

# Table of contents

Preface . . . . .	7
1 Why is genetic engineering important and how has it come about? . . . . .	9
2 The structure and components of cells . . . . .	17
3 Genes and the central dogma . . . . .	32
4 Gene cloning in <i>Escherichia coli</i> . . . . .	49
5 Expression of foreign genes in prokaryotes and eukaryotes . . . . .	63
6 Commercial applications of genetic engineering: hopes and achievements . . . . .	76
7 High-level microbial expression and purification of recombinant human growth hormone . . . . .	92
8 Monoclonal antibody technology . . . . .	101
Glossary . . . . .	111
Index . . . . .	130

It is hoped that this sacrifice of content will assist clarity and offer the book a more and readily digestible text.

The book is based on a lecture course designed for postgraduate students which was given several times between 1986 and 1989 at the University of Liverpool. We feel it is suitable for newcomers to the field at all levels, from students and teachers to those in the financial and publishing professions. Some basic knowledge of chemical technology is assumed, though a familiarity with the principles of genetic engineering is not necessary in any one part.

We are grateful to everyone who has contributed to the development of this book. These include Drs R. W. Old, N. H. Mann, G. P. C. Salway, J. A. Jones and Dr J. J. Ellis, J. M. Lord, A. Atkinson and A. Collins. Special thanks go to Dr M. May and Mr S. Bhansra for the artwork and to Mr J. C. Marrell for his skilful editing and administrative assistance.

L. M. ... and J. C. Marrell