

## Book reviews

**An Introduction to Human Molecular Genetics: Mechanisms of Inherited Diseases.** J. J. Pasternak. Fitzgerald Science Press, Bethesda, MD. 1999. Pp. 498. Price £29.50, hardback. ISBN 1 891786 03 2.

Dolly mixtures. Lots of lovely dolly mixtures. Remember those? That was my immediate impression of *An Introduction to Human Molecular Genetics* by Jack Pasternak. The brightly coloured figures of the fluorescence *in situ* hybridisation appear very much like flattened dolly mixtures, and like those childhood candies, there are some sweeties which are very, very good and some which are a little tedious and you have to chew through to get back to the good ones. Having flicked through this book more than once I started to read it at the beginning! The narrative is informal, yet informative. Refreshingly, genetics is begun from the perspective of chromosomes and not the usual rigmarole of nucleic acids moving through nucleosides into nucleotides and finishing at DNA. We are talking serious heredity here. The anecdotal style is unfamiliar and occasionally tedious but the stories do stay with you.

The contents are comprehensive and range from the genetic mapping of disease genes through to an impressively up-to-date chapter on human gene therapy. The requisite chapters on basic science are included but their position in the book is such that one is just beginning to wonder how something is achieved. The chapters covering the molecular genetics of cancer syndromes, neurological disorders and mitochondria disorders do contain enough distinct material to make them all worthwhile. Certainly, the arrangement of the material is a little strange at times, some of the terminology is not familiar to this reviewer at least, and one is left asking whether the occasional social comment should make it into a textbook? However, despite this I do recommend this book, and strongly. The coverage is modern and well referenced. All the essentials are there. The inclusion of micro-arrays and adeno-associated virus provides evidence of that. The indexing is easy to work with and the questions at the end of each chapter are provocative in assessing one's own comprehension of the material covered. Someone with significant interest in teaching, and teaching well, evidently wrote this book. The schematic figures describing PCR are amongst the best I have seen and the inclusion of the chromosome painting makes reading the text irresistible.

Remember when you used to tip your sweeties on the floor and it was random as to which came out first? This book reads a little like that. However, the contents are impressive and if one reads from cover to cover, all the latest flavours are there. The standard of this book is such that it would be appropriate for Ph.D. students, medical students and the best undergraduates.

JULIA BROSNAN  
*Department of Medicine and Therapeutics  
University of Glasgow, The Western Infirmary  
Glasgow G11 6NT, U.K.*

**Practical *In Situ* Hybridization.** Trude Schwarzacher and Pat Heslop-Harrison. BIOS Scientific Publishers, Oxford. 2000. Pp. 203. Price £21.95, paperback. ISBN 1 85996 138 X.

If you want a gripping read I suggest you go out and buy *The Beach* by Alex Garland, but if you want to set up *in situ* hybridization, and particularly fluorescence *in situ* hybridization (FISH), in your laboratory, then this is the book for you. When you work in a department where FISH analysis is performed routinely, as I did, you can become blasé about this powerful technique. Moving to a department where the technology is absent soon reminds one of how certain questions, such as 'which chromosome does this clone map to?' can be answered relatively quickly, and how publication quality data can be generated, using this approach. This book has convinced me to set up this technique again and although no money fell out when I opened it to start me on my way, it does provide a comprehensive list of the equipment and type of set-up required. The appendix contains a helpful list of suppliers, both of reagents and equipment.

In the preface to the book the authors state that 'we have aimed to distil the key techniques to an organised, uniformly presented, efficient and effective series of protocols... that a new user in either a molecular biology or cytogenetics laboratory can get to work'. They have definitely succeeded in the first part of their 'mission statement'. The book is well laid out and each chapter contains background and theory before presenting the clear and easy to follow protocols. The location of each protocol is conveniently marked on the edge of the page where it is to be found, although my suggestion would be to mark the start of each chapter in this way and then have a summary of the protocols contained therein.

There are several reasons for recommending this book, including the veritable smorgasbord of protocols it contains. The section on troubleshooting and frequently asked questions is as comprehensive as it could be without the authors coming to your laboratory to diagnose the problem themselves. The chapter on stringency and kinetics is a valuable addition and a really useful teaching aid for an often misunderstood concept. It should be compulsory reading for all molecular genetics graduate students, as well as their supervisors!

The main strengths of the book, not surprisingly, are the strengths of the authors, with their years of experience of FISH and cytogenetics quite evident. It may not be a gripping read but it is certainly a book you will refer to over and over again.

STEPHANIE HALFORD  
*Department of Molecular Genetics  
Institute of Ophthalmology  
University College London  
11-43 Bath Street  
London EC1V 9EL  
U.K.*