Book review

Arber, W.; Illmensee, K.; Peacock, W.J.; Starlinger, P. (eds.): Genetic Manipulation. Impact on Man and Society. Cambridge, London, New York, New Rochelle, Melbourne, Sydney: ICSU Press/Cambridge University Press 1984. xiii + 250 pp., several figs. and tabs. Hard bound $ 35,–.

This book contains most of the contributions to the third Cogene Symposium held under the same title as that given to the book. "Cogene" is the abbreviation for the Committee on Genetic Experimentation, itself created by the International Council of Scientific Unions in 1977. The symposium described here was held at Cologne in West Germany in 1983. Its organizers, W. Arber, K. Illmensee, W. J. Peacock and P. Starlinger made an immense effort to bring together world leaders in microbial, plant and mammalian molecular biology. That they succeeded in their aims of providing a state-of-the-art presentation of genetic manipulation in all these areas can be seen from this volume.

Chapters dealing with micro-organisms naturally find an early place in the book, with 6 chapters dedicated to microbial evolution, recombination between phages and plasmids, plasmid survival and gene cloning and bacterial pathogenecity. Microbial aspects are rounded off by a chapter on selective evolution of genes for enhanced degradation of persistent toxic chemicals, and insect control by microbes.

Nearly half of the book is devoted to plant molecular biology, dealt with under two headings – that of gene expression in plants and a section on strategies to be adopted for plant improvement. The gene expression portion covers transposable elements in maize, *E. coli–A. tumefaciens* shuttle vectors, T_i plasmids and the interesting topic of somaclonal variation and its potential for crop improvement programmes. Plant improvement strategies comprise chapters on gene transfer in maize, techniques which could be applied to potato, long-term planning for application of new methods of genetic manipulation to plant breeding programmes, activities of the International Board for Plant Genetic Resources, and perspectives for germplasm conservation.

Mammalian germ line genetic manipulation is not neglected, with eight chapters concluding this volume on such diverse topics as sequence organization of the vertebrate genome, transposable elements of *Drosophila*, growth hormone genes, retroviruses, oncgene activation in Burkitt lymphoma, activation of genes by oncgene transformation, animal breeding and genetic engineering, and in vitro fertilization.

From such a diverse series of topics, it can be seen just how large a coverage is provided by this single volume. It certainly succeeds in its aims and, further, gives adequate consideration to strategies to be adopted in applying the techniques of genetic engineering to research programmes.

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