUNOPATHOLOGY
A Neutrophil Chemotactic Factor Derived from C5 upon Interaction of Guinea Pig Serum with Endotoxin. R. Snyderman, H. S. Shin, J. K. Phillips, H. Gewurz and S. E. Mergenhagen ........................................... 413
Persistence of the Autoimmune Pathogenetic Process in Experimental Autologous Immune Complex Nephritis. Thomas S. Edgington, Sun Lee and Frank J. Dixon ........................................... 528
Rabbit Autoantibodies to Aorta. Hans W. Intorp and Felix Milgrom ........................................... 544
Distribution Analysis of Brain-Localized Radioantibodies after Zonal Ultracentrifugation in a Sucrose Density-Gradient. Eugene D. Day and Lewis C. Riggsbee ........................................... 556

MICROBIAL AND VIRAL IMMUNOLOGY
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. E. Frederick Wheelock and Robert Edelman ........................ 429
Immunosuppression by Leukemia Viruses. III. Adoptive Transfer of Antibody-Forming Cells to Friend Disease Virus-Infected Mice. Walter S. Ceglowski and Herman Friedman ........................................... 460
Particulate and Soluble Antigens of Rickettsia tsutsugamushi in the Complement Fixation Test. Akira Shishido, Michiko Hikita, Takeshi Sato and Seiya Kohno ........................................... 480
Mechanism of Bacteriophage T4 Neutralization by Rabbit Immunoglobulin and Its Proteolytic Digestion Fragments. G. W. Stemke ........................................... 596

COMMUNICATIONS
Production of Anti-Hapten Antibodies by Several Classes of Lower Vertebrates. Gerrie A. Leslie and L. William Clem ........................................... 613
Ultrastructural Identification of Possible Sites of Antigen Processing in Macrophages. Phillip J. Catanzaro, Richard C. Graham, Jr. and Howard J. Schwartz ........................................... 618
Contents

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 Yoshida and William E. Paul ................................. 625

Number 4, October 1969

Immunochemistry

7Sγ1, 7Sγ2 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 γG 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 Specifìc 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 b5b5 Homozygous Rabbits Fostered in Uteri of b5b4 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 γA Immunoglobulin Allotypes. Phenogroups 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, Toshihiko 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 SV40-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
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

Reaginie 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 Proper-
ties 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: 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

NUMBER 5, NOVEMBER 1969

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-g-d-Glutamyl Capsule of Bacillus anthracis. VI. The in
Vivo Fate and Distribution in Immunized Rabbits of the Polypeptide in Immunogenie 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 Anti-
gens and Purification of the Corresponding Antibodies. R. Bachvaroff, F. Galdiero and P.
Grabar .................................................. 953

Isolation and Characterization of Free λ-Chain of Immunoglobulin Produced by an Established
Cell Line of Human Myeloma Cell Origin. II. Identity of λ-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. des 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. II. Nature and Specificity of Opsonizing Antibody
William John Martin ............................................................................. 990

## 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 Histoplasmin, Coccidioidin, or PPD
Ronald E. Paque, Peter J. Kniskern, 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

## Immunoglobulin Responses in Serum and Nasal Secretions after Natural Adenovirus Infections
Joseph A. Bellanti, Malcolm S. Artenstein, Brenda L. Brandt, Barbara S. Klutinis and Edward L. Buescher .......................................................... 891

## An Active Interferon Inducer Obtained from Hemophilus influenzae Type B
Erik De Clercq and Thomas C. Merigan ................................................. 899

## Detection of Anti-Phage Antibody by Passive Hemagglutination
William S. Walker, Chi Tan Liu and Frank L. Adler ................................... 907

## 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

N-Terminal Residues of Heavy Chains of Human IgA Myeloma Proteins. A. C. Wang, J. W. Goodman and H. H. Fudenberg .................................................. 1149

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. Ablasri, Robert F. Siguenza and Gladys A. Wells ...................................................................... 1155

The Use of Egg Albumin Conjugates for the Purification of Antibody. Halina Szafrań, 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 Hemocyanins 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
Enzyme Activation by Antibody. II. Fractionation of Immune Sera in Search for an Enzyme Activating Antibody. T. Suzukilo, H. Felichová and B. Cinader ......................... 1366
Different Specificities in Antisera Prepared against Escherichia coli Tryptophan Synthetase a Subunit. Terence M. Murphy and Stanley E. Mills ........................................... 1377
The Interaction 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 Phytohormones 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 Loyd 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. 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. 1212

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