proceedings of a symposium of this kind since all the topics have been dealt with more thoroughly elsewhere.

Chapter 6 is a short but useful account of the use of proline analogues to inhibit collagen synthesis which may be of use in controlling diseases involving excessive fibrosis. There follow two useful reviews of collagen synthesis by cultured cells, the first covering a wide range of cell types and the second covering only arterial smooth muscle cells.

Collagen degradation is covered by two chapters, one a useful synthesis of the mechanisms of collagenolysis and their control. The second is concerned with the collagen turnover, including urinary excretion of collagen metabolites as a measure of whole body turnover and long-term pulse decay methods for particular tissues.

The still increasing number of collagen types coded for by separate genes has stimulated research into the genetic control of collagen expression and this is the title of another contribution. However, the contribution actually describes the work of one group on the chromosomal localisation of collagen structural genes using somatic cell hybridization, but only collagen type I is considered.

A chapter on inherited disorder of collagen metabolism provides a very useful review and a particularly good bibliography, but the chapter on the specific problem of idiopathic scoliosis is rather sketchy. The widespread occurrence of collagen in many tissues has lead to the widespread use of immunolocalisation techniques and this is reviewed but rather too briefly.

Since collagen is a structural protein it is not surprising to find several contributions concerned with the mechanical properties of collagen and the interdependence between structure and function. These sections also include the use of enzymes to probe the contributions of collagen and other components to the biomechanics of soft tissues. Although useful, they are rather specialised and too mathematical for the average biologist.

An important medical problem is the fibrosis which occurs in a number of common diseases. Various aspects of the problem are dealt with in a group of four chapters. These include the cell biology of fibrosis, factors influencing wound healing, the use of sponge-induced granulation tissue as a pharmacological test system and biomechanical methods in wound healing research.

The physico-chemical, mechanical and biological properties of collagen and its ready availability has made it an attractive substance for clinical applications, such as films, sponges, tubes and fibres. This aspect of collagen research is summarized in a useful contribution.

Standing on its own is a most interesting contribution by Mathews on the coevolution of collagen which integrates our knowledge of collagen structure and biosynthesis to discuss the phylogenetic development of collagen structure and function.

Different chapters will be of interest to different research workers but it is doubtful if the book as a whole will be of sufficient use to be purchased by individuals interested in the biology of collagen.

D. S. Jackson

Transfer RNA: Biological Aspects

Edited by D. Söll, J. N. Abelson and P. R. Schimmel
Cold Spring Harbor Laboratory; New York, 1980
161
mosomes, and codon usage in several organisms.

The first two sections are introduced by very useful and enjoyable general reviews and are followed by a series of chapters which are specialized and deal in the main, with the author’s own work. There is considerable repetition particularly in the introductory parts of those chapters dealing with work on *E. coli*. However, since the work is described in considerable detail, the different approaches which have been used can be studied in depth and it is valuable to be able to compare side by side these results and see the general picture which is emerging. Besides work described on *E. coli*, the section on gene arrangement gives considerable emphasis to the localization of tRNA genes in *D. melanogaster* by the use of in situ hybridization.

The section on suppression, regrettably, does not have a general introductory chapter. This seems a pity since such a review would be of particular benefit in helping the non-specialist to appreciate some of the interesting features of this specialized topic.

The final section on other roles of tRNA covers such topics as the roles of tRNA in regulation, in amino acid transport, as aminoacyl donors, as primers for reverse transcription, and in selective binding to rRNAs. The final chapter is on tRNA-like structures in viral RNA genomes. Several of these latter chapters are more general in their approach than the chapters in the other sections.

Although the chapters are based on lectures delivered to the Cold Spring Harbor Meeting in 1978, they have been updated and include later work so that reference is made to papers published in 1979 and, in a few instances, in 1980.

The book is a specialized text and therefore will be of major interest to research workers in the field. This volume, however, along with volume 1 provides a comprehensive coverage of recent work in the transfer RNA field and should provide an insight into the problems and methods by which they are being tackled to all interested in the subject.

D. S. Jones

*Genetic Engineering I*

Edited by Robert Williamson
vi + 168 pages. £9.80; $24.00

This book is the first in a series containing reviews of topics using recombinant DNA techniques. It is intended for the student, the newcomer and the experimentalist. If the standard of the reviews in this volume is maintained throughout the series, the reader will be provided with an excellent summary of genetic engineering techniques and their contribution to our understanding of gene expression.

The first chapter by Williams is an excellent review of cDNA cloning, ranging from what it is and why it is useful through the various methods of preparation and their relative merits to screening of the clone banks. He includes a consideration of the size and complexity of mRNA populations and therefore how many clones must be screened to obtain the desired sequence. The various methods and enzymological steps are covered in greater detail in Methods in Enzymology (1979) volume 68, but this chapter provides a concise comparative overview.

The second chapter by Little deals with antenatal diagnosis of hemoglobinopathies and ranges from a description of the clinical problem through the problems associated with detection in the foetus by protein analysis to the advantages of detection by DNA analysis. The exact nature of the clinical consequences is sometimes left rather vague and the attractive feature of heading sections with interesting questions is occasionally offset by the author’s failure to provide an answer. However, the review contains a wealth of data and the case for adoption by our hospitals of DNA analysis for antenatal diagnosis is convincingly argued and even costed.

The third and last chapter by Wickens and Laskey reviews the expression of cloned genes in cell-free
Although the chapters are based on lectures delivered to the Cold Spring Harbor Meeting in 1978, they have been updated and include later work so that reference is made to papers published in 1979 and, in a few instances, in 1980. The book is a specialized text and therefore will be of major interest to research workers in the field. Medical Research Center in Cold Spring Harbor, New York. 4.8. 4.8 out of 5 stars. About cold spring harbor laboratory. Our Story. We are organized into six divisions. Perfectly normal events can have disastrous consequences when they happen at the wrong time. Take, for example, a horse race, says Cold Spring Harbor Laboratory Professor Alea Mills. In summary, this study provides evidence for the biological functionality of new class of processed sRNAs produced specifically within EVs intended to have its effect outside of the cell of origin, thus expanding the importance of EV RNAs beyond their potential utility of biomarkers. In addition these results, we believe, contribute to a novel understanding of how multiple types of cancer cells (and perhaps other categories of disease and normal cells) can shape their microenvironment to promote their growth over the neighboring including perhaps immune cells. D. Professor and Head of Functional Genomics Cold Spring Harbor Laboratory Cold Spring Harbor, New York 11724 Phone: 516-422-4105 Fax: 516-422-4109 Email: [email protected]. Related documents.