THE JOURNAL OF IMMUNOLOGY

Official Journal of
The American Association of Immunologists

CONTENTS

The Relationship between a Serum and Tissue Inhibitor and the Rheumatoid Disease Agglutinating Factor. J. D. Gray


Studies on the Prevention of Mumps. VII. Evaluation of Dosage Schedules for Inactivated Mumps Vaccine. Werner Henle, Mary N. Crawford, Gertrude Henle, Humberto Faz Tabo, Friedrich Deinhardt, Angel Guerra Chabau and Irving J. Olshin

Effects of Cysteine and Acetic Anhydride on the Antigenic and Catalytic Sites of Dog Intestinal Alkaline Phosphatase. Max Schlamowitz

Studies on Organ Specificity. VI. Cross-reactions of Thyroid Autoantibodies with Thyroids of Other Species. Noel R. Rose and Ernest Witebsky

Studies on Organ Specificity. VII. Production of Antibodies to Rabbit Thyroid by Injection of Foreign Thyroid Extracts. Ernest Witebsky and Noel R. Rose

Studies of Blood Group Antibodies. II. Fractionation of Rh Antibodies by Anion-Cation Cellulose Exchange Chromatography. Neva M. Abelson and Arnold J. Rawson

Specific Hemagglutinins in X-Irradiated, Bone-Marrow Treated Mice Following Differential Immunization of Host and Donor. Richard M. Garver, George W. Santos and Leonard J. Cole


Measles Antibodies in the Population of New Haven, Connecticut. Francis L. Black

An Immunochemical Study of Streptococcal Diphosphopyridine Nucleotidase. M. Geraldine Pace and A. M. Pappenheimer, Jr.


Kinetics of Equine Complement. Myron A. Leon and Ake Nordén

PUBLISHED MONTHLY BY

THE WILLIAMS & WILKINS COMPANY
BALTIMORE 2, U. S. A.

© Copyright 1959, by The Williams & Wilkins Company
Made in United States of America
### CONTENTS

**NUMBER 1, JULY 1959**

1. The Relationship between a Serum and Tissue Inhibitor and the Rheumatoid Disease Agglutinating Factor. J. D. Gray


5. Studies on Organ Specificity. VI. Cross-reactions of Thyroid Autoantibodies with Thyroids of Other Species. Noel R. Rose and Ernest Witebsky

6. Studies on Organ Specificity. VII. Production of Antibodies to Rabbit Thyroid by Injection of Foreign Thyroid Extracts. Ernest Witebsky and Noel R. Rose

7. Studies of Blood Group Antibodies. II. Fractionation of Rh Antibodies by Anion-Cation Cellulose Exchange Chromatography. Neva M. Abelson and Arnold J. Rawson

8. Specific Hemagglutinins in X-Irradiated, Bone-Marrow Treated Mice Following Differential Immunization of Host and Donor. Richard M. Garver, George W. Santos and Leonard J. Cole


10. Failure of Mumps Virus to Inactivate Agglutinogens M, N and Rh0 (D) of Human Red Cells. O. Mäkelä, Kari Cantell and Kari Penttinen

11. The Effect of Deficiencies of Thiamine, Pyridoxine and Pantothenic Acid on the Macrophages of the Rat. G. Furness and A. E. Axelrod

12. Studies on the Combining Site of Anti-p-azobenzoate Antibody. Loss of Precipitating and Binding Capacities through Different Mechanisms on Acetylation. Alfred Nisonoff and David Pressman

13. Small Reversible Clumps of Bacteriophage and Their Anomalous Serologic Behavior. Frank Lanni


15. Analysis of Serum from Lethally Irradiated Mice Treated with Rat Bone Marrow. Nazareth Gengozian

16. Relation of Secondary Antigen Injection to Time of Irradiation on Antibody Production in Mice. T. Makinodan, Betsy H. Friedberg, M. Guthrie Tolbert and N. Gengozian


**NUMBER 2, AUGUST 1959**


20. Biologic Activity of Soluble Antigen-Antibody Complexes. IV. The Inhibition of the Skin Reactivity of Soluble Complexes and the PCA Reaction by Heterologous Complexes. Kimishige Ishizaka and Dan H. Campbell

21. Failure of Mumps Virus to Inactivate Agglutinogens M, N and Rh0 (D) of Human Red Cells. O. Mäkelä, Kari Cantell and Kari Penttinen

22. The Effect of Deficiencies of Thiamine, Pyridoxine and Pantothenic Acid on the Macrophages of the Rat. G. Furness and A. E. Axelrod

23. Studies on the Combining Site of Anti-p-azobenzoate Antibody. Loss of Precipitating and Binding Capacities through Different Mechanisms on Acetylation. Alfred Nisonoff and David Pressman

24. Small Reversible Clumps of Bacteriophage and Their Anomalous Serologic Behavior. Frank Lanni


26. Analysis of Serum from Lethally Irradiated Mice Treated with Rat Bone Marrow. Nazareth Gengozian

27. Relation of Secondary Antigen Injection to Time of Irradiation on Antibody Production in Mice. T. Makinodan, Betsy H. Friedberg, M. Guthrie Tolbert and N. Gengozian


Hemagglutination Test in Tularemia. Results in 56 Vaccinated Persons with Laboratory Acquired Infection. N. David Charkes .......................................................... 213

NUMBER 3, SEPTEMBER 1959

The Antigen-Antibody Reaction. III. Theoretical Considerations Concerning the Formation, Location, and Curvature of the Antigen-Antibody Precipitation Zone in Agar Diffusion Plates, and a Method for the Determination of Diffusion Coefficients of Antigens and Antibodies. Frederick Aladjem, Robert W. Jarosz, Rita L. Paldino and J. A. Lackner ................................................................. 221


Gel Diffusion Studies of Cross Reacting Antibody. Robert K. Jennings ................................................................. 237

Titration of Herpes Simplex Virus in One-day Eggs by an Improved Inoculation Method and Its Application to the Serum Neutralization Test. Kamesaburo Yoshino, Hirokazu Taniguchi and Sadako Taniguchi ................................................................. 246


The Relationship between Delayed Hypersensitivity and Circulating Antibody Induced by Protein Antigens in Guinea Pigs. Stewart Sell and William O. Weigle ................................................................. 257


Kinetics of Human Complement. IV. Kinetics of the Inactivation of the C3 Complex by Hydrazine. A. B. Taylor and Myron A. Leon ................................................................. 284

Kinetics of Human Complement. V. Decay of the Intermediate Complex EAhuC'A. Myron A. Leon ................................................................. 291


The Resistance-Promoting Activity of Endotoxins and Other Microbial Products. I. Their Effect on Salmonella typhi Infections of Mice. Edward W. Hook and Robert R. Wagner ................................................................. 302

The Resistance-Promoting Activity of Endotoxins and Other Microbial Products. II. Protection against the Neurotoxic Action of Influenza Virus. Edward W. Hook and Robert R. Wagner ................................................................. 310

Biologic Activity of Soluble Antigen-Antibody Complexes. V. Change of Optical Rotation by the Formation of Skin Reactive Complexes. Kimishige Ishizaka and Dan H. Campbell ................................................................. 318

Immunoechemical Studies with Human Albumin and γ-Globulin of Placental Origin. D. Subramanyam and Paul M. Maurer ................................................................. 327


NUMBER 4, OCTOBER 1959

Studies on a Skin-fixing, Reagin Blocking, Antipneumococcal Antibody. Nicholas C. Palczuk and John A. Flick ................................................................. 339

The Role of Multiplication of Pasteurella pestis in Mononuclear Phagocytes in the Pathogenesis of Flea-borne Plague. Dan C. Cavanaugh and Raymond RANDALL ................................................................................................................................. 348

Further Studies on the Effect of Ca++ on the First Component of Human Complement (C1). Frank E. Young and Irwin H. Lepow ................................................................. 364

The Effect of Adjuvants on Antituberculosis Vaccination with Live Mycobacteria. Hubert Bloch and Ivo Ferreira ................................................................. 372


Effect of Temperature on the Growth Curves of Herpes Simplex Virus in Tissue Culture. Clayton E. Wheeler and Charles M. Canby ................................................................. 392
Quantitative Studies on the Antigen-Antibody Reaction by the Monolayer Technique. II. Desorption Experiments. Tomio Ogata, Taro Tachibana, Kan Suzuki and Teruko Suzuki.............. 397
Differences in Stability of Antigen-Antibody Complexes Formed with Poliovirus and Acute and Convalescent Phase Human Sera. K. T. Brunner and R. Ward...................... 405
The Properdin System and Immunity. IX. Studies on the Purification of Human Properdin. Earl W. Todd, Louis Pillemer and Irwin H. Lepow.............................................. 418
Measurement of Herpes Simplex Virus by the Plaque Technique in Human Amnion Cells. Suydam Osterhout and Igor Tamm...................................................... 442
Differences in Primary and Secondary Immunizability of Inbred Mice Strains. Johannes Ipsen.... 448

NUMBER 5, NOVEMBER 1959

Acquired Immune Tolerance in Mice to Crystalline Bovine Serum Albumin. Geronimo Terres and Walter L. Hughes............................. 459
Mortality Enhancing Polypeptide Constituents from Pseudomonas pseudomallei. H. B. Levine, O. G. Lien and R. L. Mauser................................. 468
Homotransplantation Immunity and Tolerance in the Bullfrog. W. H. Hildemann and R. Haas.... 478
Studies on Herpes Simplex. X. The Effect of Corticosteroids on Herpetic Keratitis in the Rabbit. E. Jawetz, M. Okumo and M. Sonne........................... 486
The Specificity of Antibody Response in Typhus Fever. Its Alteration during Murine Typhus Infection as a Result of Previous Exposure to Epidemic Typhus Antigen. R. A. Goldwasser, C. C. Shepard, M. E. Jordan and J. P. Fox................................. 491
Antigens of Bordetella pertussis. I. Activities of Cell Walls and Proteolysin. J. Munoz, Edgar Ribi and Carl L. Larson.............................. 496
Studies on Variation in Virulence of Poliomyelitis Virus. IV. The Effect of 5-Bromo-uracil and Stable Cell Lines. C. P. Li.......................................................... 511
Comparative Immunologic Studies of Cell Structures Isolated from Salmonella typhosa. W. F. Carey and L. S. Baron................................. 517
The Agglutination of L Cells by Vaccinia Virus. II. The Cell Virus Interaction Related to the Agglutination Reaction. Arthur Brown, Sami A. Mayyasi and Julius E. Officer................................. 521
Persistent Infection of HeLa Cells with Meningopneumonitis Virus. G. P. Manire and G. J. Galasso............................................................... 529
Immunochemistry of Synthetic Polypeptides and Polypeptidyl Proteins. I. Qualitative Studies on the Modified Proteins. Mark A. Stahmann, Claude Lapresle, Dorothy J. Buchanan-Davidson and Pierre Grabar........................................ 534
Immunochemistry of Synthetic Polypeptides and Polypeptidyl Proteins. II. Quantitative Studies on the Modified Proteins. Dorothy J. Buchanan-Davidson, Eva E. Dellert, Steven E. Kornegutt and Mark A. Stahmann........................................ 543
Immunochemistry of Synthetic Polypeptides and Polypeptidyl Proteins. III. Antigenicity of the Synthetic Polypeptides. Dorothy J. Buchanan-Davidson, Mark A. Stahmann, Claude Lapresle and Pierre Grabar........................................ 552
Immunochemistry of Synthetic Polypeptides and Polypeptidyl Proteins. IV. Immunologic Reactions of the Synthetic Polypeptides. Dorothy J. Buchanan-Davidson, Mark A. Stahmann and Eva E. Dellert........................................ 561
Antigen-Antibody Reactions in Agar. IV. Concerning the Measurement of Antibody Concentration. Elmer L. Becker and J. C. Neff ................................................... 571
The Natural Resistance to Salmonella typhimurium of the Normal Mouse, Rat and Pyridoxine-Deficient Rat. G. Furness and A. E. Axelrod ................................................... 627
The Cessation of Antibody Absorption in the Young Pig. Vaughn C. Speer, Herbert Brown, Loyd Quinn and Damon V. Catron ........................................................................... 632
Effect of Active and Inactive Vaccinia Virus Preparations on Human Amnion Cell Cultures. H. Bernkopf, M. Nishmi and A. Rosin ........................................................................... 635
Specific and Cross Reactions by Complement Fixation with Boston Exanthem Disease Virus (ECHO-16). Franklin A. Neva and Mary F. Malone ........................................................................... 645
Antigenic Comparison of Boston Exanthem Virus Strains and Their Relationship to ECHO-16 Virus as Studied by Neutralization and Complement Fixation Procedures. Franklin A. Neva, Mary F. Malone and L. James Lewis ........................................................................... 653
A Capillary Tube Agglutination Test for Detecting Antibodies against Ornithosis in Turkey Serum. Donald M. Mason ........................................................................... 661
The Induction of Tolerance of Skin Homografts in Rats with Pooled Cells from Multiple Donors. R. E. Billingham and W. K. Silvers ........................................................................... 667
The VI Antigens of the Enterobacteriaceae. II. Immunologic and Biologic Properties. Roberta E. Whiteside and Edgar E. Baker ........................................................................... 687