
BOOK REVIEWS

SYMPOSIUM ON ANTIBODIES: THEIR PRODUCTION AND MECHANISM OF ACTION. Philadelphia, The Wistar Institute of Anatomy and Biology, 1957. 361 pp. (paperbound).

The 1957 Gatlingsburg (Tennessee) Conference took place April 8–11, and was devoted to the general topic of antibodies with a special discussion of some problems of bone marrow transplantation. The proceedings of that conference, both the formal presentations and the informal discussions, first published in the *Journal of Cellular and Comparative Physiology* in December, 1957, have now been reprinted in monograph form.

Sixteen papers were delivered, including six dealing with problems of bone marrow transplantation. William Taliaferro begins the conference with a review of the biosynthesis of antibody protein and a consideration of the rates of this process. The antibody response and the cytologic events surrounding it are discussed by Dixon. S. J. Singer of Yale describes the chemical aspects of the antigen-antibody reaction and presents his theory that the antigen and antibody proteins are linked via a single carboxyl site on the antigen and a critically located amino group on the antibody. Kabat treats the same theme, using a different approach, in his discussion of the combining sites on antibody molecules. Schweet and Owen, in an outstanding paper, discuss normal protein synthesis and antibody production. The template mechanism and the phenomenon of induced enzyme formation are discussed by them in relation to a theory of antibody production in which antigen modifies the cellular "information center" (DNA) so that new protein (antibody) is synthesized by the cellular templates (RNA-protein). Talmage discusses the diverse activity of antibody and presents data to demonstrate that these multiple activities are not special attributes of either antigen or antibody alone, but are functions of both components of the system, as well as auxiliary substances such as complement. The fascinating topic of the transfer of immune reactions by cells was presented by Mitchison of Edinburgh. In an important paper, Wissler, Fitch, LaVia and Gunderson demonstrate that neither the macrophage, the lymphocyte nor the plasma cell are *exclusively* involved in antibody production in the rat, but that these types participate only to a limited extent. The principal antibody-producing cell appears to be a large pyroninophilic cell derived from a primitive reticular cell which, when stimulated by antigen, transforms into either a lymphocyte or a plasma cell. Becker has written a lucid account of anaphylaxis with particular emphasis on the role of complement components as tissue damaging enzymes.

Of particular interest to hematologists are the papers on bone marrow transplantation. Congdon succinctly reviews the highlights of bone marrow transplantation in x-radiated animals. Loutit's group reports further studies on radiation chimeras, including an investigation of tumor transplantation in chimeras. Van Bekkum and Vos make the important point that even after supralethal doses of x-radiation the immunological apparatus of the mouse is not completely paralyzed. Their data indicate that the number of cells required to protect the host from acute radiation death is related to the degree of antigenic difference between donor and host. Furthermore, only those mice receiving supralethal doses of radiation accepted functioning homologous or heterologous marrow grafts. Makinodan presented the evidence demonstrating the survival of rat bone marrow cells in lethally x-radiated mice and, in a second paper, presented a general review of the immunological problems of bone marrow transplantation.

Participants in the informative open discussions included: Weinrach, Stelos, Pressman, Haurowitz, Rapport, Heidelberger, Mauer, Salk, Witchison, Garvey, Wolfe, Waksman (BH), Pappenheimer, Kosland, Schon, Cole, Schwartz, Coons, Suskind, Anderson, Farr, Schreck, Hahn, Gell, Shapira, Osler, Upton, Bruner, Fox, Quastler.

This book is indispensable to anyone concerned with problems of immunology. To Dr. Alexander Hollaender, who organized the conference and edited the manuscripts and informal discussions, a special measure of praise is due.

—Robert Schwartz.

THE EFFECT OF LONG TERM TREATMENT WITH DICOUMAROL IN MYOCARDIAL INFARCTION. A CONTROLLED CLINICAL STUDY. *Chr. J. Bjerkelund.* From the Medical Department VIII, Ullevaal Hospital, Oslo, Norway. Oslo University Press. New York and London, Grune & Stratton, 212 pages.

In this important monograph the author presents the first really good and well controlled clinical study on the effect of long term anticoagulant therapy in myocardial infarction. His series comprises 119 cases in the treated group, and a comparable control group of 118 cases. The controls received treatment with dicoumarol for one month during the acute stage of their illness, after that time only when recurrent infarctions or thrombo-embolic complications occurred. The patients in the treated group received dicoumarol throughout the observation period, which varied between 42 and 79 months.

The incidence of recurrent infarction and death from heart disease was found to be significantly lower in the treated than in the untreated group in the first year following the acute episode, especially in individuals under 60 years of age. In the following years a mild, though not statistically significant difference in favor of the treated group could also be demonstrated.

It is concluded that long term anticoagulant therapy following myocardial infarction is indicated particularly in individuals under 60 years of age during the first year after the acute episode.

Bjerkelund's monograph deserves attention as an important contribution to our knowledge about the indications and limitations of this form of therapy.

—*Martin Seip.*

BOOKS RECEIVED FOR REVIEW

ERYTHROBLASTOSIS FETALIS. *Fred H. Allen, Jr. and Louis K. Diamond.* Boston, Little, Brown & Co., 1958. 143 pp. \$4.00.

HOW TO WRITE SCIENTIFIC AND TECHNICAL PAPERS. *Sam F. Trelease.* Baltimore, Maryland, The Williams & Wilkins Co., 1958. 185 pp. \$3.25.

METHODS IN MEDICAL RESEARCH, Vol. 7. *J. V. Warren, Editor-in-Chief.* Chicago, Year Book Publishers, Inc., 1958. 237 pp. \$7.50.

HEMATOLOGY FOR THE MEDICAL TECHNOLOGIST. *Charles E. Seiverd.* Philadelphia, Lea & Febiger, 1958. 275 pp. \$5.75.

THE CLINICAL APPLICATION OF HORMONE ASSAY. *John A. Loraine.* Edinburgh and London, E. & S. Livingstone Ltd., 1958. 368 pp. \$7.00.