

one third of the studies treating the lymphocyte as a model and the rest studying these cells 'because of their relevance to the phenomena of immunity'.

In a volume as long and heterogeneous as this each reader will find something of interest but it may well be the papers more distant from their own interest. For this reader the section of ten papers on the nature of lymphocyte activation events covering the role of ions, cyclic AMP and plasma membrane components were of more value than the collection of papers on immune functions of lymphocytes. While the latter group include some sound of useful papers too many subjects are covered, each one too briefly, so that most papers appear isolated and out of context. Possibly to another reader the relative values will be different.

The major problem with volumes of proceedings is that where the papers describe completed studies

the full details almost always are to be found in regular journals and at best the symposium paper adds a few interesting discussion points; alternatively where the data are incomplete or speculative there is often too little in the way of experimental detail and one can only wait to see if the data finally reach a state where they can stand up to critical review. The latter remarks apply with greatest force to the short communications. It would be interesting to know how many of those teasing fragments have become full papers a year later. The workshop reports, though very brief, do convey a flavour of controversy and the range of interests in each area.

One is left with the impression that the conference was valuable for the participants but the resultant volume has much less value for the audience at large.

A. R. Williamson

Basic Exercises in Immunochemistry. A Laboratory Manual (Second Edition)

by A. Nowotny
Springer; Berlin, Heidelberg, New York, 1979
xiv + 314 pages. \$19.80, DM 36.00 (paperback)

This book is a laboratory manual intended for undergraduates or post-graduates following courses in immunology and, as such, is very successful. There are 95 different exercises divided up into three major sections and Isolations and Preparations, Structural Studies (including Quantitative Methods and Analytical Determinations) and Immunological Assays. Each exercise begins with a short introduction followed by a well laid out list of materials and equipment, procedures, evaluation (a section that explains and elaborates on the findings) and finally a section on use and limitations.

Virtually all the standard techniques are described and, what is particularly important, these have been carefully tested and do work in the time taken for an average laboratory session. This, of course, has meant taking certain short cuts but it is not always made clear that this has been done. On the credit side, however, a considerable amount of attention has been paid to reducing expense and numerous

suggestions for improvisation are made.

A book like this cannot stand on its own and, although each chapter contains a number of important references, it is unfortunate that it is the preface to the first edition (1969) that has been used to list the complementary books available. This means that no reference is made to such standard works as D. M. Weir's Handbook of Experimental Immunology; Part 1 Immunochemistry and the third edition of Garvey, Cremer and Sussdorf, *Methods in Immunology*. The former is an essential text for anyone who wishes to take the exercises in Nowotny's book further into research projects while the latter is the laboratory text with which it must be compared. *Methods in Immunology* is more comprehensive and more detailed and probably the better laboratory companion especially for the teacher or more advanced worker. *Basic Exercises in Immunochemistry* contains many more exercises, restricted largely and intentionally to immunochemistry, is

much cheaper and is much more straightforward as far as the student is concerned. This is an excellent book and is extremely good value for money. Combined with the use of a book on the rather more cellular aspects of immunology (Hudson and Hay,

Practical Immunology, for example) this book could form the basis of a very successful practical immunology course.

F. E. G. Cox

Molecular Mechanisms of Biological Recognition

Edited by M. Balaban
Elsevier/North-Holland; Amsterdam, New York, 1979
xii + 516 pages. \$68.25, Dfl 140.00

This book consists of the Proceedings of the 6th Aharon Katzir-Katchalsky Conference, organised by Manfred Eigen and Friedrich Cramer, and sponsored by the Minerva Foundation, which took place at Göttingen in September 1978.

It was an unusual conference from the start. 45 participants from Israel and 57 from Germany sat down, together with some 18 others, to honour the memory of Aharon Katzir-Katchalsky and to establish '... a bridge ... between the old and young ...'. Instead of an opening address, Manfred Eigen played Mozart's A-major piano concerto. The first day's proceedings were then devoted entirely to a session on the 'Roots and Fruits of Twentieth Century Biochemistry'. This produced not only some interesting historical observations, such as the relationship between the arts and sciences that made Berlin a major centre of European culture in the 1920s and 30s (Nachmansohn: Berlin in the Twenties and the Rise of Dynamic Biochemistry), but some novel scientific ones, such as the suggestion that '... at around the age of 30, people who are interested in researching should survey their achievements and ask people to criticize these achievements and assess their potential before they commit themselves full-time to a career which, if not successful, can lead to disappointment and frustration'. (Krebs: On Asking the Right Kind of Question in Biological Research.)

But what of the bulk of the proceedings? They are divided into five sessions: Protein-Ligand Interactions, which included a particularly interesting paper on the topography of nucleotide-binding sites in enzymes such as adenylate kinase and glutathione

reductase (G. E. Schulz); Protein-Nucleic Acid Interactions, which focused on the structure of chromatin and nucleosomes (G. Voordouw) et al., and R. Sperling and E. J. Wachtel), as well as on tRNA-ribosome and tRNA-activating enzyme interactions (by the groups of H. G. Zachau and of F. Cramer); Immunoreceptors, which included authoritative reviews on antibody structure (R. Huber) and on lymphocyte interactions (K. Eichmann); Neuroreceptors, which concentrated largely on recent evidence that requires the original acetyl choline transmitter hypothesis to be modified (including as didactic an account of others' mistakes as ever emerged from the pen of D. Nachmansohn); and Hormone Receptors, which combined a fascinating review of the molecular biology of sex-attractants in various algae (L. Jaenicke) with the anticipated papers on receptor function in the adenylate cyclase system.

It is usual for rapidly-produced books of typed copy to lack somewhat in presentation, and this volume is no exception; most of the figures, though, are of high quality. Where the book scores over other published reports of scientific meetings is in its content. Perhaps it was the presence of all those distinguished scientists in the audience that made the speakers take particular care over their presentation: each paper has a lucid summary, a comprehensive introduction and presents key experimental findings only, omitting the more usual detail in the aid of clarity. The result is a surprisingly enjoyable, readable and informative account of what was obviously a memorable meeting.

C. A. Pasternak