Book reviews

of groups with considerable expertise in the field, in working with and trying to perfect the production, characterisation, and application of these reagents. I find the book full of useful information and to the further credit of the editors they not only maintain their ability to highlight the important areas of growth in the field, but also seem able to maintain a uniformity of style which, while providing the maximum of information, does so in a way which makes the text exciting and very readable. If the references seem out of date, this in no way detracts from the book since as a 'state of the art' text it does not need the 'hot off the press' label, but can rather be viewed as a solid, reliable treatise which is the 'gold standard' of its kind. I find nothing to criticise in it. This is an excellent book from which anyone vaguely interested in the field would gain immeasurably, and which anyone working in the field will find indispensable. I recommend it without reservation.

ALAN M MCGREGOR

The Laboratory Diagnosis of Selected Inborn Errors of Metabolism

This book contains a description of twelve inborn errors of metabolism. Contrary to what the title suggests, all aspects of the diseases including clinical features, biochemistry, pathophysiology, incidence, inheritance, and treatment, as well as laboratory diagnosis, are dealt with in some detail. Each section concludes with a typical case history. The text is readable, well presented, and adequately illustrated, but the standard of the information it contains is somewhat variable. There are a number of inaccurate and misleading statements and the current state of knowledge on a subject is not always to be found. This is almost inevitable when a single author attempts to write on diseases selected from such diverse fields.

There are some unusual features about the book's contents and their arrangement. It is rather surprising that some areas of the subject, like glycogen storage diseases and the organic acidurias, are not represented. On the other hand, it is difficult to justify the inclusion of neonatal hypothyroidism, as only a very small proportion of infants with this condition have an inborn error of metabolism. The contents are divided into two parts. The first of these describes those diseases for which screening tests are available, while the second part contains those for which screening is not routinely performed. The unsatisfactory nature of this classification is evident from the closing sentence on homocystinuria, which is in the former part of the book. It concludes that routine screening for this disease is not feasible. Conversely, screening for cystic fibrosis, glucose-6-phosphate dehydrogenase deficiency, or congenital adrenal hyperplasia is practised in many places, but they are all included in the latter part.

The various anomalies that are mentioned in the preceding paragraphs are probably a symptom of what seems to be a fundamental defect in the book, that the author appears not to have defined its objectives and purposes. It was left to the foreword writer to suggest a possible use by health scientists and physicians. However, such a restricted view of the subject is unsuitable for those who might be seriously involved with the diagnosis and management of patients with inborn errors of metabolism. It could provide a useful introduction for those taking the first parts of various medical and scientific postgraduate qualifications requiring a knowledge of inborn errors of metabolism, but even these readers would need to be aware of the narrow coverage by this text. It is an expensive book considering its limited use.

J B HOLTON

Immunogenetics. Its Application to Clinical Medicine
Edited by T Sasazuki and T Tada. (Pp 308; figures+tables. £21-00, $30-00.) New York: Academic Press. 1984.

This book represents the proceedings of an international conference held in Kyoto, Japan in August 1983 on the implications for clinical medicine of recent advances in immunogenetics. Inevitably the relationship between immunogenetics and disease has been explored most widely in animal models and this is reflected in the book by articles on murine models of systemic lupus erythematosus, myasthenia gravis, autoimmune thyroiditis, and allergic encephalitis. Nevertheless, headway is being made with human diseases as exemplified by HLA associations with immune response genes to streptococcal and cedar pollen antigens (Sasazuki et al), with leprosy, and with the response to endorphin treatment in schizophrenia (van Rood et al).

In all there are 27 chapters divided into four sections: I. Immune response genes and disease. II. Cell interactions and activation in the human immune response. III. Genetic restrictions in the network and circuits. IV. Molecular genetics and biochemistry of immunologically important molecules.
Being the proceedings of a conference this book displays the characteristics of the species. On one hand, no concessions are made to those unfamiliar with the jargon of the subject and the book could not serve as an introductory text. On the other hand, it provides a stimulating insight into future possibilities for those with some background in the subject. However, perhaps some prospective buyers may be put off by these introductory comments by Mitchison and Merrick.

“We wondered whether to conclude with some advice on how to get rich. This section would have been aimed at stockbrokers thinking of investing money in biotechnology companies, and would have told them just which products of the human immune system are worth cloning, what would be the likely size of the market, and where the competition stands at present. But on second thoughts we have decided to remain silent on the grounds that such advice, if unpaid, is seldom listened to.”

N Matthews

The Harvey Lectures Series 78 (1982–1983)

Every winter since 1905 on the third Thursday of the month the Harvey Society of New York has met to hear a lecture on a biomedical topic. To be invited to lecture is a high distinction, and the list of Harvey lecturers is a roll call of the great and the good. The present volume contains nine lectures delivered between September 1982 and May 1983; at least the title page promises nine lectures but the book only contains eight because one manuscript was not received in time.

In book form the lectures face two problems, the publication delay and the wide range of topics included. The exceptionally wide range, far wider than in the usual multi-author review volume, follows from the wide interests of the Harvey Society. Eighty years ago perhaps this was no problem, but today how many people can really appreciate lectures on both ‘Control of Intercellular Communication by way of Gap Junctions’ (30 pages of voltage gating) and ‘Left-handed Z-DNA’? This is breadth without unity.

The most obvious casualty of publication delay is J Michael Bishop’s ‘Viruses, Genes and Cancer’. He sees oncogenes as ‘the enemy within’ and the text is full of metaphors of attack and subversion. It must have been an entertaining performance in March 1983, but has been badly overtaken by later discoveries. Ruth Sager’s lecture on ‘Chromosome Modification and Cancer’ has aged better. After her discovery of chloroplast DNA she showed that the maternal transmission depends on methylation (unmethylated paternal chloroplast DNA is degraded). This led to studies of methylation in a mammalian cell line. The methylation inhibitor azacytidine produced cells which had become tumorigenic, but which also had a consistent chromosome abnormality. This lecture still reads well two years later because she avoids a general review and just describes the excellent work of her own group. Other lectures similarly record one group’s progress in a straight line across an uncharted area and these too make good reading. Alexander Rich’s chapter on ‘Left-handed Z-DNA’ shows the steady development from the early studies of dinucleotide crystals to possible Z-DNA sequences generated by supercoiling and transcriptional enhancers. It left me feeling I understood the topic for the first time.

With speakers who have made such large personal contributions to their subjects, many of the lectures have an autobiographical tone and it is this feature which makes the most enjoyable reading: “One can imagine the excitement when in the afternoon of December 24 1962, Ed noticed a strikingly abnormal electrophoretic pattern in the serum and urine of no less a man than Bellevue hospital employee . . . within 3 days the protein had been defined as a molecule with many properties of an Fc fragment and an abstract was submitted to the FASEB”. This comes from a review of the heavy chain diseases read by the widow and co-worker of the late Edward C Franklin.

The original lectures must have been a real intellectual feast, but I don’t feel they make a particularly satisfactory book. It is pleasantly produced on good glossy paper, and the photographs are printed well (though I did notice a couple of misplaced captions). You would certainly buy it if you were interested in following the work of a particular group—and much of the work described is historically important—but for general reviews of a field you would usually do better with something less personal and a little more up to date.

Andrew P Read

Genetics and Neurology

This book is “meant to provide practical information regarding clinical delineation of different entities, their genetic mechanisms, and the recurrence