Environmental Carcinogenesis: Occurrence, Risk Evaluation and Mechanisms. (Eds) P. Emmelot & E. Kriek (1979). Amsterdam: Elsevier/North-Holland. 402 pp. $58.50/D fl. 120.00.

This book represents the proceedings of an international conference held in Amsterdam in 1979 to discuss environmental carcinogenesis. An interest in this topic stems from the growing awareness that diverse environmental factors, often of a chemical nature, could contribute to the great majority of cancers in man. A number of renowned scientists from a variety of disciplines were selected to consider the validity of this concept and many other related questions, notably the risk evaluation and mechanisms of action of a number of specific agents. Their clear and excellent presentations on a wide range of relevant topics combine to provide a volume which must rate as one of the most objective reviews currently available on this subject. Moreover its rapid publication, within 6 months of the meeting, makes it a particularly topical volume. Thus the authors’ succinct accounts of their own recent observations are presented in the context of other work in their own and related fields. Topics range from the epidemiological evidence for the enviromental etiology of human cancer, to detailed studies of a number of specific cancer-causing environmental agents, their metabolic activation and their effects on a variety of biological systems. Furthermore, means of detecting possible hazards with model systems, with a view to their eventual elimination from the environment, are described. Many other contributions stress the importance of environmental factors which by themselves are not carcinogenic, but which operate to modify carcinogenesis, producing either an enhancement (co-carcinogenesis, promotion) or inhibition (anti-carcinogenesis) of the process. These modifying factors may either be determined by the genotype of the host (metabolic activation, hormonal state, DNA repair capacity) or be the result of the operation of a range of external factors including diet, drugs, natural products or other organisms. These modifying factors combine to condition the tissue-cell phenotype to what Emmelot, in his excellent introduction to the volume, calls ‘cancer-genicity-sensitive or resistant phenotypes or dramatypes’. These phenotypes, it is suggested, will then determine an individual’s sensitivity to a carcinogen within the possibilities permitted by the individual genotype. The combination of these varied contributions has produced a well balanced, eminently readable and well illustrated volume which is likely to interest most cancer research workers.

J. J. Roberts

Paraneoplasia: Biological Signals in the Diagnosis of Cancer. J. Waldenström (1979). Chichester: John Wiley & Sons. 190 pp. £15.95.

Paraneoplasia is a relatively new term, but one that embraces phenomena familiar to oncology. Why does a cancer patient develop anaemia or fever, or, in rare cases, thrombocytosis, polyglobulinia or eosinophilia? The author approaches the question from 2 directions: firstly, the clinical approach, by indicating a number of manifestations that, when notified, can be of help in diagnosis, because they may be regarded as signals that should alert the physician to the possible presence of a tumour; and, secondly, the more theoretical approach. The author takes from the literature or from his personal experience examples of each syndrome illustrating that the phenomenon is reversible. If this is found to be the case it is reasonable to suppose that the manifestation is paraneoplastic and due to the presence of the tumour.

The author’s power of clinical observation in this field is documented in a variety of scientific contexts. In several of his publications the paraneoplastic nature of symptoms, both new and described earlier, has been placed in its correct context. For many years we have been speaking of Waldenström’s macroglobulinaemia, a disease that is often accompanied by paraneoplastic
manifestations. There has recently been a growing interest in plasmapheresis—for example in the case of the hyperviscosity syndrome. Here, macroglobulinaemia is a principal indication. The author has previously published a monograph on the diagnosis and treatment of myeloma, and he discusses in this book a number of sequelae of this disease, including hypercalcaemia and its treatment. Another area where the author has made original studies is the malignant carcinoid syndrome. Here the characteristic flush signals the presence of special types of tumours.

The author is thus a prominent research worker who has to his credit original contributions in the field of paraneoplasia. In this book he presents an excellent summary of his own and others’ experience and observations.

Paraneoplastic signals from the skin are particularly valuable pointers to the possible presence of a tumour. They are illustrated in a colour plate, which furnishes the dermatologist with interesting material. This presentation can also contribute to a number of other specialities such as neurology, nephrology, haematology and, perhaps especially, endocrinology, where ectopic formation of polypeptide hormones has recently attracted great interest. The author points to the interesting fact that practically all the paraneoplastic manifestations caused by chemically definable substances are due to the formation of ectopic polypeptides. He teaches us to distinguish between pathological products of the cancer cells and the topic ones, including insulin, gastrin and glucagon in pancreatic tumours and catecholamines in pheochromocytoma. Waldenström expresses the view that the ectopic ones are due to random de-repression of the system governing the synthesis of a certain polypeptide.

The comprehensive bibliography contains over 500 publications. Surgeons are well represented among the authors, perhaps because the disappearance of the paraneoplastic syndrome after radical surgery often provides the convincing proof of its direct connection with the tumour. When discussing possible explanations, the author often uses his extensive knowledge of the chemical nature of some of the products that can be formed in the tumours.

The book can increase our knowledge of hitherto little-recognized aspects of the diagnosis of cancer diseases, and also of the biology of tumours and tumour cells.

J. Einhorn

*In Vitro Aspects of Erythropoiesis.* (Ed.) M. J. Murphy (1979). New York: Springer-Verlag. 280 pp.

This book is a collection of 30 papers (plus discussion) presented at a conference on “*In vitro aspects of erythropoiesis*”. Most of the world’s eminent people in this subject were included in the programme, and several authors make the work a useful addition to one’s library. For example, Iscove and Wagemaker discuss very clearly the differential regulation of BFU-E and CFU-E; Testa and Dexter and Murphy *et al.* bring out valuable information on the production of BFU-E in long-term marrow cultures; Urabe and Murphy present an interesting technical development in the miniaturization of the CFU-E assay which could prove useful for clinical requirements. On the other hand, 5 of the 30 papers ignore the *in vitro* part of the title, while another one is solely about lymphocytes. Overall, the book is something of a disappointment. There is a sense of *déjà vu* about the papers. Nevertheless, it is of course useful to have them under one cover.

It was intended to be basically a working conference, to produce a recipe book aimed at closer standardization of methodology and nomenclature. The aims were laudable: a detailed account of materials and methods; an itemized account of agreed facts; identification of technical divergence between investigators. However, it tends to fall between the two stools of erythropoiesis at the BFU-E/CFU-E level and a technical workshop, with the result that the former is only sketchily covered, whilst I would hesitate to recommend it to a new student for technical advice. Admittedly the technical appendices are good. They might have been even more useful if their form of presentation had been standardized. Additionally a discussion of the similarities and differences (in line with the conference directives) would have been valuable. With respect to the nomenclature, one observes the use of “CFUे” throughout, but in several places this has been misprinted as “CFU_e”.

In other