Progress in Allergy. Vol. 5 (1958) edited by P. Kallós. S. Karger, Basel/New York. XL+508 pp., 103 fig., 6 tab. sFr. 82.–.

This is an outstanding book and the editor, Dr. Paul Kallós of Sweden, is to be congratulated in bringing together most valuable contributions from internationally distinguished scientists. There is not one contribution which is not of the greatest interest to the immunologist or more specialized allergist and which cannot be taken as an authoritative and inspired review of the field in question. The contents include “Diffusion-in-Gel Methods for Immunological Analysis” by Ö. Ouchterlony, “The Release of Histamine” by W. D. M. Paton, “The Immunological Response to Antigens of the Tubercle Bacillus – Some Experimental Aspects” by S. V. Boyden, “Studies on the Mechanism of Hemolysis by Antibody and Complement” by M. M. Mayer, “Tissue Transplantation Immunity” by L. Brent, “Cell Lysis and Related Phenomena in Hypersensitive Reactions including Immunohemolytic Diseases” by B. H. Waksman and finally “Immediate Reactions in the Skin of Experimental Animals Provoked by Antibody-Antigen Interaction” by Z. Ovary – a really formidable panel!

As is usual with these volumes on Progress in Allergy, Dr. Kallós introduces the volume with a critical review (30 pages) of recent advances in thought and knowledge, stressing the importance of the work of the contributors he has selected for the present volume. He stresses the need for re-examining our concepts on tissue sensitising antibodies and the importance of trying all possible means for their detection. Special comment is made on Burnet’s “Self Marker” theory and Jerme’s “Natural Selection” theory of antibody production. He is attracted to R. L. Mayer’s ideas on the influence of the protein carrier in determining the type of antibody response of an animal. Observations on patients with agammaglobulinaemia have interesting implications on the theory of transplantation immunity and Kallós shows where these apparently conflict. He is probably correct in widening our usual concept of allergy by including all sorts of cell damage brought about by immunological processes.

The first chapter by Örjan Ouchterlony on “Diffusion-in-Gel Methods for Immunological Analysis” (78 pages and 355 references) is what must be described as a scholarly account of the early history and extensive present day developments of this most valuable technique for the study of antigen-antibody interactions. All modifications of the basic technique for simple, complex and multiple precipitating systems embodying simple and double diffusion in one, two or even three dimensions are clearly presented and arranged in a logical development. The quantitative relationships are explained simply and a very valuable technical “know-how” given. The figures both schematic and of actual photographic recordings of tests are excellent. The general immunologist or allergist must account himself most fortunate and privileged for this service rendered.

The “Release of Histamine” is discussed in the second chapter (70 pages) by W. D. M. Paton. The non-specialist could ask no more from the specialist. The whole Book Reviews – Buchbesprechungen – Livres Nouveaux 373
field from the localization of histamine in the body, how it is bound in the tissues, its release by various “non-specific” release mechanisms and the more “specific” liberators and finally its role in anaphylaxis and other allergic phenomena is amply and elegantly presented. There is most useful information for the clinical allergist on concomitant histamine liberating activity of various drugs. The author also emphasizes how many of the accepted allergic phenomena are not due to histamine alone. The reader cannot fail to be impressed with the way in which the author has succeeded in integrating the interests of the physiologist still seeking the role of histamine in normal physiology and those of the allergists to whom the consequences of histamine liberation are so evident clinically.

The chapter by S. V. Boyden on “The Immunological Response to Antigens of the Tubercle Bacillus” not only affords a critical appraisal of all pertinent and recent work in this most complicated field, but it also offers most stimulating reading. (Incidentally, it reminds us of much valuable work on tubercle allergy by the editor of Progress in Allergy, P. Kallós.) The literature in many aspects of tubercle allergy is so contradictory, for instance, the effect of tubercle antigens on cells in vitro, the multiplication of tubercle bacilli in macrophages of normal and BGG vaccinated or tuberculous animals, transfer of sensitivity by a serum fraction (Cole and Favour), one set of authors drawing conclusions which are unable to be repeated by other workers, that it becomes impossible for any but the specialist to make a judgement. Only the specialist with an intimate knowledge of all the literature can do this. It is here that we have to thank Dr. Boyden for presenting so clearly the apparently conflicting evidence and analysing the possible reasons for the different findings – an analysis which is only possible from a highly critical, imaginative mind acquainted with all the literature. Boyden discusses the difficulty of serological analysis of the antibody response in tuberculosis and stresses the need for tests measuring single antigen-antibody systems. (His own work has been mainly directed towards this end.) Despite the known adjuvant action of the tubercle bacillus, the antibody response to many of the antigens of the tubercle itself is poor. Boyden considers modification of the tubercle antigens inside the macrophage may be one of the factors responsible for this. Boyden states that despite our ignorance on the mechanism of induction of delayed type hypersensitivity he still feels “there is much in favour of the view that delayed type sensitivity is due to an antibody which is produced by the same mechanism and by the same cells as other antibodies but which differs in its distribution in the tissues and in the effects of its union with antigen”. Whatever satisfaction this statement gives, all will agree that “it is unlikely that much progress can be made towards solving these problems until a method has been involved for the in vitro estimation of the postulated antibody of tuberculin allergy”.

The next chapter on “Studies on the Mechanism of Hemolysis by Antibody and Complement” by M. M. Mayer is also masterful, as only to be expected when so much of the recent thinking on complement action has come from his laboratory. To many serologists well experienced in tests using complement, the newer immunochemical approach to complement is a little mystifying but Professor Mayer describes what the immuno-chemist is about in such simple terms that everyone should be able to share the excitement of these more recent developments. The approach being logical and not chronological, as is usual, is very satisfying, although it gives us shocks at times, as for instance, the evidence for the stages of complement action being dependent on the discovery of the requirement of Ca and Mg ions. Professor Mayer puts the evidence from different schools on the nature and properties of the intermediate products on the way to final haemolysis fairly into perspective. This review is really the “Vade Mecum” for research workers turning their attention to the experimental aspects of complement action.
The contribution of Leslie Brent on “Tissue Transplantation Immunity” (75 pages + 200 references) is most valuable in bringing together all the important knowledge of the subject. One can say no more than it has the hallmark of clarity and elegance which one has come to expect from the inspired school which has centred around Medawar, Billingham and Brent. The review covers what might strictly be called transplantation immunity and acquired tolerance and also discusses related phenomena such as inhibition of drug allergy, immunological paralysis and the phenomenon of enhancement. Gaps and apparent inconsistencies in our existing knowledge are brought to our notice and several fruitful avenues of research suggested. Once again we are reminded that “the in vitro demonstration in either field (transplantation immunity and hypersensitivity phenomena of the delayed type) of serum antibodies (other than those which will agglutinate red cells) would undoubtedly have the profoundest effect upon the theoretical interpretation of both types of reaction”.

The chapter by B. K. Waksman on “Cell Lysis and Related Phenomena in Hypersensitive Reactions including Immunohematologic Diseases” (110 pages) is a type of review article which one has come of necessity to acknowledge as being useful. The author states that his bibliography is by no means complete yet includes over 1120 references! As a consequence of this the review is in many parts uncritical and as a whole lacks form. By including under cell lysis “any form of cell damage resulting from an antigen-antibody reaction in or on the cell surface” and defining hypersensitivity as “disease resulting from antigen-antibody combination” he is able to weld together all the so-called immunohematologic diseases (with their in vitro counter parts!) anaphylaxis, atopy, the Arthus phenomenon, delayed sensitivities and “experimental disease of unknown type”. The reviewer has the impression that this is more a marriage of convenience than of natural affinities. It is disappointing not to have more elaboration on the author’s own work on specific white cell lysis produced by antigen and non-precipitating antibody. Having read this section one is made fully conscious of one’s ignorance and one cannot avoid asking: should one not attempt a new definition of hypersensitivity or allergy?

The last chapter on “Immediate Reactions in the Skin of Experimental Animals Provoked by Antibody-Antigen Interaction” occupies 80 pages and cites 103 references. It is by Z. Ovary, who introduced the term “passive cutaneous anaphylaxis” and has made such valuable contributions on its mechanism and applications. All his own experiences on passive cutaneous anaphylaxis and on the Arthus phenomenon in different animal species are gathered together and the evidence presented why the author considers the two phenomena quite distinct. It is not easy reading but most rewarding to those interested in skin reactions in experimental animals and there can be no experimental immunologist or allergist disinterested.

With all the contributions the literature is reviewed up to the end of 1956 or 1957. There is no general index but the list of contents is so well laid out that there is no difficulty in referring to any desired topic. As with most Karger publications, the book is beautifully produced.

Finally, although the title of the book is “Progress in Allergy”, it could equally well have been called “Progress in Immunology”, which is encouraging as it shows that the artificial division between allergy and immunology is breaking down and that immunity, the allergic phenomena and serum reactions must be studied as the one science. R. R. A. Coombs (Cambridge).

C. M. MacBryde (Editor): Signs and Symptoms. Applied Clinical Physiology and Clinical Interpretation. Lippincott, Philadelphia, Pa., 1957. 973 pages,
This excellent book is now available in a new Third Edition. A number of interesting and important new chapters have been added on “Growth and Sex Development” (C. M. MacBryde), “Generalized Vasospasm and Arterial Hypertension” (H. A. Schroeder), and “Lymphadenopathy and Disorders of the Lymphatic System” (O.C. Solnitsky and H. Jeghers). The other chapters seem to have been thoroughly revised and brought up to date. To the great satisfaction of the reviewer, the following sentence from his review of the Second Edition is quoted on the jacket of the present edition: “There are not many clinical books in my library which I have read so often and with such distinct pleasure and admiration”. After reading the Third Edition I can only repeat this statement. This book is really unique and indispensable.

Paul Kallós, Helsingborg.

Information on Psychopharmacology

A clearing-house of information on psychopharmacology is being established by the Psychopharmacology Service Center of the National Institute of Mental Health in the U.S.A. The Center plans to provide bibliographies and references and to prepare critical and analytic reviews of special topics. Workers in this field are invited to provide three copies of any papers that deal with their work – whether reprints, pre-publication manuscripts, progress reports, informal mimeographed reports, papers read at meetings, or abstracts. Letters outlining work in progress would also be welcome. Any restriction that authors place on the Center’s use of their papers will be observed. Communications should be addressed to the Technical Information Unit, Psychopharmacology Service Center, National Institute of Mental Health, 8719 Colesville Road, Silver Spring, Maryland, U.S.A.

New Journal of Biology and Medicine

“Perspectives in Biology and Medicine”, a new quarterly journal dedicated to a multidisciplined approach to biology and medicine, has been announced by the Division of Biological Sciences and the Press of the University of Chicago. The Editors are Dwight J. Ingle, Ph. D. and Dr. S. 0. Waife. The journal will present new hypotheses and concepts; interpretative selective essays; and reviews by men in science and medicine of their formative years and their philosophy of research. Subscriptions at $ 6.00 a year, may be sent to The University of Chicago Press, 5750 Ellis Ave., Chicago 37, Illinois, U.S.A.

Deutscher Allergikerbund


Immunology

The first issues of a new Journal entitled «Immunology», Official Organ of the British Society for Immunology, have been published by Blackwell Scientific Publications, Ltd. Editor: J. R. Marrack.

The contents of Vol. 1, No. 1 is as follows:

Adrenal Homografts in Mice, with Special Reference to «Immunological Adrenal-ectomy». By P. B. Medawar and P. S. Russell. – Localization of Tissue Antigens with