CONTENTS

NUMBER 1, JANUARY 1970

IMMUNOCHEMISTRY

The Immunochemistry of Immune Tolerance. II. The Relationship of Chemical Structure to the Induction of Immune Tolerance to Catechols. Harold Baer, Charles R. Dawson, Joseph S. Byck and A. Peter Kurtz .......................................................... 178

Enzyme-Activation by Antibody. II. The Distribution of Activating Antibody in Chromatographic Fractions of Ribonuclease Antiserum and Their Competition with Inhibiting Antibody for Enzyme Sites. H. Pelichová, T. Suzuki and B. Cinader ...................... 195


Binding Properties of Anti-Dinitrophenylated-Bacitracin A Antibodies Produced in Guinea Pigs. Domenico Mancino, William E. Paul, Baruj Benacerraf, Gregory W. Siskind and Zoltan Ovary ................................................................. 224

The Role of n-Alanine in the Antigenic Specificity of Bacterial Mucopolypeptides. Walter W. Karakawa, Paul H. Maurer, Patricia Walsh and Richard M. Krause ................................................................. 230

Chemical Modification of Human and Rabbit Antistaphylococcal γG Antibodies: Effect of Acetylation, Carbamylation and Amidination on Oposonic Activity. R. P. Messner, C. W. Parker and R. C. Williams, Jr ................................................................. 238

IMMUNOGENETICS

Contribution of the b and c Light Chain Loci to the Composition of Rabbit γG-Immunoglobulins. John L. Vice, William L. Hunt and Sheldon Dray ................................................................. 38

Phylogenetic Insight into Evolution of Mammalian Fc Fragment of γG Globulin Using Staphylococcal Protein. A. Göran Kronvall, Ulysses S. Seal, Joanne Finstad and Ralph C. Williams, Jr ................................................................. 140

CELLULAR IMMUNOLOGY

Isolation and Characterization of IgA Produced by an Established Human Lymphocytoid Cell Line. Y. Matsuoka, Y. Yagi, G. E. Moore and D. Pressman ................................................................. 1


Detection of Hemopoietic Allografts by Localization of Radiolabeled Alloantibodies. Isaac Witz, Gustavo Cudkowicz and David Pressman ................................................................. 19

Isolation of Molecules of Restricted Allotype from Antistreptococcal Polysaccharide Antibody. L. Scott Rodkey, Tat K. Choi and Alfred Nisonoff ................................................................. 63


Studies on Rabbit Lymphocytes in Vitro. XII. Augmentation of Anti-allotypic Blast Transformation by a Second Anti-allotypic Serum Directed against the Primary Stimulating Anti-allotypic Serum (Piggy-Back Effect). Stewart Sell, Jennifer A. Lowe and P. G. H. Gell ................................................................. 114

Mode of Action of Adjuvants: Retinol and Other Lysosome-Labilizing Agents as Adjuvants. John K. Spitznagel and A. C. Allison ................................................................. 119


The Effect of Antigen Competition on Both the Primary and Secondary Immune Capacity in Mice. M. G. Hanna, Jr. and Leona C. Peters ................................................................. 166
### CONTENTS

**IMMUNOPATHOLOGY**

- Experimental Hemorrhagic Pneumonitis Produced by Heterologous Anti-Lung Antibody. William F. Willoughby and Frank J. Dixon. 28
- Spontaneous Thyroiditis in the Obese Strain of Chickens. IV. The Effect of Thyrectomy and Thymo-Bursectomy on the Development of the Disease. Georg Wick, Joseph H. Kite, Jr. and Ernest Witebsky. 54
- Bacteriologic Studies on Wasting Disease Induced by Neonatal Thyrectomy. John C. Cantrell and John W. Jutila. 79

**MICROBIAL AND VIRAL IMMUNOLOGY**

- Antibody Responses in Serum and Nasal Secretions According to Age of Recipient and Method of Administration of A2/Hong Kong/68 Inactivated Virus Vaccine. Robert V. Fulk, David S. Fedson, Margret A. Huber, James R. Fitzpatrick and Julius A. Kael. 8
- Demonstration of Viral Antibody Activity in Two Immunoglobulin G Sub-classes in Patients with Varicella-Zoster Virus Infection. Larry L. Leonard, Nathalie J. Schmidt and Edwin H. Lennette. 23
- Immune Response of Rabbits to Purified Papovavirus SV40. Satvir S. Tevethia. 72
- Development and Duration of Mumps Fluorescent Antibodies in Various Immunoglobulin Fractions of Human Serum. Gordon C. Brown, Joseph V. Baublis and Theresa P. O’Leary. 86

**COMMUNICATIONS**

- 2,4-Dinitrophenyl-Hapten Specific Hemolytic Plaque-in-Gel Formation by Mouse Myeloma (MOPC-315) Cells. Hisashi Yamada, Atsuko Yamada and Vincent P. Hollander. 251
- Pyrrolidonecarboxylic Acid at the N-Terminal Positions of Polypeptide Chains from Leopard Shark Immunoglobulins. Joel W. Goodman, Gerhard G. Klaus, Danute E. Nitecki and An-Chuan Wang. 260
- Intracellular “Monoclonal” Immunoglobulin in Non-secreatory Human Myeloma. Daniel Hurez, Jean-Louis Preud’Homme and Maxime Seligmann. 263
- Concanavalin A-Induced Release of Skin-Reactive Factor from Lymphoid Cells. Howard J. Schwartz, Myron A. Leon and Ronald P. Pelley. 265

**NUMBER 2, FEBRUARY 1970**

**IMMUNOCHEMISTRY**

- Inhibition of the Eighth Component of Complement (C8) by Ethylenediaminetetraacetate (EDTA). Duane R. Schultz and Romeo M. Zarco. 279
- The Biologic Activities of Guinea Pig Antibodies. I. Separation of γ1 and γ2 Immunoglobulins and Their Participation in Allergic Reactions of the Immediate Type. Benedito Oliveira, Abraham G. Oser, Reuben P. Siraganian and Ann L. Sandberg. 320
- The Biologic Activities of Guinea Pig Antibodies. II. Modes of Complement Interaction with γ1 and γ2 Immunoglobulins. Ann L. Sandberg, Abraham G. Oser, Hyun S. Shin and Benedito Oliveira. 329
- Synthesis of Secretory IgA in the Rabbit. II. Production of Alpha, Light and T Chains by in Vitro Cultures of Mammary Tissue. Alexander R. Lawton, Richard Asofsky and Rose G. Mage... 388
Synthesis of Secretory IgA in the Rabbit. III. Interaction of Colostral IgA Fragments with T Chain. Alexander R. Lawton, Richard Asofsky and Rose G. Mage .................................................. 397

Immunoochemical Studies of Foot-and-Mouth Disease. VI. Differences in Antigenic Determinant Site Recognition by Guinea Pig IgM and 7S Antibodies. K. M. Cowan ........................................ 423

Transglutaminase Levels during Development of Allergic Orchitis. Johanna M. Lee and Issabel J. Wajda .................................................................................... 448

Antigenic Specificity of γδ Polymers. Michael A. Apicella and James C. Allen ........... 455

Measurement of Antibody against Human IgG by the Neutralization of IgG-Sensitized Herpes Simplex Virus. Charles A. Daniels, Stephan E. Mengenhagen and Abner Louis Notkins ........ 470

A New Serum Factor in Normal Rabbits. V. Induction in Neonatal Rabbits. Marion E. Woolsey and William J. Mandy .............................................................. 475

CELLULAR IMMUNOLOGY


Evidence for Tolerance to SV40 Tumor Antigen in Hamsters Bearing Para-Adenovirus 12 Tumor Transplants. Robert N. Lausch, Satvir S. Tevethia and Fred Rapp ........................................... 305

Influence of Thymosin on Cell-Mediated and Humoral Immune Responses in Normal and in Immunologically Deficient Mice. Allan L. Goldstein, Yoshitsugu Asanuma, Jack R. Battista, Mark A. Hardy, Jerome Quint and Abraham White ................................................ 359

The Measurement of Immunoglobulin Associated with Human Peripheral Lymphocytes. Richard S. Smith, Robert L. Longmire, Robert T. Reid and Richard S. Farr ............................ 367

Studies of Thoracic Duct Lymphocytes of Mice. II. A Quantitative Comparison of the Capacity of Thoracic Duct Lymphocytes and Other Lymphoid Cells to Induce Graft-versus-Host Reactions. Harvey Cantor, Mark A. Mandel and Richard Asofsky .................................................. 409

Correlation between Ocular Inflammation and Antibody Production. I. Serum Antibody Response following Intravitreal Immunization with Protein Antigens. J. M. Hall and G. R. O'Conner .... 432

Correlation between Ocular Inflammation and Antibody Production. II. Hemolytic Plaque Formation by Cells of the Uveal Tract. J. M. Hall and G. R. O'Conner .............................. 440

Primary Rejection of Skin Allografts in the Anterior Chamber of the Rabbit Eye. R. M. Franklin and R. A. Prendergast .............................................................................. 463


Immunoglobulin Classes of Antibody-Forming Cells in Mice. II. Class Restriction of Plaque-Forming Cells Demonstrated by Replica Plating. Albert A. Nordin, Humberto Cosenza and Stewart Sell ................................................ 495

IMMUNOPATHOLOGY

A Reaginic Type of Antibody Stimulated by Extracts of Bordetella pertussis in Inbred Strains of Mice. C. R. Clausen, J. Munoz and R. K. Bergman ............................................... 312

The Capacity of Human Immunoglobulin E to Mediate the Release of Histamine and Slow Reacting Substance of Anaphylaxis (SRS-A) from Monkey Lung. Teruko Ishizaka, Kimishige Ishizaka, Robert P. Orange and K. Frank Austen .................................................. 335

Spontaneous Thyroiditis in the Obese Strain of Chickens. V. The Effect of Sublethal Total Body X-irradiation on the Development of the Disease. Georg Wick, Joseph H. Kite, Jr. and Ernest Witebsky .......................................................... 344

Distribution of γδ-Forming Cells in Lymphoid Tissues of the Human and Monkey. Tomio Tada and Kimishige Ishizaka .......................................................... 377

MICROBIAL AND VIRAL IMMUNOLOGY

Quantitation of Staphylococcal Protein A: Determination of Equilibrium Constant and Number of Protein A Residues on Bacteria. Göran Kronvall, Paul G. Quie and Ralph C. Williams, Jr. 273

A Prospective Study of Chronic Herpes Simplex Virus Infection and Recurrent Herpes Labialis in Humans. R. Gordon Douglas, Jr. and Robert B. Couch 289

Precipitation and Neutralization of Bacteriophage M9-2 by Rabbit Antibodies. G. F. Rohrmann and R. G. Krueger .................................................................................. 353
CONTENTS

ANTIBODY FORMATION IN ZWEEGIZERKTE, A SLOW INFECTION IN SHEEP. G. F. De Boer ............... 414

AN IN VITRO MEASURE OF CELLULAR IMMUNITY TO FIBROMA VIRUS. W. A. F. Tompkins, Cathryn Adams and W. E. Rawls ................................................. 502

COMMUNICATIONS

IMMUNOSUPPRESSIVE POTENCY OF ANTI-SERUM TO THYMUS GLANDS PREPARED WITH RIBOSOMAL FRACTION. H. Nagaya, W. N. McKenzie, Jr., K. H. Kilburn and H. O. Sieker ............... 511

ISOELECTRIC SEPARATION OF MOUSE IMMUNOGLOBULINS. Robert A. Murgita and Stephen I. Vas ................................................................. 514

RELEASE OF FAB- AND FE-LIKE FRAGMENTS FROM HUMAN IgM BY REDUCTIVE CLEAVAGE. William L. Albritten, Ralph E. Schroenloher and J. Claude Bennett ................. 518

IMMUNOSUPPRESSIVE EFFECTS OF ANTILYMPHOCYTE SERUM IN COMPLEMENT-DEFICIENT MICE: Evidence that Immune Cytolysis is Not Essential for ALS Activity. Rolf F. Barth and Gary F. Carroll .................................................. 522

EVIDENCE FOR CONFORMATIONAL UNFOLDING OF IMMUNOGLOBULIN HEAVY CHAINS IN PROPYLIC AND ACETIC ACIDS. Judson C. Harrington and John W. Fenton, II .............................................. 525

NONIMMUNOLOGIC PRECIPITIN LINES BETWEEN SERUM AND ENTERIC CONTENTS GIVING FALSE-POSITIVE EVIDENCE OF LOCAL ANTIBODY PRODUCTION. S. C. Kraft, R. M. Rothberg and G. W. Kriebel, Jr ................................................................. 528

CORRELATION OF CHARGE PROPERTIES OF HUMAN REAGINIC ANTIBODIES WITH CHARGE OF THE CORRESPONDING ALLERGENS. Brian J. Underdown and Lawrence Goodfriend.............................. 530

NUMBER 3, MARCH 1970

IMMUNOCHEMISTRY

INTERACTION OF PLASMA KALLIKREIN WITH THE CI INHIBITOR. Irma Gigli, John W. Mason, Robert W. Colman and K. Frank Austen .................................................. 574

MODEL SYSTEMS FOR THE STUDY OF DRUG HYPERSENSITIVITY. II. STUDIES ON THE ACETYLATION MECHANISM FOR ASPIRIN INTOLERANCE. Donald R. Hoffman and Dan H. Campbell ........................................... 582

STUDIES ON BRAIN ANTIGENS. III. PURIFICATION AND CHARACTERIZATION OF A WATER-SOLUBLE BOVINE ANTIGEN SPECIFIC FOR NERVOUS TISSUE (α-BASNT). Victor B. Hatcher and Catherine F. C. MacPherson ................................................................. 633

THE DISSOCIATION OF HUMAN SERUM 7S AND BOVINE COLOSTRUM IMMUNE GLOBULINS INTO SUBUNITS BY REDUCTION-ALKYLATION-SUCINYLATION. Anatoly Bezkorovainy, Rainer Zschocke and Dietmar Grohlich ................................................................. 648

SUPPRESSION OF SKIN HYPERSENSITIVITY AND ANTIBODY FORMATION BY β-ASPARAGINASE. Amanullah Khan and Joseph M. Hill ................................................................. 679

A STUDY OF ANTIBODY RESPONSES BY RADIOIMMUNODIFFUSION WITH DEMONSTRATION OF γD ANTIGEN-BINDING ACTIVITY IN FOUR SERA. Douglas C. Heiner and Bram Rose ................................................................. 691

METAL CATION REQUIREMENTS FOR PHYTOHEMAGGLUTININ-INDUCED TRANSFORMATION OF HUMAN PERIPHERAL BLOOD LYMPHOCYTES. Robert H. Alford ................................................................. 698

DEFICIENCY OF THE FOURTH COMPONENT OF COMPLEMENT IN MAN. Motomichi Torisu, Hidekichi Sonozaki, Shinya Inai and Makoto Arata ................................................................. 728

POLYDONAL 13S HUMAN γG IMMUNOGLOBULIN. Ralph Heimer, Jose Martinez and John Abruzzo ................................................................. 738

THE BIOLOGIC ACTIVITIES OF DENATURED HUMAN IgG AND ITS HEAVY CHAINS. Shun-ichi Hirose ................................................................. 753

IMMUNOGENETICS

ALLOTYPE SUPPRESSION IN aαa4 HOMOZYGOUS RABBITS FOSTERED IN UTERI OF a2-IMMUNIZED aαa4 HOMOZYGOUS MOTHERS AND INJECTED AT BIRTH WITH ANTI-a2 ANTISERUM. John L. Vice, Alice Gilman-Sachs, William L. Hunt and Sheldon Dray ................................................................. 550

DISTRIBUTION OF ALLOTYPE SPECIFICITIES A1, A2, A14, AND A15 AMONG IMMUNOGLOBULIN G MOLECULES. S. Landucci Tosi, R. G. Mage and S. Dubiski ................................................................. 641

CELLULAR IMMUNOLOGY

PRODUCTS OF INTERACTION OF ANTIGEN-SENSITIZED LEUKOCYTES AND ANTIGEN: FURTHER CHARACTERIZATION OF THE MITOGENIC FACTOR. Lynn E. Spiteri and H. Hugh Fudenberg ................................................................. 544

HL-A ANTIGENS FROM A CONTINUOUS LYMPHOID CELL LINE DERIVED FROM A NORMAL DONOR. I. SOLUBILIZATION AND SEROLOGIC CHARACTERIZATION. R. A. Reisfeld, M. Pellegrino, B. W. Papermaster and B. D. Kahan ................................................................. 560
CONTENTS vii

Cellular Differentiation in the Thymus. II. Thymus-Specific Antigens in Rat Thymus and Peripheral Lymphoid Cells. Daniel G. Colley, Artin Malakian and Byron H. Waksman .................................................. 585
Appendix and γM-Antibody Formation. I. Immune Response and Tolerance to Bovine γGlobulin in Irradiated, Appendix-Shielded Rabbits. M. Hansoka, K. Nomoto and Byron H. Waksman .................................................. 616
The Role of Immune and Natural Specific Antibodies in Immunologic Paralysis and Immunity of Mice to Pneumococcal Polysaccharide Type III. Ronald Kerman, Diego Segre and W. L. Myers .................................................. 656
Sandwich Solid Phase Radioimmunoassays for the Characterization of Human Immunoglobulins Synthesized in Vitro. Sydney E. Salmon and Beth A. Smith .................................................. 665
Reactions in Agarose Gel between Clq and Aggregated γGlobulins. S. Thumold, C. J. Abeyounis and F. Milgrom .................................................. 685
The Fate of Antigen in Delayed Hypersensitivity Skin Reactions. Harold F. Dvorak, Blanche A. Simson, Martin H. Flax and Sidney Leskowitz .................................................. 718

IMMUNOPATHOLOGY

C5 Chemotactic Fragments Produced by an Enzyme in Lysosomal Granules of Neutrophils. Peter A. Ward and Jeffrey H. Hill .................................................. 535
Enhancing Antibody. III. Site of Activity. Barry Zimmerman and Joseph D. Feldman .................................................. 626
The Biologic Half-Life of Brain-Localized Antisympathetic Antisera Antibodies. Eugene D. Day and Stanley H. Appel .................................................. 710

MICROBIAL AND VIRAL IMMUNOLOGY

A Sensitive Neutralization Test for the Adeno-Associated Satellite Viruses. D. Wark Boucher, Wade P. Parks and Joseph L. Melnick .................................................. 555
Analysis of the Neutralizing Activity in Nasal Wash and Serum following Intranasal Vaccination with Inactivated Type 13 Rhinovirus. Harry L. S. Knopf, John C. Perkins, Dinah M. Bertran, Albert Z. Kapikian and Robert M. Chanock .................................................. 566
Late 18S Rabbit Antibody Neutralization Test for Differentiating Herpes Simplex Virus Types 1 and 2. Berge Hampar, Lidia M. Martos, Mrinal Chakrabarty and Mary Alice K. Burroughs .................................................. 593
Measurement of Antibodies to Herpesvirus Types 1 and 2 in Human Sera. William E. Rawls, Kumiko Iwamoto, Erwin Adam and Joseph L. Melnick .................................................. 599
Complement-Requiring Neutralizing Antibodies in Herpesvirus hominis Encephalitis. A. Martin Lerner, Elizabeth J. Bailey and David C. Nolan .................................................. 607
Why Antibody Inhibits Vascular Clearance of Staphylococcal Enterotoxin B. Sigurd J. Normann .................................................. 673
Antibody Response in Rhesus Monkeys and Guinea Pigs to Inoculation with RNA Derived from Antigenically Stimulated Cell-Free Systems. Diether J. Jacherts and Joachim Drescher .................................................. 746

COMMUNICATIONS

Purification and Serologic Tests with Adenovirus 2 Virion and T Antigens. Stephen Oroszlan, Thomas B. Stanley, Jr. and Raymond V. Gilden .................................................. 759
The Immunoglobulin Nature of the Antigen Recognition Site on Cells Mediating Transplantation Immunity and Delayed Hypersensitivity. Sally Mason and Noel L. Warner .................................................. 762
Secretion of a Phytohemagglutinin-Binding Glycoprotein in Man. James A. Strauchen, Charles F. Moldow and Robert Silber .................................................. 766

NUMBER 4, APRIL 1970

IMMUNOCHEMISTRY

Structural and Antigenic Relationships between Avian Immunoglobulins. II. Properties of Papain- and Pepsin-Digested Chicken, Pheasant and Quail IgG-Immunoglobulins. Gerrie A. Leslie and Albert A. Benedict .................................................. 810
Biologic Activities of Aggregated Immunoglobulin E. Teruko Ishizaka, Kimishige Ishizaka, Hans Bennich and S. Gunnar O. Johansson .................................................. 854
Univalent Antigen as Elicitor of Anaphylactic Reactions. James F. Green, Karen G. Thiellek and Sidney Raffel .................................................. 863
Canine Immunoglobulins. III. Distribution of Immunoglobulins in Colostrum and Isolation of Secretory IgA and 7Sγ. Herbert Y. Reynolds and John S. Johnson .................................................. 1000
Canine Immunoglobulins. IV. Copro-Immunoglobulins. Herbert Y. Reynolds and John S. Johnson .................................................. 888
Comparative Study of Antibodies to Native and Denatured DNA. E. M. Tan and P. G. Natali ... 902
Biochemical Events in Rabbit Regional Lymph Nodes following Antigenic Stimulation. Boaz Moav and T. N. Harris .......................................................... 950
Biochemical and Assembly of Immunoglobulin in Rabbit Lymph Node Cells. I. Immunoglobulin on the Ribosomes. Boaz Moav and T. N. Harris ......................... 957
Biochemical and Assembly of Immunoglobulin in Rabbit Lymph Node Cells. II. Assembly in the Soluble Phase. Boaz Moav and T. N. Harris ........................................ 965
A New Serum Factor in Normal Rabbits. VI. Reaction with Buried Determinants of IgG Exposed Sequentially with CNBr, Pepsin and Pepsin. Ellen R. Richie, Marion E. Woolsey and W. J. Mandy .......................................................................................... 984
Studies on the Formation and Association Characteristics of IgG Class Antibodies in Bovine Serum and Colostrum against Protein Antigens. D. K. Hammer, B. Kickhöfen and G. Henning .......................................................... 1016
A Sensitive Colorimetric Method for the Measurement of Serum CI Inactivator Using the Substrate N-α-Acetyl-L-lysine Methyl Ester. Peter C. Harpel ........................................ 1024

IMMUNOGENETICS

CELLULAR IMMUNOLOGY
The in Vitro Transfer of Delayed Hypersensitivity to Rhesus Monkey and Human Lymphocytes with Transfer Factor Obtained from Rhesus Monkey Peripheral White Blood Cells. P. Baram and W. Condouls ......................................................... 769
Effect of Phytohemagglutinin on Skin Allograft Survival in Mice. Stephano S. Stefanl and Clark D. Moore .......................................................... 780
Serologic Demonstration of a Thymus-Dependent Population of Lymph-Node Cells. Michael Schlesinger and Ilana Yron ........................................................................ 798
Inhibition of Natural Cytotoxic Rabbit Antibody by Human IgM: Production of Nontoxic Rabbit Serum for Use as Complement Source. Ronald B. Herberman ........ 805
The Specificity of Tolerance Induction in Delayed Hypersensitivity. Maury Goldman and Sidney Leekowitz .......................................................... 874
Response of NZB and NZB/NZW Spleen Cells to Mitogenic Agents. Brigid G. Leventhal and Norman Talal .......................................................... 918
Production of Hypersensitivity in the Neonatal Mouse. Betty J. Hargis and Saul Malkiel .......................................................... 942
Immunoglobulin Classes of Antibody-Forming Cells in Mice. III. Immunoglobulin Antibody Restriction of Plaque-Forming Cells Demonstrated by the Double Immunofluorescent Technique. Humberto Cosenza and Albert A. Nordin .......................................................... 976
Cells Involved in the Immune Response. XIV. The Immunologic Response of Irradiated Rabbits Given Allogeneic Bone Marrow Cells Incubated with Antigen and/or Subjected to Irradiation in Vitro. Nabih I. Abdou and Maxwell Richter .......................................................... 1009

IMMUNOPATHOLOGY
Intracellular Distribution of Immunoglobulin Heavy and Light Chains within Tissue Cultured Cells of Human Lymphoid Origin Detected by Electron Microscopy. Ikuo Suzuki, Morinobu Takahashi, Hideo Kamei and Tadashi Yamamoto .......................................................... 907
Release of Vasoadative Amines from Rabbit Platelets Induced by Antiplatelet Antibody in the Presence and Absence of Complement. Peter M. Henson .......................................................... 924
Reaginic Activity Associated with Immunoglobulins other than IgE. Robert T. Reid .......................................................... 935

MICROBIAL AND VIRAL IMMUNOLOGY
Immunology of Interferons. I. Immune Response to Protective and Nonprotective Interferons. R. E. Levy-Koenig, M. J. Mundy and K. Paueker .......................................................... 785
Immunology of Interferons. II. Heterospecific Activities of Human Interferons and Their Neutralization by Antibody. R. E. Levy-Koenig, R. R. Golgher and K. Paucker......................... 791
Measurement of Rubella Antibody by Hemagglutination Inhibition. I. Variables Affecting Rubella Hemagglutination. Harvey Liebhaber................................. 818
Measurement of Rubella Antibody by Hemagglutination Inhibition. II. Characteristics of an Improved HAI Test Employing a New Method for the Removal of Nonimmunoglobulin HA Inhibitors from Serum. Harvey Liebhaber................................. 826
The Use of an Immunofluorescence Technique for the Determination of Antibodies to Cytomegalovirus Strains in Human Sera. Wen-Tsuo Chiang, Berttina B. Wentworth and E. Russell Alexander................................. 992

COMMUNICATIONS

Rapid Detection of Australia Antigen by Counterimmunoelectrophoresis. David J. Gocke and Calderon Howe................................. 1031
Antibodies of Different Specificities in Normal Rabbit Sera. Joseph Haimovich, Rebeea Tarrab, Andre Sulica and Michael Sela................................. 1033
The Effect of Polyninosinic-Polyctidylic Acid upon Graft-vs-Host Activity in BALB/C Mice. Harvey Cantor, Richard Asofsky and Hilton B. Levy................................. 1035
Anti-Protein Plaque-Forming Cells Detected with High Efficiency by the Use of Red Cells Coupled to Bovine Serum Globulin through Bis-diazo-benzidine. Judith A. Kapp and J. S. Ingraham................................. 1039

NUMBER 5, MAY 1970

IMMUNOCHEMISTRY

A New Immunochroemical Assay for the Detection of the First Component of Complement (C1). Harvey R. Colten and Joel S. Spalter................................. 1043
Antigenic Relationships between the First Component (C1) of Human and Guinea Pig Complement. Harvey R. Colten, Tibor Borsos and Herbert J. Rapp................................. 1048
Immunoglobulins of Rat Colostrum. Daniel J. Stechschulte and K. Frank Austen................................. 1052
Reduced Complement Activity in Sera of Patients with Waldenström's Macroglobulinemia. M. Glovskiy and H. H. Fudenberg................................. 1072
Quantitative Passive Hemagglutination: Adaptation of the Cell Migration Technique to Measurement of Antibodies to Protein. Howard M. Johnson and James T. Peeler................................. 1079
Immunologic Properties of Glucose Oxidase. Ira Green and John K. Inman................................. 1094
INV Allotypes of Cold Agglutinin Kappa Chains. Aniel G. Cooper and Arthur G. Steinberg................................. 1108
The Nature of the Reaction of Antigen with Lymphocytes from Rabbits Infected with Schistosoma mansoni on the Release of Histamine from Rabbits Platelets. J. F. Barbaro and M. J. Schoenbechler................................. 1124
Antibodies to Type III and Type VIII Pneumococcal Polysaccharides: Evidence for Restricted Structural Heterogeneity in Hyperimmunized Rabbits. Jack H. Pincus, Jean-Claude Jaton, Kurt J. Bloch and Edgar Haber................................. 1143
Properties of Structurally Restricted Antibody to Type VIII Pneumococcal Polysaccharide. Jack H. Pincus, Jean-Claude Jaton, Kurt J. Bloch and Edgar Haber................................. 1149
Specificity of Antibody Produced in the Bullfrog (Rana catesbeiana). J. E. Coe................................. 1166
Isolation, Chemical and Immunologic Characterization of K- and y-Type Light Chains from IgG of Normal Rabbits with b9 Allotype. Alberto Chersi, Rose Mage, Jaroslav Rejnek and Ralph Reisfeld................................. 1205
An Analogue of Guinea Pig CS: In Vitro Generation and Inhibitory Activity. Robert L. Stolfi................................. 1212
Immunoglobulins of the Hamster. II. Characterization of the γA and Other immunoglobulins in Serum and Secretions. John Bienestock................................. 1228
Goldfish Immunoglobulins and Antibodies to Bovine Serum Albumin. Gary N. Trump................................. 1267
Relative Concentrations of IgM and IgG Antibodies during the Primary Response. W. M. LeFor and D. C. Bauer................................. 1276
Species Comparison of Antigenic Determinants of the Variable Region of Light Chains of Immunoglobulins. A. Ruffilli and C. Baglioni................................. 1247
**CONTENTS**

**CELLULAR IMMUNOLOGY**

Long-Term Skin Allograft Survival Elicited by a Finite Treatment with Antilymphocyte Serum Combined with Cytarabine.  
R. J. Perper, R. E. Monovich and B. E. Bowersox .......................... 1063

Cells Involved in the Immune Response. XVIII. Potential Hemolysin-Forming Cells in the Sacculus Rotundus of the Normal Adult Rabbit.  
Nabil I. Abdou and Maxwell Richter ............................................. 1087

Impaired Recovery of Plaque-Forming Cells in New Zealand Mice Given Cyclophosphamide.  
P. J. Staples and N. Talal .................................................................. 1101

Immunosuppressive Effect of the Depletion of Circulating Lymphocytes by Chronic Irradiation of the Rat Spleen.  
Takeshi Yoshida, Robert L. Hunter and Baruj Benacerraf ................... 1111

The Abolition of Tolerance of Skin Homografts in Rats with Isomuniserum.  
David M. Lubaroff and Willys K. Silver ........................................... 1236

Studies of Antibody Formation in *Xenopus laevis*.  
R. Auerbach and L. N. Ruben ......................................................... 1242

Immunogenicity of Human γ Globulin Bound to Macrophages after Inhibition of RNA Synthesis.  
A. Cruchaud, J. P. Despont, J. P. Girard and B. Mach ......................... 1256

Anti-Pneumococcal Polysaccharide Type III Hemolytic Plaques in Mice: Cellular Response in Immunity and Immunologic Paralysis.  
Ronald Kerman and Diego Segre ..................................................... 1262

**In Vitro** Detection of Transplantation Immunity: The Inhibition of Migration of Immune Spleen Cells and Peripheral Blood Leukocytes by Specific Antigen.  
R. E. Falk, L. Collste and G. Möller ................................................ 1287

**IMMUNOPATHOLOGY**

Target Cells of Human Ragweed-Binding Antibodies in Monkey Skin. I. Immunofluorescent Localization of Cellular Binding.  
Thomas Hubscher, J. Ian Watson and Lawrence Goodfriend ............. 1187

Target Cells of Human Ragweed-Binding Antibodies in Monkey Skin. II. Immunoglobulin Nature of Ragweed-Binding Antibodies with Affinity for Monkey Skin Mast Cells.  
Thomas Hubscher, J. Ian Watson and Lawrence Goodfriend ............. 1196

**MICROBIAL AND VIRAL IMMUNOLOGY**

Effect of Antigenic Stimulation on the Specificity of Antibody Produced by Rabbits Immunized with Bacteriophage MS-2.  
R. G. Krueger ................................................................................. 1117

Application of the Paired Radioiodine-Labeled Antibody Technique (PRILAT) to the Detection of Adenovirus 12 Tumor (T) Antigen.  
M. J. Evans and D. S. Yohn ............................................................. 1132

Selective Effects of Anti-Macrophage Serum, Silica and Anti-Lymphocyte Serum on Pathogenesis of Herpes Virus Infection of Young Adult Mice.  
B. Zisman, M. S. Hirsch and A. C. Allison ....................................... 1155

Macrophages and Age-Dependent Resistance to Herpes Simplex Virus in Mice.  
M. S. Hirsch, B. Zisman and A. C. Allison ........................................ 1160

James L. Gale and George E. Kenny ................................................ 1175

The Localized Hemolysis-in-Gel Method Adapted to the Detection of Spleen Cells Releasing Virus-Specific Antibodies.  
H.-U. Schwenk and F. Lehmann-Grube ....................................... 1184

**COMMUNICATIONS**

Effect of Lymphocytosis-Promoting Factor (LPF) on the Appearance of Antibodies in Mice Infected with Influenza Virus.  
taquo Iwasski and Tokukichi Nozima ............................................. 1293

Antigen-Induced Blastogenesis: The Human Cell Determining the Specificity of Response *in Vitro*.  
William R. Levis and Jay H. Robbins ............................................. 1295

Common Antigenic Determinants in Fd Fragments of Guinea Pig γ 1, γ 2 and γM Immunoglobulins.  
R. Oriol and R. Binaghi .................................................................. 1300

A Rapid, Quantitative Fluorescence Assay for Cell Damage by Cytotoxic Antibodies.  
Michael Edidin ............................................................................. 1303

An Antigen Density Effect on the Hemolytic Efficiency of Complement.  
William D. Linscott ................................................................. 1307

The G4 Subclass in IgG Fractions Prepared by Ion-Exchange Chromatography.  
Frantisek Skvaril and Andreas Morell ............................................. 1310

Enhancement of the Antibody Response to Type III Pneumococcal Polysaccharide in Mice Treated with Antilymphocyte Serum.  
Phillip J. Baker, Rolf F. Barth, Philip W. Stashak and Diana F. Amsbaugh .. 1313

Ontogenetic Development of Clq Synthesis in the Piglet.  
N. K. Day, H. Gewurz, R. J. Pickering and R. A. Good ..................... 1316
CONTENTS

NUMBER 6, JUNE 1970

IMMUNOCHEMISTRY


Studies on the Specificity and Affinity of α-DNP-Oligolysine Antibody: A Basis for Questioning the Role of Cellbound Antibody in Cellular Recognition of Antigen. Howard A. Levin, Herbert Levine and Stuart F. Schlossman ................................................ 1377

Effect of Physical State and Route of Inoculation of Diphteria Toxoid on the Formation of Nasal Secretory and Serum Antibodies in Man. William T. Butler, Roger D. Rossen and Reuben D. Wende .......................................................... 1396

The Effect of Fumaropimarine Acid on Delayed Hypersensitivity and Cutaneous Forssman Reactions in the Guinea Pig. Lawrence Feinman, Stanley Cohen and Elmer L. Becker ................................. 1401


A Comparison of PCA Reactive and Hemolytic Rabbit Antibodies to Sheep Red Blood Cells. Noel L. Warner and Zoltan Ovary .......................................................... 1429

Complement Fixation by a Single Molecule of γG Hemolysin. Michael M. Frank and Thelma A. Gaither .......................................................... 1458

Homocytotropic Antibody in Primary Responder and Hyperimmune Rabbits. Thomas J. Kindt and Charles W. Todd .......................................................... 1491

Localization of Glycosphingolipids in Human Tissues by Immunofluorescence. Donald M. Marcus and Rosamond Janis .......................................................... 1530


IMMUNOGENETICS

Some Observations on the Phylogeny of Serum Inhibitor of C1 Esterase. Virginia H. Donaldson and Jack Pensky .......................................................... 1388

Alloantibodies Induced by Weaker Histocompatibility Antigens in Rats. G.H. Thoenes, E. White and W. H. Hildemann .......................................................... 1447

Repression of the Synthesis of Immunoglobulins in Newborn Mice by Antibodies Directed against the Variable Region of Light Chains. A. Ruffilli, A. Compere and C. Baglioni .......................................................... 1511

CELLULAR IMMUNOLOGY

Effects of Irradiation on Initial and Anamnestic Hemolysin Responses in Rabbits; Antigen Injection before X-Rays. William H. Tilaferro and Lucy Graves Tilaferro .......................................................... 1364

Transfer with a Plasma Fraction of Delayed Hypersensitivity to PPD in Guinea Pigs. J. M. Dupuy, P. Kalpaktosoglu and R. A. Good .......................................................... 1384

Electron Microscopic Study of Erythrocyte Receptors with Labeled Antisera to Membrane Components. C. Howe, H. Spiele, F. Minio and K. C. Hsu .......................................................... 1406

Lymphocyte Response in Acute Experimental Renal Failure. Raymond G. Slavin, Joseph F. Kelly and John J. Garrett .......................................................... 1424

Dissociation of Antibody Production from Disease Suppression in the Inhibition of Allergic Encephalomyelitis by Myelin Basic Protein. Robert P. Lisak, George A. Falk, Robert G. Heinz, Marian W. Kies and Ellsworth C. Alvord, Jr. .......................................................... 1435

The Mixed Leukocyte Culture: A Three Component System. Harold N. Rode and Julius Gordon .......................................................... 1453


Immunologic Unresponsiveness following a Single Feeding of Picryl Chloride. Jerome R. Pomeranz .......................................................... 1486
The Effect of X-Irradiation on Delayed Hypersensitivity and Circulating Antibody in the Rat.
Robert T. Bowser, Denise B. Spence and Eurmal D. Exum ........................................ 1497
Transfer of Skin Homograft Immunity with a Plasma Factor. J. M. Dupuy, D. Y. E. Perey and
R. A. Good ........................................................................................................ 1523

IMMUNOPATHOLOGY
Tissue- and Species-Specific Antigens of Normal Human Prostatic Tissue. R. J. Ablin, Paul Bron-
son, Ward A. Soanes and Ernest Witebsky ................................................................ 1329
Antigenic Release of Histamine from Rabbit Leukocytes. Reuben P. Siraganian and Abraham G.
Osler ....................................................................................................................... 1340
The Preparation of Human Kininogen and the Elicitation of Antibody for Use in a Radial Immuno-
Diffusion Assay. Jocelyn Spragg, Edgar Haber and K. Frank Austen ........................ 1348
Transfer of Autoimmune Thyroiditis of the Rat with Lymph Node Cells. Frank J. Twarog and
Noel R. Rose ........................................................................................................ 1467
Observations on the Mechanism of Immune Hemolysis: Importance of Immunoglobulin Class and
and John H. Humphrey ......................................................................................... 1502

MICROBIAL AND VIRAL IMMUNOLOGY
Interferon in Rabbit Brain, Cerebrospinal Fluid and Serum following Administration of Poly-
inosinic-Polycytidylic Acid. Francoise Cathala and Samuel Baron ............................. 1355
Enhancement of Virus Multiplication and Interferon Production by Cortisone in Ocular Herpes-
virus Infection. J. O. Oh ......................................................................................... 1359

COMMUNICATIONS
Comments on the Leucocyte Migration Technique as an In Vitro Method for Demonstrating
Cellular Hypersensitivity in Man. Gunnar Bendixen and Mogens Søborg .................... 1551
Prevention of Immunologic Deficiency in Pituitary Dwarf Mice by Prolonged Nursing. René J.
Duquesnoy and Robert A. Good .............................................................................. 1553
Concanavalin A: A Reagent for Sensitization of Erythrocytes with Glycoproteins and Polysac-
charides. M. A. Leon and N. M. Young .................................................................... 1556
An in Vitro Primary Immune Response to 2,4,6-Trinitrophenyl Substituted Erythrocytes: Re-
sponse against Carrier and Hapten. J. Kettman and Richard W. Dutton .................... 1558
J. M. Stone and Moshe Shifrine .............................................................................. 1562
Comet Plaques: Evidence for Storage of Low Efficiency Hemolysins by Indirect Plaque-Forming
Cells. Bruce Merchant ............................................................................................ 1565
Attempts to Sensitize Mice for PCA Using Pepsin-Digested Mouse Antibody Fragments. Francis
B. Casey, Jr. and Sei Tokuda .................................................................................. 1569
Relationship between Histocompatibility (H-2) Genotype and Immune Responsiveness to Low
Doses of Ovalbumin in the Mouse. Nelson M. Vaz, Eda M. Vaz and Bernard B. Levine .... 1572