theoretical background to give a good level of understanding of the basic methodology. Plenty of photographs will help the inexperienced workers to understand the practical aspects of cell culture.

The second part describes applications in cell and molecular biology. Four chapters cover the isolation of lymphocytes, establishment of lymphocyte lines, cell fusion techniques and cytotoxicity assays. Some techniques described here may not be necessary for all those readers new to cell culture. However, they are very important tools for cell culture workers in some specialized fields including immunology and haematology.

Finally, transfection, a technique that has become one of the most basic and important technologies in most fields of biology, is described. The authors do not intend to cover in detail all the background and protocols for transfection, but electroporation should be emphasized more. Although electroporation has become a major method for introducing foreign DNA into recipient cells, it is not given sufficient emphasis in this chapter. On the other hand, the protocol of the calcium phosphate co-precipitation method is well written, and sufficient to enable the uninitiated to achieve success.

My overall impression of the book is that it is a very useful introduction to basic culture techniques. I would highly recommend this volume for the inexperienced cell culture worker.

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Human Gene Mutation. By DAVID N. COOPER and MICHAEL KRAWCZAK. BIOS Scientific Publishers. 1993. 402 pages. Price £49.50/US $99.00. ISBN 1 8872748 41 4.

As the Human Genome Project rolls relentlessly forward, more and more of the estimated 100000 human genes have been characterized. Most of those responsible for high-prevalence Mendelian disorders have already been cloned; in 1993 alone the sequences of the genes for Huntington's disease, X-linked agammaglobulinaemia, Menkes' disease, Friedreich's ataxia and neurofibromatosis type 2 were reported. With a few exceptions the general rule is that these disorders are extremely heterogeneous at the molecular level. Inevitably, therefore, increasing attention has to be paid to the range of mutations that are to be found and the types of assay that have to be used to detect the variable mutant alleles at these loci.

Human Gene Mutation is one of the first books, and undoubtedly the best, to address itself specifically to this subject. It has useful chapters on genetic disease, on the anatomy of the human genome and on linkage analysis. But its substance lies in its coverage of mutation, from history through technology to estimation of mutation rates. The data content is huge and impressive, and the appendices which summarize genetic diseases in which molecular detection is possible, single base-pair substitutions, small deletions and splice-site mutations causing Mendelian disorders, would be worth publishing on their own.

Inevitably a book of this name will date rapidly. Its value depends to some extent on how quickly the publishers can get it on to the bookshelves. Cooper and Krawczak claim that their literature survey is complete to December 1992. I don't know exactly when this was published, but it landed on my desk for review before the end of June. That is very impressive, and I wonder once again why so many other publishers – Cambridge University Press being a particularly bad example – find it so difficult to publish a complete manuscript in under a year. Most would benefit from a refresher course at BIOS Scientific.

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Cystic Fibrosis: Current Topics. Volume 1. Edited by J. A. DODGE, D. J. H. BROCK and J. H. WIDDICOMBE. John Wiley & Sons. 1993. 250 pages. Price £59.95. ISBN 0 471 93 1012.

The publication of a new book on cystic fibrosis is welcome news for those of us with graduate students, new post-docs and clinical fellows in a laboratory investigating the molecular and cell biology of this disease. Until the cloning of the CFTR gene in 1989, new students in the CF field were faced with a mass of literature to wade through that had little real science content.

Cystic Fibrosis: Current Topics thus has the potential to fill a definite gap in the market, that is between the lay books on CF and those written for practising physicians. Its price tag of £60 puts it beyond all but the independently wealthy of students, so the decision to purchase is likely to end up on the table of budget-holders or librarians.

A brief scan of the authors reveals contributions from many of the key players in the CF research field since 1989. The book is divided into three sections on genetics, cell biology and clinical aspects. It opens well with a chapter on the structure of the CFTR gene that gives an insight into the tremendous amount of work that went into the isolation of the CF gene by positional cloning. It describes the problems encountered in constructing a full-length CFTR cDNA clone and examines expression of the CFTR gene. An unusual feature of the CFTR mRNA – that of alternative splicing leading to the production of mRNA lacking specific exons – is explored, though its significance remains obscure. Finally the CFTR gene promoter is discussed, essentially revealing how little