Cell Biology of Breast Cancer. Eds. C. McGRATH, M. J. BRENNAN & M. A. RICH (1981). New York: Academic Press. 516 pp. \$33.00 net.

The Chapters in this book formed the basis of oral presentations at the "Systematics of Mammary Cell Transformations" workshop held by the Michigan Cancer Foundation in Detroit. The aim of the workshop was to review the present knowledge about the role of steroid and peptide hormones in both physiological and neoplastic changes in responding tissues. The book is divided into 5 sections, each one devoted to a different aspect of breast cancer at the cellular level.

The meticulous work described by each author is most impressive, but it is apparent that the real need is for an *in vitro* system for growing cells which truly represents the *in vivo* situation. Until this is possible it is difficult to interpret and interrelate results obtained by various hormone manipulations or by the administration of carcinogens. However, the chapters describing the use of a collagen-gel culture system for growing mammary epithelial cells are most encouraging. Nandi and his co-workers claim that this system has at least 3 advantages over the monolayer technique: 1, both normal and neoplastic mammary epithelial cells can be grown in primary culture with a substantial increase in cell number; 2, cells from different physiological states and from tumours exhibit different responses to growth-promoting factors; and 3, cells maintain many of their *in vivo* characteristics. It appears that at last an *in vitro* system is available to permit people to elucidate the role of hormones and carcinogens in the growth and transformation of mammary epithelial cells, without the disadvantage of having an inrepresentative model on which to work. The reports from the next workshop should be very interesting. Meanwhile, this book gives a good resumé of the present views of cellular changes in breast cancer.

D. BARNES

Hodgkin's Disease and the Lymphomas, Vol. 4. Ed. C. R. TAYLOR (1981). Edinburgh: Churchill Livingstone. 377 pp. £24.00 net.

This is the 4th Annual Review of Hodgkin's disease and Lymphomas by Clive Taylor, and

as usual, with his reviews, they are a pleasure to read, with perhaps more concentration than might be expected in an Annual Review on making the English intelligible and enjoyable. It is perhaps inevitable that this review should concentrate mainly on non-Hodgkin's lymphoma, and in particular, on the considerable turmoil in the histological classification of non-Hodgkin's lymphoma which exists at the moment. In this respect, the book fulfils an important and timely role in summarizing and gathering together the wealth of information that has recently been published about the pathological and immunological classification of lymphomas. Dr Taylor and his co-authors wisely do not come to any definitive conclusions about which classification should be regarded as superior, though because the book has been written and compiled in California at Professor Luke's centre, considerable attention is paid to the Lukes-Collins classification. The new international formulation, which is yet to be published, is also mentioned, though of course this cannot be given in any detail at this stage. It will be very interesting to see whether, by the time of the next Annual Review, a consensus has emerged that can be reported by Dr Taylor.

The rest of the Review of the literature in the book is thorough and includes chapters on extra-nodal lymphoma, epidemiological studies of lymphoma and genetic and kinetic studies of both Hodgkin's disease and non-Hodgkin's lymphoma. The references which have been accumulated not only from the English literature but also from the foreign-language literature are exhaustive and very thorough.

In summary this is a book which, as an Annual Review of lymphoma, can be recommended most strongly. It is both enjoyable to read and extremely informative.

G. BLACKLEDGE

Mammalian Genetics & Cancer. The Jackson Laboratory 50th Anniversary Symposium. E. S. RUSSELL (1981). New York: Alan R. Liss Inc. 327 pp.

C. C. Little, who founded the Jackson Laboratory in 1929, and his successors in that Institute, can take a lot of the credit for evolving inbred mouse strains. Few institutes can claim a more momentous contribution to

Biomedical Science. In the words of the editor, Elizabeth Russell, this book is a "view at mid-passage", of mouse and human genetics and cancer, as seen by the staff and friends of this Laboratory. This book puts into perspective what has been and what is to come in "Big Science" [*sic*]. The presentations were made at the Jackson Laboratory's 50th Anniversary Symposium. They are divided into 5 sections: Gene and chromosome organization; Analysis of mammalian differentiation; Inherited diseases of mouse and man; Immunogenetics, and the Aetiology of cancer. Each section contains authoritative contributions from three or more authors. Eicher discusses the present status of the mouse linkage map and describes the ingenious use of ovarian teratomas in gene mapping. Leder tells of gene-cloning techniques in mouse haemoglobin transcription. On differentiation, there are descriptions by Papaioannou of the production of mouse chimaeras using aggregation and micro-injection techniques; by Stevens of the selection of his high-teratoma strain of mouse, and by Ilmensee of the study of differentiation using cellular and nuclear transplantation in early mouse embryos. McKusick reviews advances in Human Genetics and Bodmer adds, in the Immunogenetics section, a description of the human HLA system, analysed using monoclonal antibodies. There are many other interesting articles: *viz.* Coleman on inherited obesity-diabetes in the mouse, George Klein on the MHC and cancer, George Snell, providing a *tour de force* through Immunogenetics, Walter Heston on Mouse inbred strains and contributions on mouse leukaemia viruses by Rowe and Baltimore. It would be difficult, in a book covering such a wide field, not to find something stimulating to think about. Any inherent lack of cohesion seems to have been anticipated because introductions to each section and an over view are included. If this volume represents self-indulgence by the Jackson Laboratory, it also reveals much about the Institute itself. In general the presentations are excellent, informal, factual and exciting. It will be interesting to see, if any of us are still

around, what happens in the next 50 years. The 100th anniversary volume will put into perspective all that has been written in this "view at mid-passage".

G. M. TAYLOR

Proteinases and Tumour Invasion. Eds.

P. STRAULI, A. J. BARRETT & A. BAICI
(1981). New York: Raven Press. 215 pp.

A considerable amount of information has accumulated in recent years on the possible role of proteolytic enzymes in the invasion of surrounding normal tissue by tumour cells. Previous reviews in this area have tended to focus attention on results obtained using *in vitro* models, and have been concerned primarily with the cell biology of cell motility, leaving questions specifically concerned with tumour-cell invasion for future discussion. Drs Strauli, Barrett and Baici have noted this need for a timely review of proteinases in tumour-cell invasion, and have assembled a collection of chapters written by authorities in the field, dealing with major aspects of this complex phenomenon. Chapters are included on the biological distribution and mode of action of proteolytic enzymes believed to be involved in the invasive process (i.e. collagenase, plasminogen activator, lysosomal enzymes, etc.). Useful review chapters are also included, dealing with the synthesis and degradation of major connective-tissue matrix macromolecules. The contributors have steadfastly kept the major question in sharp focus, and all chapters clearly relate to the pathobiology of tumour-cell invasion. Professor Strauli has done an excellent job in defining the basic problem of invasion in his opening remarks, and ties the various threads of the monograph nicely together in his concluding review chapter, in which the outstanding problems relating to invasion are defined. All in all, this monograph will be of great interest and utility to research workers in the field, as well as to all scientists interested in the biology of proteolytic enzymes.

S. SCHOR