any mention is made of polygenic conditions with the exception of heart disease but what is more surprising is the absence of papers dealing with the prenatal diagnosis of single gene disorders.

These criticisms should not detract from this excellent volume. It achieves what the organisers hoped—providing the most up to date account of human molecular biology currently available.

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Molecular biology of DNA repair. A. Collins, R. T. Johnson and J. M. Boyle (eds). The Company of Biologists Limited, Cambridge. 1987. Pp. 353. Price £35.00, $70.00 US. ISBN 0 948601 06X.

The involvement of DNA damage as an early step in carcinogenesis and the existence of several multisystem human genetic disorders associated with defects in DNA repairs or DNA processing, attest to the fundamental importance of DNA repair in maintaining the integrity of cell and organisms. The symptoms of genetic disorders such as xeroderma pigmentosum, ataxia-telangiectasia and Fanconi's anaemia demonstrate that DNA repair repair enzymes are involved not only in the avoidance of carcinogenesis but also in many aspects of differentiation and development.

Molecular Biology of DNA Repair is a book based on the proceedings of an international conference held in Manchester in March 1986. As such it suffers from all the shortcomings of conference proceedings, of which I admit to being in general a long-standing opponent. A request for a paper to be published in such proceedings often results either in the prevention of the publication of the same work in a referenced journal or entails the writing of such a paper in a rather vague and often unhelpful way. The resulting proceedings are almost inevitably a hotchpotch of articles, some containing latest results, others being reviews, or short summaries. The editors must then put them all together with some semblance of coherence. The division of the book into DNA repair, correction of repair defects by DNA transfection, mechanisms of recovery from DNA damage, control of DNA repair processes and mutagenesis appears quite artificial, only the section on correction by transfection containing articles which are clearly on this topic.

Notwithstanding these general criticisms, most of the individual articles are very good, especially those which contain mini-reviews of work from the authors' laboratories over the last few years. These include articles by Hoeijmakers on the correction of the defect in xeroderma pigmentosum by microinjection of gene products or cell extracts and the cloning and characterisation of the ERCC-1 human DNA repair gene, by Smith on repair in specific sequences, by Mullenders on localisation of excision repair, by Johnson on the effect of inhibitors and stress on DNA repair, and by Day on the role of 6-methylguanine in human cells. These are comprehensive articles containing many useful references.

The book commences with a well-written overview of excision repair by Friedberg. A further particularly useful review is by two of the editors, Collins and Johnson, who have undertaken the commendable task of collating existing information on all mammalian mutant cell lines. They provide comprehensive lists of these mutants together with brief descriptions of their properties. Their article is a valuable source of information which will spare their readers much tedious searching of the literature.

As a supplement to Journal of Cell Science, this book will be found on the shelves of any library which subscribes to the journal. Although I doubt if it will find too many individual purchasers, laboratories actively involved in research on DNA repair will find it a useful book to have on their reference shelves.

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Plasmids: a practical approach. K. G. Hardy (ed.). IRL Press Oxford, Washington DC. 1987. Pp. xi + 192. Price £15.50, $28.00 US PB; £25.00, $45.00 US HB. ISBN 0947946 81 0 PB; 0 947946 78 0 HB.

There was a time when bacterial plasmids were little more than a biological curiosity, studied by a small number of devoted, prokaryote biologists. Times have changed. Today, in the "probe it, clone it, sequence it" hothouse of molecular biology there are few workers who do not at some time make use of plasmids, although many are woefully ignorant about the vectors which they use. This book in the Practical Approach series from IRL Press could help to dispel their ignorance but, alas, is more likely to be read by those who study plasmids for their own sake.

In putting together this book, Kimber Hardy has chosen a collection of self-contained chapters dealing with particular aspects of plasmid biology. In each chapter, the author gives explicit descriptions of the techniques which he employs. In the first chapter, Hardy discusses various methods for the purification of plasmid DNA. In the second, Thomas describes experimental approaches to the investigation of replication and copy number control and in the third chapter, Bergquist looks at plasmid incompatibility (a phenomenon much beloved of plasmid biologists but an impenetrable mystery to many outside the brotherhood). These chapters are a mine of valuable technical information, especially for those workers setting out to investigate plasmids in poorly-characterised organisms.

Later chapters venture into the realms of transposon mutagenesis in gram-positive organisms (Youngman) and the study of colicins and their plasmids (Pugsley &