ing in the literature. After an introductory chapter listing 7 schema of isolation of the natural product, structural formulae with details such as molecular weight, bioactivity in different tumour systems, melting point and the organism of origin, with references, are given. The existence (but not details) of spectral data are noted. There is a detailed index to both the substances themselves (about 400) and 343 references. There is also a useful appendix on the Cancer Evaluation System employed by the U.S. National Cancer Institute, listing the abbreviations normally used by them.

These two books are timely and provide a feast of information for the cancer research worker and the synthetic chemist, as well as an information and reference source for those involved in teaching this otherwise complex aspect of medical treatment.

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Antitumour Antibiotics. Eds S. K. CARTER, H. UMEZAWA, J. DOUROS & Y. SAKURAI. (Recent Results in Cancer Research, Pt. 63) (1978). Berlin, New York: Springer-Verlag. 303 pp. \$42.50 net.

This book is a collection of official papers delivered to the 3rd Symposium held in San Francisco in May 1977 as part of the joint US-Japan Agreement on Cancer Research, and supported by the Northern California Cancer Program.

The contribution of this U.S.-Japanese co-operation to antitumour antibiotic development has, without doubt, been of very considerable benefit to the clinical containment of many human tumours. The historical background and current developments in this field are very well summarized in this collection of papers, and fully justify its publication. Following a short introduction by S. K. Carter, the chairman of the U.S. Chemotherapy subsection of the agreement, 2 informative review papers by medical representatives of Japan and the U.S. summarize the clinical role of antitumour antibiotics in their respective countries. This is followed by a historical review of the National Cancer Institutes Fermentation Development Program by J. Douros, listing the interesting products obtained. A satisfactory aspect of this paper is the careful attention paid to the illustration of full structural formulae and their respective NSC nomenclature coding,

which makes it a useful reference source. A selection of antitumour evaluations of single and combined treatment in a number of experimental tumours is briefly listed by J. M. Venditti and R. K. Johnson, and in microbial systems by J. P. N. Rosozza. However, there are clearly problems as to which assay system is likely to give the greatest yield of useful antitumour agents, and the relative importance of different assay systems available is discussed by L. J. Hanka and R. H. Bunge and their respective co-workers. The development and operation of the Chemotherapy Fermentation Laboratory at the Frederick Cancer Research Center is described in some detail by A. F. Langlykke.

The problem of improving detection of potentially useful antitumour agents continues to provide a rich forum for discussion, and a review on the criteria employed by a distinguished practitioner in this field, A. Goldin, is useful as reference source of new analogues and of treatment protocols.

A fascinating paper by H. Umezawa summarizes both the theory and the facts behind the Japanese programme, with special reference to bleomycin and its analogues. As with many other papers from this author, there is a great deal of description of new and interesting biochemical transformations written in an interesting and thought-provoking manner.

Y. Koyama's papers on the current status of chemotherapy for gastric cancer in Japan outlines the special oncological problems of that country, as well as the clinical success of mitomycin C in its management. A U.S. contribution to this study follows with a paper by P. S. Schein and co-workers. M. A. Friedman outlines the role and status of bleomycin in combination with other agents that are used in the U.S. Its combination with radiation in Japan is then discussed by T. Miyamoto and later by N. Yamanaka and co-workers in experimental systems. The bleomycin programme in Japan has produced over 300 analogues, and detailed studies of antitumour properties and toxic side-effects have led to general conclusions about the origin of these properties within the structure of the molecule itself. A. Matsuda and co-workers review this extraordinary piece of co-ordinated research effort. Radioimmunoassay technology applied to bleomycin has allowed for more detailed pharmacokinetic studies in man, reviewed by S. T. Crooke and co-workers.

Anthracycline analogues, such as adriamycin, have been studied in many countries since its original discovery in Italy, and the U.S. contribution to this field by R. S. Benamin reviews the more recent work. The clinical use of adriamycin is not as frequent in Japan as in Europe and the U.S., being replaced to some extent by mitomycin C. However, H. Furue and T. Komita have reviewed the Japanese application of this agent. Specialized papers of macromomycin aclacinomycin and neocarzinostatin also appear.

A paper by Y. Sakurai, apparently out of context with the main theme of the book, discusses some of the synthetic analogues of nitrosoureas, alkylating agents, antimetabolites and platinum complexes under present study in Japan.

The whole book is a most useful addition to the library of both students and practitioners of oncology. As with many such books, however, the lack of an index is inexcusable. Its value could have been immensely enhanced by even the shortest listing, of drug and tumour data contained within it.

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radiotherapists who recognize such curves for the incidence of complications or recurrence. The rationale for low-dose-rate radiotherapy includes reoxygenation and overall time, but the still-controversial facet of a reduced cellular "oxygen effect" is not mentioned. The phrase "thermal tolerance" is used here and widely by others to denote acquired resistance to heat after prior heating. This conflicts with the accepted meaning of tolerance in radiotherapy, and can be a source of confusion.

The new S.I. units are quoted in some cases as footnotes, but as this volume appears during the coming-of-age of S.I. units, a table of common comparative values would have been useful. In general, the presentation is lucid, concise and quantitative. Key words are emphasized in bold type, and sufficient examples are given for teaching purposes. This book is strongly recommended for students of Radiology and Radiobiology. It covers the syllabus of many teaching courses, including Diagnostic Radiology for the Radiological Society of North America.

J. H. HENDRY

Radiobiology for the Radiologist. 2nd Edn. E. J. HALL (1978). Maryland, U.S.A.: Harper and Row. 460 pp. £25.00 net.

This is the second edition of an already highly regarded text. The subjects presented are wide-ranging, in order to cover material relevant to Diagnostic Radiology and Nuclear Medicine, as well as to Radiotherapy. Modifications in this edition include an expansion of the section on carcinogenesis and genetic effects, with a discussion of risk versus benefit which is similar to the ideas embodied in the new ICRP recommendations. Also, for the radiotherapist, sections on sensitizers and hyperthermia have been expanded in the light of much new information, and the sections on high LET and human tumour kinetics have been updated.

On the radiotherapy sections, the reviewer has a few comments. The mathematical reason why 37% survival is chosen as a parameter for defining the slope of cell-survival curves is not given, and it could help students in their understanding. In discussing LD₅₀ endpoints, *e.g.* for mouse lung, the rather ambiguous statement that a dose-response curve is not obtainable may surprise many

Asbestos and Disease. J. J. SELIKOFF & D. H. K. Lee (1978). New York: Academic Press. \$31.50.

This book has taken a long time to appear, and many of us have been apprehensive about the contents. Now that the waiting period is over, we are relieved to find that it is a comprehensive review of the literature on the diseases associated with exposure to asbestos dust. As it has had a long preparation most of the references are about 5 years old, but in places it has been brought up to date by addenda or with current reports from the Mount Sinai School of Medicine in New York. Further, there is a loose page labelled "Comments, Clarifications and Errata", which keeps getting mislaid.

The literature has been studied in a most thorough manner, nearly a third of the 3000 references being quoted. From many, the highlights have been used verbatim, and a large number of tables from acknowledged sources appear. The authors have covered most of the hard-fought controversial facets of the story and have, on the whole, been impartial. The major exception to this is the failure to quote the full evidence implicating