

series of European School of Oncology Monographs that are intended to disseminate rapidly the results of study group meetings involving experts in the field.

As the title suggests, the book is mainly devoted to the clinical aspects of the interferons as anti-cancer agents. Two useful summary chapters, by Woll and Crowther and by Wagstaff, begin and end the book, providing an overview of the clinical successes and failures of interferon therapy, and looking to the future, respectively. Sandwiched between these are detailed accounts of the uses of interferons in the treatment of myeloma, low-grade lymphoma and neuroendocrine tumours.

Apart from a chapter by Stark on the molecular aspects of interferon production and action there is little biochemistry in this monograph, and I detected some generalizations here and there that could mislead readers unfamiliar with the field. Although the anti-proliferative effects of interferons unfortunately are easily demonstrated in tissue culture than they are with patients, it is still an exaggeration to say that 'a majority of tumour cell lines are growth inhibited by interferons in vitro'. More seriously, a distorted view of the poorly understood signal transduction pathways used by the interferons could be obtained from casual (and unreferenced) remarks, such as the suggestion that the

interferon-gamma receptor is G-protein linked. Even Stark's chapter ignores a large body of evidence indicating the involvement of protein kinase C (or a similar type of protein kinase) in the regulation of gene expression by the α and β interferons.

Of course, we do not need to know how an agent works in order to use it successfully in the clinic. Nevertheless, the future of interferon therapy probably lies in the development of combination treatments, with other cytokines or with chemotherapeutic drugs, a theme that crops up in several places. The reports of synergistic effects between different combinations of these agents raise important questions about the mechanisms responsible, and these will need to be answered if a rational approach is to be adopted in the future. As Woll and Crowther state, the initial euphoria by testing the interferons as anti-cancer agents in vitro and in vivo has given way to cautious optimism born of mature reflection. As a biochemist, perhaps one must add that the future of this branch of medicine should lie in the acquisition of knowledge born of experiment.

Mike Clemens

Biochemical and Molecular Aspects of Selected Cancers, Volume I; Edited by T.G. Pretlow II and T.P. Pretlow; Academic Press; San Diego, 1991; x + 444 pages. \$ 99.00.

The two volume treatise on biochemical aspects of cancer research was designed to provide readers with an insight into the underlying biochemistry of selected cancers. Unfortunately this reviewer received only the first volume, and as such my comments are restricted to the contents of vol. I. It may well be that volume II has yet to be published! In this regard it would have been informative if volume I gave some kind of indication as to the topics covered in volume II.

During the last twenty years there has been an exponential growth in the publications of cancer-orientated research, making it almost impossible for the average research scientist or clinician to keep in anyway abreast of the field. He or she has come to rely more and more on publications of the sort being reviewed herein to obtain a broad picture on the current status of research in areas as diverse as drug resistance, oncogenes and tumour progression. This book brings together recent developments in the biochemical area of selected human cancers. The volume reviewed consists of 13 chapters running to 444 pages with each chapter well endowed with appropriate bibliographies. The topics covered range from oncogenes and tumour suppressor genes to the role of kinases and the extracellular matrix in tumour development. Each chapter is contributed by an expert researcher in the field and is by and large well sprinkled with informative diagrams. The initial chapter in the book examines the role played by tumour suppressor genes in human cancers, an area of research which is both exciting and

rapidly expanding at present. An excellent subsequent chapter by M. Oren looks in detail at what we know about p53, the archetypal tumour suppressor gene. Other well-written chapters cover topics on chromosomal markers of cancer and protein kinase C in neoplastic cells.

There are a number of weaknesses and omissions in this volume, none of which are serious or worthy of comment except perhaps the level of detail which individual contributors go into on their subject. For example the chapter on glutathione transferases by Sata and Tsuchida goes into considerable detail on the biochemical structure and function of this enzyme with 19 pages of references. In contrast Gottesman et al. give a much more general review on multi-drug resistance with as few as 8 pages of references. This imbalance makes for difficult reading, and I ask myself at what kind of reader is the book targeted; the individual who wants a general overview or the cancer expert who wants detailed precise information? It is debatable whether these comments are really worthwhile criticisms, but in my opinion they do reflect a certain lack of editorial guidance. The job of an editor is to ensure that each contributor is aware of the type of reader the book is aimed at and is given editorial guidelines that enable a readable well balanced volume to be produced at the end of the day. However, having said all that, I feel that this volume is a good buy and well worth the \$99.00 price tag.

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