
Book Reviews

Schleif, R. F.; Wensink, P. C.: Practical Methods in Molecular Biology. Berlin, Heidelberg, New York: Springer 1981. xiii, 220 pp., 49 figs. Hard bound DM 69,-, \$ 32.20.

It is not often that one can pick up a book and say immediately without hesitation "That really would be useful". "Practical Methods in Molecular Biology" is such a volume. For those responsible for arranging practicals for undergraduates, this work will prove itself invaluable. It fills the gap between the existing forefront of recombinant DNA technology and what is possible for giving large classes in order to gain at least some feeling for the new technology.

As explained by the authors, the laboratory procedures have only been included after repeated use by themselves, so that do work! I can attest to that myself, having recently used several of their experiments in undergraduate classes. The book covers a very broad range of techniques, from growing bacteria, cell breakage techniques, rudimentary bacterial genetics, through enzyme assays, cell-free transcription-translation systems and the handling of proteins, to working with nucleic acids. The list of experiments is completed with a number of procedures commonly used to construct, select and characterize recombinant DNA (including Southern transfers) and a section on *in vitro* translation systems from higher organisms (plant and animal). Finally a chapter on useful assorted laboratory techniques such as hints on washing pipettes, use of pH meters, ultracentrifuges, facts about autoradiography and fluorography and recovery of CsCl. Appendices give some commonly used recipes, including media preparations and finish appropriately enough with a recipe for chocolate chip cookies and reasons for not eating (or "cooking") in the laboratory!

The book has a full index and a bibliography and should be used in conjunction with "Methods of Enzymology". This book does not include, for instance, techniques on DNA sequencing, which can be found in vol. 65 of "Methods in Enzymology", nor does it pretend to provide details of the sort of collection of genetic techniques described in the book "Experiments in Molecular Genetics" by J. Miller. The production of the book conveniently includes the use of wide margins, so that students can pencil in notes alongside the text.

A thoroughly useful book – a must for any biochemistry course.
J.F. Jackson, Glen Osmond

Walton, A. G. (ed.): Recombinant DNA. Proceedings of the Third Cleveland Symposium on Macromolecules, Cleveland,

Ohio, 22–26 June 1981. Amsterdam – New York: Elsevier 1981. VIII, 310 pp. Hard bound \$ 86.00.

The full text of the 22 invited papers at the Third Cleveland Symposium in 1981 is presented in this volume. Recombinant DNA, the subject of this symposium is of course of vital interest and so this book is timely. The book is directed towards a broad spectrum of science and to young scientists in particular. An introductory commentary is given by David Jackson of Genex Corporation, dealing nicely with the necessary interweaving and cooperation between universities and industry in recombinant DNA technology.

The main part of the book is divided into four sections. The first deals with Medical and Fundamental approaches, containing chapters on structure of some human genes and of genes of medical interest. Chapters on the interferons, on histocompatibility genes and on somatic cell hybrids naturally find a place in this first part of the book. The second section, entitled "Use of Phage and Yeast" contains chapters on mammalian mitochondrial t-RNA, DNA replication, and Herpes Simplex Virus and its use as a vector in mammalian cells, in addition to chapters dealing with topics closer to the title of this section.

Industrial and Agricultural Applications, the third section, contains some of the most interesting chapters of the whole volume. For instance, the problem of how to deal with the chlorinated compounds which are spread around our landscape is the subject of one chapter. Studies with soil bacteria and their plasmids are described, which could eventually lead to cultures capable of utilizing chlorinated dioxins and other toxic chemicals. Synthesis of higher eukaryotic proteins in yeast host vector systems is the subject of another chapter, while stereospecific induction of macromolecular synthesis by small molecules and consideration of recombinant DNA for plant genetic improvement are also to be found here.

The fourth and final section covers chemical aspects. Included is a chapter on design and synthesis of gene control regions useful for genetic engineers, a fascinating study on the chemical synthesis of a promoter which really is biochemically active. Additionally, a chapter on the usefulness of oligonucleotides of mixed sequences as specific hybridization probes is followed by a final chapter on the interpretation of NMR spectra of proteins as approached genetically.

A thoroughly readable book, the broad focus of the Cleveland Symposium of which it is a record makes it of interest to scientists from many different fields.

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