

but it does rather steal the thunder from Sinclair, Gubbay and Lovell-Badge in the following two chapters. It can also lead to confusion for those not already familiar with this field — the two chapters which review work on Anti-Mullerian Hormone have startlingly different conclusions as to the significance of recent studies.

In all honesty, this is really a very good book which will provide an invaluable source of reference and these carping criticisms result from the disappointment that there are *not* chapters on the sex determination of reptiles, birds (particularly chickens) and fish, in addition to the well-written review on *Drosophila*. In my opinion, the prize for readability goes to Hampikian, Cooper and Graves for the chapter on 'Sex Determination in Marsupials and Monotremes' while not necessarily agreeing on the importance of transgenic marsupials. I shall leave dedicated readers to find the chapter ghost-written by my collaborators, R. Zimmerman and N. Mailer.

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A large number of techniques are available to examine biological processes at the molecular level. Publications such as *Molecular Cloning: A Laboratory Manual* by Sambrook and colleagues and *Current Protocols in Molecular Biology* have successfully compiled recipes, hints and tips to tackle most techniques used in molecular biology. These manuals give necessarily limited insight into the wider application of the techniques they describe. This problem is addressed in *Gene and Chromosome Analysis (Part B)*, the second volume in the series *Methods in Molecular Genetics* edited by Kenneth W. Adolph.

The book is divided into five sections covering recombinant DNA, chromosome and DNA analysis, immuno-

globulin genes, mutants and mutagenic activity and finally, replication, transcription and translation. The twenty chapters cover an eclectic array of techniques and research areas. Some give overviews of particular biological systems and describe the techniques used by the authors to analyse them. Others give more technical examinations of particular methodologies. The preface suggests that the book 'will provide practical experimental procedures for use in the laboratory'. It satisfies this claim with mixed success.

From a purely technical point of view, some chapters are more informative than others. For example, the chapter by Hofbauer and Denhardt provides background information and detailed protocols for the isolation of cDNA clones representing low-abundance mRNAs by differential and subtractive hybridization. Another highlight is the excellent chapter reviewing current methods in pulsed-field gel analysis of megabase DNA by Smith and co-workers. Other chapters detail methods that have been used in specific areas but could readily be applied to other systems. One case is the chapter describing the physical mapping of human immunoglobulin heavy chain variable region gene loci by Matsuda and Honjo. This would be a useful guide for analysis of other large tracts of DNA cloned as yeast artificial chromosomes. Unfortunately, there appears to be no standard format for the presentation of methods. Some are given in numbered stages, while others are in the less easy to follow standard text format. Apart from chapters obviously concerned with a particular technique, finding a specific protocol is also difficult. Nevertheless, the index does provide some guidance for this. Apart from practical applications, this book may also be of value for those wishing to gain knowledge of certain research areas. In this context, I found chapters on *p53* gene mutations and heritable mutagenic activity in maize informative and interesting.

In conclusion, I expect this volume to be of little direct use at the bench, but it may find a worthwhile home as a reference text, emphasizing the practical applications of the diverse techniques used by molecular biologists.

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