devoted to the characteristic radiological changes observed in the gastro-intestinal tract in association with primary and secondary immunodeficiencies and with the lymphoreticular neoplasias.

Other excellent chapters are contributed by D Wright (Burkitt Lymphoma and Infectious Mononucleosis) and by R. A. Good and colleagues (Immunodeficiencies associated with the Leukaemias, Multiple Myeloma and Non-Hodgkin Lymphoma) to name but a few.

In summary then this is a very substantial text for which a brief review can do little other than commend to those investigating in the field, what is a significant addition to the literature on the immunopathology of lymphoreticular neoplasms.

M. Moore

**Bleomycin: Current Status and New Developments.** Eds. S. K. Carter, S. T. Crooke, and H. Umezawa (1978) New York: Academic Press. 365 pp. £16.25.

This is a comprehensive review of the current status of the biology, pharmacology and clinical status of bleomycin, and it is a comprehensive review of the present status of this relatively new chemotherapeutic agent. The biological reviews are written by experts in the field of bleomycin biochemistry and pharmacology and represent a succinct summary of advances to date. A comprehensive review of the morphological toxicity of bleomycin therapy is also presented in this early section.

The latter part of the book deals with the clinical evaluation of bleomycin in a number of malignant diseases, and these are in general excellent reviews of the range of activity of bleomycin and its limitation in clinical practice. Important additional sections include the use of bleomycin, in combination with a number of other agents, including radiotherapy.

The final part of this book concerns the search and development of new bleomycin derivatives with a major thrust is to develop agents that have less pulmonary toxicity than the current compound. This book can be strongly recommended for all practising oncologists. It is a substantial achievement to have so many authorities writing in a single volume, which overall represents a very balanced approach in the literature of this new and important agent.

H. Bush

**Biophysical Characterisation of the Cell Surface.** G. V. Sherbet (1978) London: Academic Press. 298 pp. £12.80.

This book is primarily an account of electrochemical methods for the investigation of the properties of cellular surfaces, and it covers this narrow field thoroughly and clearly.

There are extensive discussions of the theoretical bases for the electrostatic titration of cells, for cell electrophoresis and for isoelectric focusing, but perhaps in such detail as to deter most biologists. Equally, the physical chemist, seeking to apply his subject to a biological system, may feel that slightly more extensive theoretical discussion would be justified. The early chapters outline present theories of membrane structure and consider the nature and properties of the surface changes of cells. Nearly half the book is devoted to cell electrophoresis and its relationship to the chemistry of the cell surface in normal and pathological states. Of this, one general criticism can, perhaps, be made, which is that the extensive fixation of cells that is widely used in cell electrophoresis, and the tendency of electrochemical methods to be an averaging of the surface properties of the cell, means that such techniques have to be applied with caution, particularly when dealing with cells of epithelial origin, where the different faces of the cell may have profoundly different properties.

The investigation of the isoelectric equilibrium of cellular surfaces is much more recent than cell electrophoresis and, as yet, is much less thoroughly developed; nevertheless, it may become a useful and quite widely applicable procedure. This work represents the first comprehensive review of the possibilities of this technique as applied to cells.

The final chapter of the book deals with the partition of cells in two-phase systems, which again is a method that may well prove to have wide application, and one would have liked to see this chapter extended a little, relative to the earlier sections of the book.

Had this work set out to cover a wider field, for example by reviewing the uses of nuclear magnetic resonance, electron spin resonance and depolarisation of fluorescence in the study
of membrane fluidity, or the value of chemical labelling in the localisation of surface proteins, it would have appealed to a much wider readership, albeit at greater cost. Relatively few laboratories are equipped for cell electrophoresis, and the technique has few practitioners—and of the newer methods the same is even more true. Nevertheless, this book has considerable qualities and should certainly be read by those who intend to take up the physical study of cell surfaces. It cannot be recommended unreservedly to the student or to anyone who has no experience of dealing with cells *in vivo*, whilst the physical chemistry that it contains may well deter the casual reader. This is primarily a book for libraries rather than the individual purchaser.

R. W. STODDART

*Nasopharyngeal Carcinoma: Etiology and Control*. Eds. G. De-Theo and Y. Ito. (1978) Lyon: I.A.R.C. 610 pp. 100 Sw. Fr.

This book reports the Proceedings of an International Symposium on Nasopharyngeal Carcinoma held in Kyoto, Japan, in April 1977. There are 48 chapters contained within 7 sections covering the pathology, clinical aspects, epidemiology, aetiology and treatment of this very remarkable malignant neoplasm.

While nasopharyngeal carcinoma (NPC) is rare in most countries of the world, among the Southern Chinese it is the commonest malignancy in men and the second commonest in women. This implies a racially determined genetic susceptibility to the tumour, and this proposal has been strongly supported by Simons and his colleagues, who have determined that there is a 3-fold greater risk of NPC associated with a Chinese-related HLA profile. This association appears to be the most consistent of any between a tumour and a specific HLA profile.

Again, epidemiological studies have shown that when Southern Chinese emigrate to the U.S. and Australia they have the same high incidence of NPC. The rate among their local-born descendants falls to a lower level, but still remains higher than the surrounding Caucasian population. These observations would suggest that some environmental factor peculiar to the Chinese mode of life is also important in the aetiology of NPC.

Thirdly, there seems little doubt that the indubitably oncogenic Epstein-Barr virus (EBV) plays some causative role in this situation. The viral genome and virus-determined nuclear antigen are found in the malignant epithelial cells of all NPC tumours from all parts of the world, and there is a specific EBV antibody pattern in NPC cases which alters characteristically with progress of the disease.

Thus it would appear that EBV acts with some as yet unknown environmental cofactor on a susceptible genetic constitution to bring about the malignant change of NPC, and all these different strands are extremely well covered in the present volume.

There is a very good section on the histopathology of the tumour which does much to clear up past confusion as to terminology and definitions of the different types of NPC. Ho's excellent review of previous stage classifications of NPC, and his presentation of his own classification and correlation with treatment results and prognosis is a model of its kind. There is also a short but interesting section at the end, which deals with recommendations and priorities for future study. Unfortunately, there are one or two contributions which are misleadingly or wrongly titled, but these are obvious and can be ignored.

All in all, this volume can be highly recommended as a complete and up-to-date overall survey of a highly interesting tumour; it should be of the greatest interest to ENT specialists of all kinds, tumour virologists, immunologists and epidemiologists.

B. G. ACHONG