CONTENTS

NUMBER 1, JULY 1957

Studies on Ragweed Pollen. II. Fractionation of the Water Soluble Extract of Ragweed Pollen by Zone Electrophoresis and the Characterization of the Fractions. M. Richter, A. H. Sehon and B. Rose ................................................................. 1


The Elimination of Heterologous Serum Proteins and Associated Antibody responses in Guinea Pigs and Rats. William O. Weigle and Frank J. Dixon ......................................................... 24

Studies of Antibodies against Organ-Antigens. I. Effects of Anti-Mouse Spleen Serum upon the Reticuloendothelial System. Daniel A. Boroff, Rita M. Meier and John H. Heller ...................... 34

Studies on Diphtheria-Pertussis-Tetanus Combined Immunization in Children. II. Immune Responses after the Primary Vaccination. Bei-Loo Chen, Chi-Tao Chou, Chien-Tao Huang, Yao-Tung Wang, Hsiu-Hua Ko, Wang-Cheng Huang and Che-Fu Ling ....................................................... 39

Studies on Anaphylactic Shock in the Mouse. Perry Morgan, Noble P. Sherwood and Alvar A. Werder ........................................................................................................ 46

The Establishment of Strains of Human Cells in Tissue Culture. Gertrude Henle and Friedrich Deinhardt ......................................................... 54

Studies on the Viral Spectra of Tissue Culture Lines of Human Cells. Friedrich Deinhardt and Gertrude Henle ........................................................................................................ 60

Repository Immunization in Pollen Allergy. Mary Hewitt Loveless ...................................................................................................................... 68

Concerning the Mechanism of Complement Action. III. Inhibitors of Complement Activity. William F. Cushman, Elmer L. Necker and George Wirtz ........................................................................................................ 80

The Antigenicity of Polyvinyl Pyrrolidone II. Paul H. Maurer ......................................................................................................................... 84

NUMBER 2, AUGUST 1957

Factors Affecting the Efficiency of Combined Prophylactics: Effect of Poliomyelitis Vaccine on Diphtheria Toxoid. Leo Levine and Louise Wyman ................................................................................................................................. 89


Studies on the Cytotoxic Effect of Newcastle Disease Virus (NDV) on Ehrlich Ascites Tumor Cells. II. The Mechanism and Significance of in Vitro Recovery from the Effect of NDV. Alfred M. Prince and Harold S. Ginsberg ...................................................................................................................... 107

The Cross Reactions of Antisera Prepared against Four Human Cell Strains in Continuous Tissue Culture. Milton N. Goldstein ...................................................................................................................... 113

Starch Block Electrophoresis of Ragweed Pollen Antigens. John J. Cebra ....................................................................................................................... 118

Studies of Anti-Horse Crystalbumin Sera. IV. The Influence of Absorption with a Heterologous Antigen on Reactions with the Homologous and with a Second Heterologous Antigen. G. R. E. Naylor and M. E. Adair ...................................................................................................................... 130

Effect of Preradiation Immunization on Resistance to Aerosol-Induced Infection in X-Irradiated Mice. Eugene H. Perkins and Stanley Marcus ...................................................................................................................... 136

Precipitin Production in Chickens. XVI. The Relationship of Age to Antibody Production. Harold R. Wolfe, August Mueller, John Neess and Constantine Tempelis ...................................................................................................................... 142

Precipitin Production in Chickens. XVII. The Effect of Massive Injections of Bovine Serum Albumin at Hatching on Subsequent Antibody Production. Harold R. Wolfe, Constantine Tempelis, August Mueller and Samuel Reibel ...................................................................................................................... 147

Multiple Antibody Responses Following Immunization of Human Subjects with Diphtheria Toxoid. W. J. Kuhns and W. Dukstein ...................................................................................................................... 154

Mechanism of Antibody Formation. I. Fate of $^{111}$-Labeled Diphtheria Toxoid at the Site of Antibody Formation. Marian Elliott Koshland ...................................................................................................................... 162

Mechanism of Antibody Formation. II. Rate of Diphtheria Antitoxin Formation in the Booster Response. Marian Elliott Koshland and Frieda Engleberger ...................................................................................................................... 172
CONTENTS

NUMBER 3, SEPTEMBER 1957

The Purification of Formol Diphtheria Toxoid by Multi-Membrane Electro-Decantation. John F. Largier .......................................................... 181


Antibody Synthesis by Homotransplanted Cells and Tissues. II. Study of Factors Which Influence the Process in the Rat. Abram B. Stavitsky, A. E. Axelrod and J. Pruzansky ............... 200

Vascularization of the Cornea During Delayed Hypersensitivity Reactions. Stuart Schlossman and Chandler A. Stetson .......................................................... 208

The Effect of Complements on Soluble Antigen-Antibody Complexes. William O. Weigle and Paul H. Maurer .......................................................... 211

The Molecular Ratios of Soluble Rabbit Antigen-Antibody Complexes. William O. Weigle and Paul H. Maurer .......................................................... 223

Further Studies on Antigenic Heterogeneity in Bacteriophage. Andrew R. Fodor .......................................................... 227

Sedimentation Properties of Human and Sheep Erythrocyte Hemolysins. Alonza Johnson, Donald Woernley and David Pressman .......................................................... 234

Relationship of the Anaphylaxis Sensitizing and Adjuvant Properties of Hemophilus Pertussis Vaccine. Leon S. Kind .......................................................... 238

Challenge of Hamsters with Japanese B, St. Louis and Murray Valley Encephalitis Viruses after Immunization by West Nile Infection Plus Specific Vaccine. Imam Z. E. Imam and W. McD. Hammon .......................................................... 243


The Local Response of Tissue Mast Cells to Antigen in Sensitized Mice. Paul B. Carter, R. D. Higginbotham and Thomas F. Dougherty .......................................................... 259

NUMBER 4, OCTOBER 1957


Studies of the Immunochemistry of Leptospires. II. Heterogenous Relationship between Leptospires and Other Microorganisms. Nathaniel Rothstein .......................................................... 276

Antibody Response of Mice Treated with 2-Mercaptoethylguanidine Hydrobromide and Lethal Doses of X-Radiation, and its Significance to the Relation of Antigen to Host. Takashi Makinodan, Isabel C. Shekarchi and Charles C. Congdon .......................................................... 281

Some Effects of Nonreacting Substances in the Quantitative Application of Gel Diffusion Techniques. John R. Preer, Jr., and William H. Telfer .......................................................... 288

Relationship of Virulence for Mice to Patient Source of Type 2 Polioviruses. Karl Habel and Rosalie J. Silverberg .......................................................... 294

Effects of X-Irradiation on Susceptibility to Infection Following Oral Challenge in Immunized and Nonimmunized Mice. Eugene H. Perkins and Stanley Marcus .......................................................... 300

Immunologic Relationships of C-Reactive Protein from Various Human Pathologic Conditions. A. Libretti, M. Goldin and M. A. Kaplan .......................................................... 306

Effects of Acute and Chronic Exposure to X-Radiation on Phagocytic Activity. Ko Ko Gyi and Stanley Marcus .......................................................... 312

Behavior of Complement in Antigen-Antibody-Complement Precipitates. William O. Weigle and Paul H. Maurer .......................................................... 314

The Rate of Localization of Anti-Rat Kidney Antibodies. Monte Blau, Eugene D. Day and David Pressman .......................................................... 330


Mumps Complement Fixing Antibodies in Guinea Pigs. Klaus Hummeler .......................................................... 337

The Influence of Reciprocal Immunity on Eastern and Western Equine Encephalomyelitis Infection in Horses and English Sparrows. D. D. Stamm and R. E. Kissling .......................................................... 342

Immunization of Man against Epidemic Typhus by Infection with Avirulent Rickeella Prowazekii Strain E. IV. Persistence of Immunity and a Note as to Differing Complement-Fixation Antigen Requirements in Post-infection and Post-vaccination Sera. John P. Fox, Martha E. Jordan and Henry M. Gelfand .......................................................... 348
STUDIES ON MUMPS VIRUS. III. EXPERIMENTAL STUDIES IN GUINEA PIGS. MASAO TOKUDA.............. 355
STUDIES WITH MEASLES VIRUS. III. ATTEMPTS AT ISOLATION FROM POST-MORTEM HUMAN TISSUE. GISELA RUCKLE ............................................................. 361
THE EFFECT OF CHEMICAL AND PHYSICAL TREATMENTS OF SERA ON THE HEMOLYTIC ACTIVITIES AND FIXATION OF COMPLEMENT NITROGEN BY ANTIGEN-ANTIBODY PRECIPITATES. WILLIAM O. WEIGLE AND PAUL H. MAURER ........................................ 370
BIOLOGIC AND SEROLOGIC CHARACTERISTICS OF ECHO VIRUSES FROM WEST VIRGINIA. RICHARD A. ORMABEE AND JOSEPH L. MELNICK ........................................... 384
STUDIES ON DIPHTHERIA-PERTUSSIS-TETANUS COMBINED IMMUNIZATION IN CHILDREN. III. IMMUNE RESPONSES AFTER THE BOOSTER VACCINATION. BEI-LOO CHEN, CHI-TAO CHOW, CHIEN-TAO HUANG, YAO-TUNG WANG, HSIU-HUA KO, WANG-CHENG HUANG AND CHE-FU LING 393
STUDIES ON THE SEROLOGIC DIAGNOSIS OF MURINE TYPHUS AND ROCKY MOUNTAIN SPOTTED FEVER. I. EXPERIMENTAL INFECTIONS IN GUINEA PIGS AND RABBITS. DAVID F. HERSEY, MYRNE C. COLVIN AND CHARLES C. SHEPARD .................................................................. 401
STUDIES ON THE SEROLOGIC DIAGNOSIS OF MURINE TYPHUS AND ROCKY MOUNTAIN SPOTTED FEVER. II. HUMAN INFECTIONS. DAVID F. HERSEY, MYRNE C. COLVIN AND CHARLES C. SHEPARD .................................................................. 409
PHAGOCYTOSIS OF INFLUENZA VIRUS. I. IN VITRO OBSERVATIONS. ARTHUR V. BOAND, JR., J. E. KEMP AND ROBERT J. HANSON ................................................................. 416
PHAGOCYTOSIS OF INFLUENZA VIRUS. II. ITS OCCURRENCE IN NORMAL AND IMMUNE MICE. ROBERT J. HANSON, J. E. KEMP AND ARTHUR V. BOAND, JR. 422
THE SUBMERGED CULTURE OF MAMMALIAN CELLS: THE SPINNER CULTURE. WILLIAM F. McLIMANS, ELDON V. DAVIS, FLETCHER L. GLOVER AND GEOFFREY W. RAKE .................................................................................. 428
HUMAN PLASMAPHERESIS AND ITS EFFECT ON ANTIBODIES. JOSEPH SMOLENS, JOSEPH STOKES, JR., AND AGNES B. VOGT .................................................................................. 434

NUMBER 6, DECEMBER 1957

QUANTITATIVE STUDIES OF THE PRECIPITATION AND AGGLUTINATION REACTIONS BETWEEN SERUM OF PATIENTS WITH "CONNECTIVE TISSUE" DISEASES AND A PREPARATION (COHN FRACTION II) OF HUMAN GAMMA GLOBULIN. WALLACE V. EPSTEIN, EPHRAIM P. ENGLEMAN AND MARGARET ROSS .............................................................................................................. 441
OBSERVATIONS ON INDUCED CHRONIC PLASMODIUM BERGHEI INFECTIONS IN WHITE MICE. HERBERT W. COX .............................................................................................................. 450
A SERUM ALBUMIN MEDIUM FOR THE CULTIVATION OF HUMAN EPITHELIAL-LIKE CELLS. R. SHIHMAN CHANG AND ROBERT P. GEYER ................................................................................. 455
MECHANISM OF ANTIBODY FORMATION. III. HALF-LIFE OF HOMOLOGOUS DIPHTHERIA ANTITOXIN IN THE GUINEA PIG. MARIAN ELLIOTT KOSHLAND ............................................................................. 462
CORNEAL REACTIONS TO HORSE SERUM IN RABBITS PASSIVELY SENSITIZED BY LEUKOCYTES. MARY M. TREMAINE .............................................................................................................. 467
KINETICS OF HUMAN COMPLEMENT. III. INTERMEDIATES IN THE REACTION BETWEEN HUMAN COMPLEMENT AND SENSITIZED CELLS. MYRON A. LEON .............................................................................. 480
HUMAN CELLS IN CONTINUOUS CULTURE. II. COMPARATIVE SUSCEPTIBILITY OF STABLE AND CLONAL-STRAIN EPITHELIAL CELLS TO INFECTION BY VIRUSES OF POLIOMYELITIS, VACCINIA OR HERPES SIMPLEX. LOREY C. MCLAREN AND JEROME T. SYVERTON ............................................................................. 484
POLIOMYELITIS VACCINE SAFETY TESTING BY THE TISSUE CULTURE METHOD. W. B. BEARDMORE, A. E. HOOK, R. W. SARBER, I. W. MCLEAN, JR. AND A. R. TAYLOR ............................................................................. 489
CONDITIONS FOR THE DEMONSTRATION OF LOCAL PERIPHERAL ANTIBODY FORMATION AND FAILURE TO SHOW LOCALIZATION OF ANTIBODY BY ANTIGEN. RICHARD THOMPSON, VIRGINIA H. OLSON AND LOUIS R. SIBAL .............................................................................................................. 508
TOXICITY AND IMMUNOCHEMICAL PROPERTIES OF I\(^{131}\) TRACE LABELED DIPHTHERIA TOXIN. S. P. MASOUREDIS .............................................................................................................. 516
SEROLOGIC REACTIONS OF EXTRACELLULAR SOLUBLE SUBSTANCES OF CROWN GALL BACTERIA (AGROBACTERIUM TUMEFACIENS). ALEXANDER H. PINKES AND JAMES M. NEILL ............................................................................. 525