CONTENTS

NUMBER 1, JULY 1954

The Number of Elementary Bodies per 50% Lethal Dose of Meningo-Pneumonitis Virus as Determined by Electron Microscopic Counting. T. Timothy Crocker.......................... 1

Erythrocyte-Sensitizing Substances from Rickettsiae of the Rocky Mountain Spotted Fever Group. R. Shih-Man Chang, Edward S. Murray and John C. Snyder ........................................... 8

Studies on Vi Antigen. IV. Physico-Chemical Characterization of Vi Antigens Isolated from V Form Enterobacteriaceae. Marion E. Webster, Jerome F. Sagin, Pearl R. Anderson, Sydney S. Breese, Monroe E. Freeman and Maurice Landy ............................................ 16

Studies on Vi Antigen. V. Comparison of the Immunological Properties of Vi Antigens Derived from V Form Enterobacteriaceae. Maurice Landy, Marion E. Webster and Jerome F. Sagin........ 23

Heterogeneity of Antibodies to the Human Blood Groups in Normal and Immune Sera. Ray D. Owen...................................................................................... 29


The Effect of Cortisone and Adrenocorticotropin Hormone on Passively Transferred Delayed Hypersensitivity to 2,4-Dinitrochlorobenzene in Guinea Pigs. Paul M. Seebohm, Mary M. Tremaine and W. S. Jeter ............................................................................ 44

Inhibition of Antibody Formation in Mature Rabbits by Contact with the Antigen at an Early Age. Robert Hanan and Jiro Oyama ............................................................. 49

The Effect of Gamma Globulin on Subclinical Infection in Familial Associates of Poliomyelitis Cases. Gordon C. Brown, Alan S. Rabson and Jack H. Schieble ................. 54

Tissue Cultures in the Study of Immunity: Retrospection and Anticipation. John F. Enders.... 62

NUMBER 2, AUGUST 1954

The Immunochemistry of Blood Group O. I. The Production of Precipitating and Agglutinating Antibodies in Chickens to Various Human and Hog Blood Group Substances. Harold Baer, Joan Kemp Bringaze and Mary McNamee .................................................. 67

Electrophoretic Mobility in Paper of Isoagglutinins. Rose Payne and Q. B. Deming ............ 81

Antibody Formation and the Effect of X-Radiation on Circulating Antibody Levels in the Hypophysectomized Rat. C. Susan Nagareda ................................................... 88

Studies on Local Antibody Production: Demonstration of Agglutination by Lymphocytes. Sheldon P. Hayes and Thomas F. Dougherty .......................................................... 95

The Effect of Biologic and Chemical Agents on the Experimental Production of Arteritis by Passive Sensitization. II. Nitrogen Mustard. Sheldon G. Cohen, John W. Walsh and Daniel S. Dzury. 100


The Antigenic Composition of Ammodytes Viper Venom. M. Piantanida and N. Muié .......... 115

Quantitative Serological Determination of Antibody Formation in X-Irradiated Rabbits. Myron S. Silverman and Paul H. Chin ............................................................... 120

NUMBER 3, SEPTEMBER 1954

In Vivo Localization of Rat Organ Antibodies in Ovaries, Adrenals, and Other Tissues. William F. Bale and Irving L. Spar...................................................................................... 125

In Vivo Localization of Labeled Rat Adrenal Antibodies. Irving L. Spar and William F. Bale ... 134

Quantitative Comparisons of Responses of Cotton Rats and Albino Mice to Measured Doses of Epidemic Typhus Rickettsiae. Henry S. Fuller ....................................................................... 138


Serological Properties of Polyglycy1 Bovine Serum Albumin. Takaohi Makinodan, Robert R. Becker, Harold R. Wolfe and Mark A. Stahmann ............................................................. 159

Studies on the Complement Function. II. The Dual Activity of Complement. Arthur M. Silverstein.......................................................... 163
Mixed Bacterial Infections in Relation to Antibiotic Activities. I. *Clostridium septicum*-Micrococcus Infections. Seymour P. Halbert, Constance Sonn and Lois Swick .................................................. 169

Influenza Virus-Erythrocyte Interaction. I. Reversible Reaction Between Lee Virus and Cat Erythrocytes. Igor Tamm ..................................................................................... 180

Influenza Virus-Erythrocyte Interaction. II. Effect of Egg Passage on the Reaction Between a Recently Recovered Influenza A Virus and Sheep Erythrocytes. Igor Tamm ............................................................ 190

NUMBER 4, OCTOBER 1954

Studies with *Shigella dysenteriae* (Shiga). V. Factors Involved in the Preparation of Toxoid. Sara E. Branham, George A. Hottle and Donald B. Riggs .................................................. 199

An Unidentified Antibody in Anti-Egg Albumin Sera Revealed by the Agar Diffusion Technic: Methods for its Immunochemical Analysis. John H. Vaughan and Elvin A. Kabat ............................................................ 205

The Nature of "Complete" Rh Antisera as Revealed by Antiglobulin Augmentation. Phillip Sturgeon .................................................................................................................. 212

The Development of Resistance in Mice Immunized with Soluble Antigen Derived From *Bacterium tularense*. Carl L. Larson, J. Frederick Bell and Cora R. Owen .................................................................................. 221

Antigenic Relations of Blood Group Antigens as Suggested by Tests with Lectins. William C. Boyd and Elizabeth Shapleigh ........................................................................................................... 226


Antibody Response of Suckling Mice to Mumps Virus. I. Immune Response Following Immunization with Mumps Virus Vaccine. John R. Overman ............................................................... 244

Antibody Response of Suckling Mice to Mumps Virus. II. Relation of Onset of Antibody Production to Susceptibility to Mumps Virus Infection. John R. Overman .............................................. 249


NUMBER 5, NOVEMBER 1954


Further Studies Concerning a Receptor-Destroying Factor in Human Saliva from Healthy Donors and from Poliomyelitis Patients. Claus W. Jungeblut and Alice W. Knox ............................................................. 264

A Receptor-Destroying Enzyme in Human Saliva and Its Possible Relation to Poliomyelitis Infection. Barthold Hofman .................................................................................................................. 273

The Uptake of Radioactive Phosphorus by Mouse Lymph Nodes During Sensitization to a Foreign Protein. Hermann Pinkus, S. Albert and Ralph M. Johnson ................................................................. 278

The Effect of the Order of Addition of Antigen and Antibody on the Precipitin Reaction. Jane C. Neff and Elmer L. Becker .................................................................................................................. 286

Studies of Hypersensitivity to Low Molecular Weight Substances. III. The 2,4-Dinitrophenyl Group as a Determinant in the Precipitin Reaction. Herman N. Eisen, Mary E. Carsten and Sidney Belman ................................................................. 296

Studies of the Complement Fixation Reaction in Virus Systems. VI. In Vesicular Stomatitis in Horses, Cattle and Swine. Christine E. Rice and P. D. McKercher .................................................. 309

The Effect of Histamine Upon and Local Fixation of Antibodies in the Skin of the Guinea Pig. B. Benacerraf, G. Bicozzi and B. N. Halpern ........................................................................................................... 318

Quantitative Antigen Analysis by the Oudin Method. Herbert M. Rubinstein ........................................................................................................................................................................ 322


The Hemagglutinin of Western Equine Encephalitis Virus: Recovery, Properties and Use for Diagnosis. Robert M. Chanock and Albert B. Sabin .................................................................................. 337

The Hemagglutinin of West Nile Virus: Recovery, Properties and Antigenic Relationships. Robert M. Chanock and Albert B. Sabin ................................................................................................... 352

Properties and Antigenic Relationships of Hemagglutinins Associated with Dengue Viruses. Benjamin H. Sweet and Albert B. Sabin ........................................................................................................... 363

NUMBER 6, DECEMBER 1954

Relative Effects of Various Agents on Complement and Antibody Production. I. Christine E. Rice ................................................................................................................................. 375

Persistence of *Rickettsia rickettsii* in a Patient Recovered From Rocky Mountain Spotted Fever.

Studies on Immunity in Anthrax. V. Immunizing Activity of Alum-Precipitated Protective Antigen. George G. Wright, Thomas W. Green and Ralph G. Kanode, Jr. ................................. 387

Monolayer Tissue Cultures. III. Propagation of Poliomyelitis Viruses in Cultures of Trypsin-Dispersed Monkey Kidney Cells. J. S. Youngner ....................................................... 392


The J Substance of Cattle. II. A Comparison of Normal Antibodies and Antigens in Sheep, Cattle and Man. A. Neimann Sørensen, J. Rendel and W. H. Stone ........................................ 407

The Incorporation of Radioactive Phosphorus Into Influenza Virus. Oscar C. Liu, Harvey Blank, John Spizizen and Werner Henle ................................................................. 415

Kinetic Studies on Immune Hemolysis. V. Formation of the Complex EAC' and Its Reaction with C'. Lawrence Levine and Manfred M. Mayer ......................................................... 426

Kinetic Studies on Immune Hemolysis. VI. Resolution of the C' Reaction Step Into Two Successive Processes Involving C' and C'. Lawrence Levine, Manfred M. Mayer and Herbert J. Rapp .. 435

Kinetic Studies on Immune Hemolysis. VII. Decay of EAC' Reaction, Fixation of C' and Other Factors Influencing the Hemolytic Action of Complement. Manfred M. Mayer, Lawrence Levine, Herbert J. Rapp, and A. Alvin Marucci ......................................................... 443