
Tissue Immunity

Immunity has been studied from the humoral and cellular aspects for about forty-five years, but only recently has the importance of local tissue reaction been emphasized. Kahn's book is essentially a monograph embodying his own extensive and detailed experiments in this field. It deals principally with serological reactions and grossly observable tissue changes as they bear on the problem of tissue immunity. No histological studies are included. On the basis of this experimental structure the author considers various theoretical and clinical applications. The style leaves little doubt regarding the author's meaning but for the general reader the book is overburdened with experimental detail and repetition. For those in the immediate field who might wish to repeat or extend the work such detail would be essential.

The author holds that allergy and hypersensitivity are phases of immunity; that it is illogical to believe the host acts in a manner against his own interests (e. g., anaphylaxis) except when antigens are introduced in unnatural ways or amounts. He believes that the first and most fundamental evidence of an immune state is the capacity of tissue to anchor locally injected antigen. This is manifested usually by inflammation but if too much free antigen is present there may be necrosis. The appearance of humoral antibodies is secondary and they may disappear from the blood stream long before the capacity for tissue reaction is lost. In this sense incomplete proteins, such as gelatin, may act as antigens, for they are shown to be capable of evoking specific tissue response.

Effective use is made of an ingenious technic to follow local fixation of antigen. Rabbits are immunized against horse serum and then injected with diphtheria toxin. Now if antitoxic horse serum is injected into a certain tissue it will be more or less firmly anchored at the site of inoculation and will be unable to diffuse throughout the animal to neutralize the toxin. Accordingly much larger quantities of antitoxin will be required to prevent toxic death in the horse serum-immunized animals as compared with normals. The technic is applied to various tissues in various phases of active and passive immunity.

There can be no doubt that the author brings important experimental contributions to this field. One feels that he carries some of his theoretical applications rather far and occasional misconceptions are noted; for example, in the chapter on the reactions of young animals the inference is made that embryonic tissue possesses high defensive capabilities as compared with mature tissue. Yet there is little experimental evidence in the literature to support this assumption, in fact, the opposite seems more probable. The author refers repeatedly to the formation of insoluble immune globulin by local tissue cells, but there is no indication in the text that this is more than a mere hypothesis. In general, however, the speculative material is not introduced in an offensive manner but rather for the purpose of supplying a working basis for further thought and investigation. Immunologists and bacteriologists generally may profit by reading this work and clinicians too will find that it sheds new light on many phenomena with which they come into daily contact.—O. C. WOOLPERT.

Tissue Immunity, by Reuben L. Kahn. xix+707 pp. Springfield, Charles C. Thomas, 1936. \$7.50.