and the basic genetics of human pregnancy and its diseases are beginning to make a discernible pattern. Half of the contributors come from New York, which may be why some chapters have an insular feel — the authors are seemingly unaware of work going on elsewhere in the world. I cannot imagine that anyone would want to buy this book for themselves, as all the information it contains is already available in cheaper and better presented forms. □

Colin Stern is a Consultant in Paediatrics at St Thomas' Hospital, London.

Lymphokines for the nineteen eighties

Dudley C. Dumonde

The Lymphokines: Biochemistry and Biological Activity. Edited by John W. Hadden and William E. Stewart II. Pp.437. ISBN 0-89603-012-1. (Humana/Wiley: 1981.) $59.50 in the United States, $69.50 elsewhere.

IN 1982 the serious student of immunology need no longer doubt the existence of lymphokines: he has only to consult the literature. As non-antibody protein products of lymphocyte activation, lymphokines act as mediators and regulators of many aspects of lymphocyte function. After a slow start in the 1960s the pace of lymphokine research began to quicken. Semantic barriers were broken down: between mouse-doctors studying "help"; guinea-pig doctors studying "delayed-type hypersensitivity"; and human doctors studying "disease". By the end of the 1970s two international conferences on lymphokines had been held, a special review journal devoted to the subject had been launched, and lymphokine research had become one of the most vigorous fields of molecular and cellular immunology.

Now in 1982, gone are the days when sceptics viewed the term "lymphokine" as having merit only in so far as it could be used both as a noun and as an adjective. The application to lymphokine research of brighter biochemistry, supplemented by techniques of cell hybridization, cell cloning and gene cloning, has even awakened venture capital: not only is there a ferment of lymphokine literature but also a ferment of medical interest in the diagnostic and therapeutic potential of lymphokines. Accordingly the lymphokinologist of the 1980s will find that Dr Hadden and Dr Stewart have edited a book which must be compulsive reading and which must be compulsively purchased given the current pressures of information retrieval.

In *The Lymphokines* the discerning consumer will find his favourite item delicately positioned between an appetizing prologue by Byron Waksman and a satisfying epilogue by Barry Bloom. Considerable effort has been made by the contributors — all authorities — to emphasize what is known about the physicochemical nature of lymphokines and the biochemical events that attend their production and action. This theme is well illustrated in the first half of the book by chapters on chemotactic, migration-inhibitory, macrophage-activating, cytotoxic, thymocyte-stimulating and colony-stimulating lymphokines. A most useful feature is the inclusion of two chapters on the confusing subject of helper and suppressor factors (though at the time the book was finally edited, the term "interleukin" would seem to have only just been coined). There is a chapter on interferons by Dr Stewart himself; here I would like to have seen a more critical discussion of the relationships between interferons and lymphokines.

Having dealt with what we all regard as "lymphokines", the second half of the book is comprised of chapters on leukocyte transfer factor, immune RNA, macrophage secretion products including prostaglandins, monocyte/granulocyte haemopoiesis and thymus hormones. To this extent the book is heterogeneous, though the student of lymphokines cannot afford to ignore current knowledge of other factors apparently regulating lymphocyte and leukocyte function. The general standard of production is satisfactory, though the subject index lacks details and there are quite a number of typographical errors.

Yes! This is a useful addition to the lymphokine literature, although it is not necessarily the "key resource" on the subject. If the aim of the book is to relate lymphokine biochemistry to biological activity, then it must be regarded as premature, simply because much of this research remains to be done. In fact, it seems to be this very theme that runs through many of the contributions, as if the authors were aware that whilst they were writing their reviews someone else was busy cloning the mRNA of interleukin 2 in *Xenopus* oocytes, or copying the gene for γ-interferon in *E. coli*. Can one capture at any moment the pace of a fast-moving scientific field with all of its genetic, biochemical, biological and clinical implications? Drs Hadden and Stewart, together with their well-known contributors, have sallied forth where some others may have feared to tread. The result is appealing. □

Dudley C. Dumonde is Professor of Immunology and Head of the Department of Immunology at St Thomas' Hospital and Medical School, London.