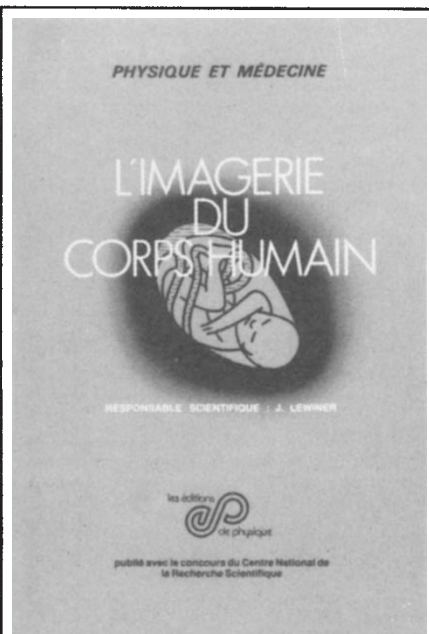


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Le médecin utilise de très nombreux outils nouveaux pour l'imagerie du corps humain, la thérapie, la surveillance et la régulation des paramètres psychologiques. L'interaction est donc de plus en plus forte entre médecins et physiciens.

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conventional pathway through an early history of vaccines (Pasteur, Jenner) to antigens, major histocompatibility complex and phagocytes, followed by inflammation. Next, we suddenly leave cells for three chapters on antibodies before "tissues of the immune system" are approached. I feel a more logical order would have been to describe lymphoid organs and the differentiation of lymphocytes, then go on to discuss the induction of an immune response which would lead to a description of end products such as lymphokines and antibodies.

Among the antibodies much attention is given to allotypes, to the neglect of the sugars. Immunoglobulins are glycoproteins, and although the role of the oligosaccharides is still largely unknown they may help to dictate the various biological functions of the immunoglobulins. To indicate in a figure that IgE only has sugars bound to the C_H2 domain (like IgG) is incorrect as six oligosaccharides have been reported on three different C_H domains of IgE. There follows an excellent chapter on how to measure antigen-antibody reactions and antibody affinity, including a lucid section on antigen-antibody interaction with Fc receptors on cells.

As the author leads us into the jungle of immunoregulatory processes, he looks back at us over his shoulder to offer encouragement to "who has managed to follow so far"; we later graduate to a reader "who has managed to follow so far"! This is not because the book is difficult to understand, rather a sympathetic way of apologizing for the complexity of the subject. A stimulating chapter "Immunity at Body Surfaces" precedes another on vaccines which are dealt with very competently. However, absent here is an assessment of how successful vaccines have been in the improvements in public health from the turn of the century to the present day, and in the introduction of antibiotics. As vaccines are designed to induce memory cells and many properties of murine B memory cells have been described it was a pity not to include them.

The highlight and declared *modus operandi* of the book lies in the account of mechanisms of resistance to disease. This topic is bravely treated by separately dealing with bacteria, viruses, protozoa and helminths, an approach to a difficult subject which exposes many of the "nasties" practising immune evasion. A certain weakness in defining tropism with the microorganism's reliance on specific receptors on target cells can be excused as being "non-immunological", but I missed any account of the Duffy blood group - *Plasmodium vivax* story. Still, I like this book — it is how I would have described immunology myself and it has something in it for everyone. □

Brian Solomon is a Lecturer in the Department of Bacteriology at the University of Aberdeen.

Enzymology in the golden ages

Keith Tipton

Enzyme Structure and Mechanism, 2nd Edn.

By Alan Fersht.

W.H. Freeman: 1985. Pp.475. Hbk \$24.95, £28.95; pbk £14.95.

ALTHOUGH an understanding of the behaviour of enzymes is essential for any full appreciation of the behaviour of living systems at the biochemical level, enzymology is too often regarded as being an esoteric and somewhat purposeless pursuit or a pedestrian and ossified technology. Anyone with such views should read this book. It is the author's contention that we are now entering a new golden age of enzymology, but this scholarly and enthusiastically written account suggests that such an age has existed for many years and will continue for many more.

A book of this size could not be expected to provide a comprehensive coverage of all aspects of enzymology and it is particularly strong in areas such as transient kinetics, enzyme mechanisms, and specificity and editing mechanisms, in which the author has been particularly active himself. However the generally well-chosen reference lists should allow readers to develop their knowledge in areas that receive less detailed coverage, for example steady-state kinetic analysis and the behaviour of metabolic pathways. The book is never dull and in controversial areas, such as the evolution of enzyme kinetic power, the author presents his own arguments cogently and convincingly.

Many will be familiar with the first edition of this work. In addition to the revision of much of the original material there are several new chapters, among them an account of enzyme stereospecificity, a topic which is often neglected in books of this type, and an excellent treatment of genetic engineering and enzymology. This latter chapter includes a particularly valuable consideration of the techniques of site-specific mutagenesis and their importance to the future development of the study of enzymes.

I have been recommending the first edition of this book to students, both undergraduate and graduate, since its publication in 1977. The appearance of this revised and expanded version is most welcome. I recommend it most highly as a stimulating and informative guide in which the ideas and principles behind our current understanding of enzymology are presented in such a way as to capture much of the excitement of the subject. □

Keith Tipton is Professor and Head of the Department of Biochemistry at Trinity College, Dublin.