

Preface to Third Edition

Because it is conventional to reprint prefaces from all previous editions there is little point in reiterating the aims set out in the First Edition (since they remain the same) or in attempting to rebut the opinions of the few reviewers who misunderstood them. We do, however, again express our thanks to colleagues who have made many helpful suggestions and have provided valuable material for illustrations.

Since the second edition was published, knowledge of the biochemistry of bacterial growth has increased much as bacteria themselves increase in a favourable environment. This new edition reflects these changes, in particular, with new presentations of the subjects of Growth, Genetics, and Differentiation. More detailed treatment is given to the division of individual cells and to the replication of chromosomes, while growth of cell populations in continuous cultures has received much more attention. The chapter on Genetics has been re-written to take account of major advances in the biochemistry of DNA and of the application of

techniques for genetic manipulation both *in vivo* and *in vitro*. Previously, the treatment of differentiation was restricted to sporulation and germination. The chapter now deals with a much wider range of cellular structures and developmental processes, and the emphasis is on what can be explained in molecular terms. The form of the remaining chapters has been retained but the content has been up-dated where necessary.

In both of the earlier editions a very brief summary was used to introduce a general development of the whole subject in about fifty pages and this was followed by detailed treatment of the same material expanded about tenfold. This presentation seems to have been found useful both by teachers and by students. We have retained it.

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