

The first chapter, by Levitzki, deals with subunit interactions in terms of the formal "concerted" or Monod-Wyman-Changeux model and the "sequential" or Koshland-Némethy-Filmer model. The material has been discussed in much this way several times before, and it is not obvious why this chapter, which presents no new insights or approaches, is included. The last chapter, by Dempsey, is a well-done description of squalene and sterol carrier proteins. These are very interesting systems but, in view of the present level of information about their functions, inclusion of the chapter may have been premature. There also seems to be no evidence for subunit interaction, although the complex must interact functionally with a number of enzymes of lipid metabolism.

The other five chapters make up the core of the book. Ginsburg and Stadtman provide a characteristically lucid account of highly complex results obtained with the fascinating glutamine synthetase system from *Escherichia coli*. Interactions between proteins and among subunits at several levels are illustrated. Gabriel, Kalckar, and Darrow discuss uridine diphosphogalactose-4-epimerase from various organisms. The lactose synthetase system, described by Ebner and Magee, may not illustrate subunit interaction in the strict sense; α -lactalbumin and the galactosyltransferase may better be considered two proteins. Nevertheless, the interaction between them, with a consequent change in acceptor specificity, is interesting and important in terms both of enzymic function and of comparative molecular evolution. Unfortunately this chapter is carelessly written, with much unnecessary repetition, and the syntax sometimes renders the meaning ambiguous or obscure. The extensive polymerization of acetyl coenzyme A carboxylases, with concomitant effects on function, is clearly and interestingly discussed by Lane, Polakis, and Moss. Finally, Crawford's chapter on tryptophan synthetases is a superior review of the catalytic interactions and the immunological, genetic, and evolutionary aspects of a highly interesting system.

This book can be recommended especially to students as a means of obtaining a general background, through consideration of well-chosen specific systems, on the kinds of interactions between polypeptides that underlie much of the versatility of protein function.

DANIEL E. ATKINSON

Department of Chemistry,
University of California, Los Angeles

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Books Received

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Auditory Analysis and Perception of Speech. Papers from a symposium, Leningrad, Aug. 1973. G. Fant and M. A. A. Tatham, Eds. Academic Press, New York, 1975. x, 564 pp., illus. \$29.75.

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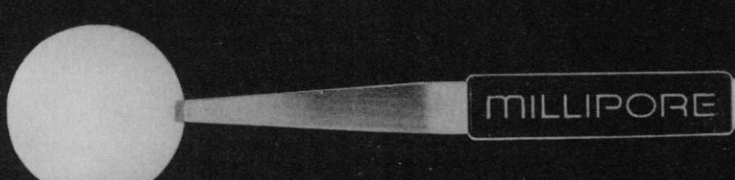
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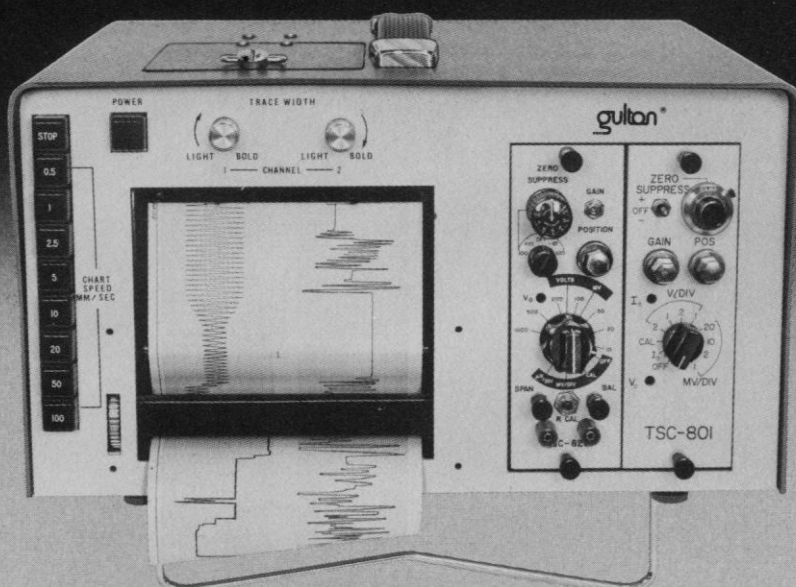


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