BOOK REVIEWS

Biology of Cancer

Edited by E. J. Ambrose and F. T. C. Roe
Ellis Horwood Ltd; Chichester, 1975
vii + 315 pages. £ 15.00

In common with current cancer research, three-quarters of this book is concerned with either the structure and properties of tumour cells or the mechanisms for their production from normal cells. Only the remainder deals with what we can do about them once they have developed – which some may feel to be the crux of the matter. Apart from surgery and radiotherapy, there are two approaches being made: chemotherapy and immunotherapy. During the last 25 years the former, thankfully, has been strikingly successful. Currently 15 per cent of all cancer can be cured in this way and in the disseminated disease, it is the only treatment available. Dr J. A. Stock's review is most encouraging. By the timed use of carefully chosen multiple drugs, by the selection of agents which only the tumour can activate, or by inducing the tumour to mutate under drug pressure into a form having a new sensitivity, the tumour cell is being ruthlessly hunted down. News from the immunological front is, however, not so heartening. Cancer cells cleverly fool our immunological radar by releasing excess tumour surface antigen like an attacking aircraft releases showers of aluminium foil. Dr P. Alexander, nevertheless, sounds an encouraging note. Injection of irradiated homologous tumour cells does raise an antitumour immune response. Together with a general stimulation of the reticulo-endothelial system with killed *tuberculin* bacilli or *corynebacterium*, some post-operative metastases can be prevented.

The chapters on tumour virology, surface membranes, metastasis and metabolic patterns are equally stimulating. When the evidence is assembled concisely and clearly as here, it would seem amazing if viruses were not involved in human cancer, particularly leukaemia. However, a distinct impression lingers that the altered tumour cell structure and deviant metabolism are merely the compulsory properties of rapidly dividing cells. The major difference would seem to be that tumour cells retain the differentiated properties of their tissue of origin and thus do not resemble the undifferentiated naturally dividing stem cell population of the body. Herein lies our hope for the future.

If you have some grounding in biology and biochemistry and are interested in the cancer problem, this collection of reviews by London's top cancer experts will certainly fill in the gaps in your knowledge and stimulate ideas as to possible avenues of research. It would be well complemented by the Cold Spring Harbor publication 'The Biology of Tumour Viruses' by John Tooze. This book starts from first principles, is beautifully written, and gives a much wider appreciation of tumour cell properties than its title implies.

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