

describe normal immune function, with scant reference to autoimmune disease, and some of these would be better sited in an enlarged introductory chapter.

There is a bibliography at the end of each chapter, and most of the references given are pertinent and up to date. One exception occurs in chapter 1 where, in a fast-moving field, it is inappropriate to list two dated immunology textbooks. In addition, while the chosen format for the bibliography is acceptable, this book would surely have benefited from at least some numbered references in the text. Some readers will find the concluding Glossary useful, but many will consider definitions such as those for lymphokines, stem cells, T-helper cells, and transgenic mice to be insufficient or incorrect. In summary, then, the book promises well, and reads well in parts, but overall it has not been put together with sufficient care or attention to detail for it to be enthusiastically recommended.

C. J. INCHLEY
Immunology Group
Division of Biological Sciences
University of Edinburgh

Cytokines. By M. J. CLEMENS. Medical Perspectives Series (Editors: A. P. READ and T. BROWN). *βios Scientific Publishers*, Oxford, England. 1991. 122 + x pages. Paperback. £11.95/US\$24.00. ISBN 1 872 748 70 8.

This is an interesting and informative summary of the nature and activities of the cytokines, a diverse group of molecules which regulate many cellular functions, and which are particularly prominent in the immune and haematopoietic systems. The account is readable, well laid out, and presented with instructive diagrams and summary tables. It deserves to be well received among its intended readership of medical students, clinicians, and postgraduates in immunology and related fields.

For a small volume, the book covers a lot of ground. For instance, in chapters 2 and 3 it includes coverage of some relevant topics in cell and molecular biology, dealing, for example, with the signalling pathways by which ligation of surface receptors mediates changes at the chromosomal level. In the context of cytokine activity many of these pathways have yet to be worked out in detail, so the links to

actual mediators in this section are sometimes slight. However, this is useful background material, and it points the way towards a lot of current research activity. It is helpful that the author has chosen to give key references in the text, with full bibliography plus additional reading at the end of each chapter. The literature cited is up to date and carefully chosen, though in places the story has a perceptible bias towards the author's own interests of interferon function in relation to viral replication and tumour cell growth. In the section on cytokines and immunity, only one of the four references cited in the text comes from a major immunological journal, and one or two topics of interest to immunologists fail to get the coverage they might merit.

One such omission, highly topical during the gestation and production of this book, is the division of CD4⁺ T-helper cells into subsets with discrete profiles of cytokine secretion. In fact, the division of T-cells into CD4⁺ (helper) and CD8⁺ (cytotoxic/suppressor) phenotypes, and their respective MHC restrictions, are only briefly touched on. It is generally believed that the characteristics of a given antibody response and the bias towards humoral or cell mediated immunity are dependent on which T-helper subset predominates, and two regulatory cytokines, interferon- γ and IL-10, have important roles to play in cross-regulation of helper T-cell responses. The immunological reader will perhaps be surprised to find such gaps, while the non-immunologist will have to make do with something less than the whole story, and will need to take care that he understands that most references to T cells describe the activity of the helper subset. However, while the role of cytokines in the immune system is perhaps underplayed, the breadth of the account means that we are given a good overview of the variety of functions which cytokines serve.

Having outlined the biological roles of cytokines, and considered their disease associations, the book concludes with a chapter on the prospects for cytokine therapy in infectious diseases, autoimmunity and cancer. This is an area where, despite past disappointments, much effort is concentrated, and the overview provides a suitable conclusion for this useful volume.

C. J. INCHLEY
Immunology Group
Division of Biological Sciences
University of Edinburgh