
Book review

Walker, J. M.; Gaastra, W. (ed.): Techniques in Molecular Biology. London and Canberra: Croom Helm 1983. 333 pp., several figs., several tabs. Hard bound £ 19.95.

Within the covers of this one book one finds a systematic treatment of all the sophisticated techniques needed in modern molecular biology. Written for advanced students just starting out in research, this book deals with the biochemical and genetic methods one needs at this stage. Thus refinements on methods of the more traditional investigations of proteins and nucleic acids are presented, as well as the newer techniques of genetic engineering.

High performance liquid chromatography on proteins and nucleic acids is dealt with in the first chapter, followed by several chapters on a variety of other aspects of protein methodology. This includes analytical electrophoresis, protein blotting and peptide sequence analysis. Then follows a chapter on extraction and fractionation of RNA with special consideration to mRNA. Appropriately the next chapter is on *in vitro* protein synthesis, with the objective of identifying mRNA molecules and to study their properties and properties of the proteins for which they code.

The procedure for preparation for cloning of cDNA is covered in the next three chapters, including synthesis and "double-stranding" of cDNA, plasmid isolation and insertion of double stranded cDNA into a plasmid. The latter deals with the various practical aspects of restriction endonucleases and DNA ligase. The next step towards the cloning of the DNA fragment is the introduction of the hybrid vector DNA into an appropriate host, and this too is covered in this book. Together with transformation, the screening of transformants by a number of techniques including restriction analysis, Northern hybridization and others. The use of minicells and maxicells for the identification and subcellular localization of cloned DNA-encoded gene products is dealt with and chapters on gel electrophoresis of DNA and Southern blot technique for detection of specific DNA sequences precede chapters on the determination of DNA sequences and the use of cosmids as cloning vehicles.

All chapters in this admirable book have adequate references and the book is finished off with a detailed index and a glossary of terms, very useful for the student new to the field.

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