to record the history of this field, " Chromosomes and Cancer " is fundamentally forward-looking and the last section with its theme of synthesis between theory and clinical practice gives a clear indication of the direction of future developments for which this book will provide a valuable launching platform.

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MOLECULAR VIROLOGY. T. H. Pennington and D. A. Ritchie. Chapman and Hall, London, 1975. Pp 64+23 figures +tables. £1·30.

This title in the *Outline Studies in Biology* series covers the anatomy, intracellular activities and genetics of viruses from a strictly molecular standpoint. There is also a short final chapter on tumour virology. The chapters on the structure of viruses and the sequence of events following infection, from penetration to lysis, are concisely and authoritatively written. They make absorbing and informative reading. These two chapters include accounts of genome structure, genetic organisation of the genome and nucleic acid replication. The section on genetics concentrates on mutation, the mapping of viral genomes and recombination, but is not nearly so well presented. It does not consider, for instance, the contribution of studies on T4 bacteriophage to our understanding of the fine structure of the gene or the genetic code, except rather obliquely in passing. The problems of mapping are given more extensive coverage but the three quarters of a page on "*functional or complementation analysis*", while throwing in all the key words like *intergenic complementation, intragenic complementation* and *unity of function*, contains barely a word of explanation and will doubtless generate more confusion than clarification. The students' response to this book may well be to read it in the book shop and then put the money saved towards one of the several excellent text books listed in the " suggestions for further reading ".

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CYTOGENETICS OF MAN AND OTHER ANIMALS. A. McDermott. Chapman and Hall, London, 1975. Pp. 64+60 text figures. £1·30.

This book is one of several in the *Outline Studies in Biology* series edited by J. A. Ashworth. The title is rather pretentious for a book of only 64 pages which, when the space for figures and the 254 references is set aside, reduces to a mere 31 pages of script. Even so the net has been cast really wide to catch undergraduates and graduates in genetics, biology and medicine as well as practising clinicians. The seven chapters of this " concise and comprehensive account of human and animal cytogenetics " provide " a foundation for self help in the achievement of successful examination results " embracing the mechanism of inheritance, advances in techniques, chromosome mutations, cytogenetics in medicine, heterochromatin and evolutionary aspects of chromosomes! Readers will need all the self-help they can get. In the semi-diagrammatic representation of mitosis the prophase chromosomes appear in an unreplicated form and attached to the nuclear membrane at their