

## *The DNA Story: A documentary history of gene cloning*

Edited by J.D. Watson and J. Tooze

*Freeman; San Francisco, 1981*

xvi + 606 pages. £13.95

Faced with the flood of new results from recombinant DNA research, it is salutary to look back over the past decade during which DNA splicing has passed from being a worrying new possibility to a technique routinely used by a vastly expanding research industry. The DNA story is a fine collage of nearly 200 of the documents concerning the controversies over regulation of recombinant DNA research interspersed with potted summaries of the main developments by the editors. This collage, which occupies most of the book, is preceded by 8 pages of attractive colour paintings that effectively explain the key ideas of gene expression and recombinant DNA techniques to the uninitiated; it is followed by a lucid 50 page outline of the same topics pitched at about first year university level, that could be valuable for students or others seeking a general account where the basic principles are not obscured by unnecessary technical detail.

The documents include previously unpublished letters, almost all concerning the American debate, published articles and excerpts from official documents such as NIH guidelines and the supreme court decision on patenting micro-organisms, and the full Boyer–Cohen DNA-splicing patent, and make fascinating reading. None of the documents clarify the reasons for the important switch from the cautious ‘certain such hybrid molecules *may* prove hazardous’ in the Singer and Söll letter that sparked off the controversy to the categorical ‘such experiments . . . *would* also result in the creation of

novel types of infectious DNA elements’ in the Berg moratorium letter a year later and the assumption by the Asilomar conference that all recombinant DNA research was hazardous in some degree and that the only question was how, not whether to regulate it. Most concern the subsequent gradual slide from unwarranted fear of cancer epidemics to the present mixture of complacency and self-perpetuating bureaucratic regulations. The whole episode highlights how ignorant leading biochemists and molecular biologists can be in such areas as microbial ecology and evolutionary biology, and how ill-prepared they are by their education to make wise and balanced judgements in a world of conflicting fears and passions.

It is a pity that the documents are not arranged in strict chronological order as this would have made it easier to use them to follow the sequence of changing views. It is also a pity that the documents chosen deal so much with the safety of genetic engineering and so little with the broader ethical questions.

The editors have tried to be reasonably neutral in their comments that precede each batch of documents; nonetheless, they sometimes read a bit like a history of the Borgias written by a Catholic convert rather than a critical historian. Even so, this beautifully produced book deserves a place in all public and university libraries and to be widely read.

T. Cavalier-Smith