

trospectroscopy, conformational analysis, electron spectroscopy for chemical applications, accessibility by bromine sorption and differential scanning calorimetry. The degradation reactions studied included hydrolysis with acid in the presence and absence of lithium chloride, thermolysis, alkaline degradation, ozonisation, direct photolysis, photosensitised degradation and free radical processes. Gel permeation chromatography has been useful in following cellulose fragmentations. The increased use of cellulose as a matrix material is a current and future development, which is dependent on an understanding of the essential differences between cellulose I and cellulose II in terms of their fine structure and morphology. The book is completed by 6 short chapters relating to posters presented at the meeting.

The volume is based on 'camera-ready'

manuscripts provided by the authors. The quality of these manuscripts is uneven. At least one chapter should have been retyped, and in others, the size of print of some tables and diagrams increased. This reviewer was recently a participant in a similar international meeting where all the manuscripts were retyped on the same word processor, to an identical style. It is unfortunate that the standard of presentation is not up to that of the scientific content, and that despite the presence of four editors, many misprints (including a chapter heading) appear in the finished volume. Nevertheless, the book provides a comprehensive survey of current basic and applied knowledge of cellulose, and can be recommended to all who work on Nature's most abundant polysaccharide.

D.J. Manners

Vitamins and Cancer

Human Cancer Prevention by Vitamins and Micronutrients

Edited by F.L. Meyskens, jr and K.N. Prasad

Humana Press; Clifton, NJ, 1986

xx + 481 pages. £76.30

This work represents a first attempt to correlate the increasing knowledge of the role and use of vitamins and related compounds as anticancer agents into a single volume. Presented as a series of papers published by multidisciplinary groups of biochemists, cell biologists, immunologists, oncologists and epidemiologists, the book covers the whole range of work currently being performed on vitamins and cancer treatment.

The papers are presented in sections beginning with basic experimental approaches to the use and evaluation of the effects of vitamins A, C and E on cell growth, differentiation and transformation using animal cells in culture. Many useful techniques are described although several papers stress the need for further study and evaluation of some of the procedures at present being used.

The next section represents the bulk of the

papers presented. It covers animal and human studies to evaluate the links between vitamins and cancer prevention. The section begins with an impressive and comprehensive review of nutrients and other risk factors associated with the development of specific tumours. Each tumour type is assessed with regard to the experimental evidence available and epidemiology. Firm conclusions are drawn regarding the significant effects of diet on certain types of cancer susceptibility. Subsequent papers in this section deal specifically with the actions of carotenoids, retinoids, cholesterol and vitamin E in defined animal models.

Problems associated with studying vitamins as anticancer agents in humans are described. Useful experimental procedures give detailed accounts of design and methodology of clinical trials in this area. The reader may be disappointed, however,

that most of the trials described are in their infancy and few conclusions are drawn. Most authors are hopeful that useful information will be available in the near future.

The final section deals specifically with the use of vitamins in treating cancer patients. Several papers are published reporting studies employing vitamins C, B and E either as agents in their own right or in conjunction with established cancer treatments such as chemotherapy and radiotherapy. The authors are enthusiastic regarding the use of vitamins as agents in cancer treatment especially with regard to improving the quality of life of the patients. This section of the book will be of wide interest to biochemists and immunologists as well as oncologists. Again many discussions in-

clude the fact that further work must be performed before definitive conclusions can be drawn. It is unfortunate that the section on the status of pyridoxyl derivatives and cancer growth in patients is headed vitamin C and cancer.

The editors have achieved their aim of correlating a vast area of research into a single volume and have presented papers on very relevant research which will be of use to anyone with an interest in vitamins and cancer prevention or treatment. The book will be of more value to those who wish to know what has been achieved in the field and what is being done rather than to those who want a textbook of vitamin action and cancer prevention.

S. Brown

Current Topics in Nutrition and Disease, Volume 15

Nutritional Diseases: Research Directions in Comparative Pathobiology

Edited by Dante G. Scarpelli and George Migaki

Alan R. Liss; New York, 1986

568 pages. £59.00

This book is essentially a collection of review papers read to a Symposium held in Bethesda, Maryland, in November 1985 together with summaries of the discussions following each presentation. There is, however, little attempt made to introduce much cohesion into the written proceedings. Although the book is divided into several sections, differentiation and development; nutritional influences on transcriptional and translocational modifications; nutritional effects on function of the immune system; nutrition, hormones and osteoporosis; selective nutritional diseases and imbalances and finally, nutritional factors in arteriosclerosis, there is no editorial introduction, interlinking statement, or summing-up provided for these different sub-sections. I feel that as a *book*, the whole exercise loses out by this omission. In my judgement there is little scientific

justification for continually publishing reports of scientific meetings in book form unless there is an important general message from the editor and a cohesive thread running throughout. Without this a book differs little from the type of collection of scientific papers one finds in a standard scientific journal.

This offering has a further drawback. It is not *printed* in the conventional sense, it is merely a photographic reproduction of the original typescripts, albeit well executed. At a price of £59, however, surely something rather easier to read could be expected. The price will place the book quite outside the reach of most personal libraries and it is only likely to find a place in those of specialist organizations: a work-book like this should be more readily obtainable.

What has been said should not be interpreted as

Prasad, Kedar N.; Frank L. Meyskens Jr. (2013-10-04). *Nutrients and Cancer Prevention*. Humana Press. ISBN 978-1-4612-8856-5. Omenn, Gilbert S.; Goodman, Gary E.; Thornquist, Mark D.; Balmes, John; Cullen, Mark R.; Glass, Andrew; Keogh, James P.; Meyskens, Frank L. Jr.; Valanis, Barbara (1996-05-02). "Effects of a Combination of Beta Carotene and Vitamin A on Lung Cancer and Cardiovascular Disease" (PDF). *New England Journal of Medicine*. Meyskens Jr., Frank L.; Farmer, Patrick; Fruehauf, John P. (2001-06-01). "Redox Regulation in Human Melanocytes and Melanoma". *Pigment Cell Research*. 14 (3): 148–154. doi:10.1034/j.1600-0749.2001.140303.x. ISSN 1600-0749. PMID 11434561. References[edit]. *Human Cancer Prevention by Vitamins and Micronutrients*. Series: *Experimental Biology and Medicine*. by Kedar N. Prasad and Jr. Meyskens. Price. Quantity. This anticipated generation of data on vitamins and their interactions has proceeded rapidly and the importance of interactions between vitamins and other micronutrients in the prevention setting has become better appreciated. Currently, more than 25 intervention trials with a variety of target populations using vitamins and other micronutrients have been started, but it remains too early for meaningful analysis of the results to date. Contents: *Basic Experimental Approaches*. - *Studies on the Mechanism of the Antiproliferative Action of Retinoids Using Retinoid-Resistant Melanoma Cell Mutant* *Experimental Biology and Medicine* *Vitamins and Cancer*, edited by Frank L. Meyskens, Jr. and Kedar N. Prasad, 1986 *Directed Drug Delivery*, edited by Ronald T. Borchardt, Arnold Repta, and Valentino Stella, 1985 *Immune Regulation*, edited by Marc Feldmann and N. A. Mitchison, 1985 *Human T Cell Clones*, edited by Marc Feldmann, Jonathan R. Lamb, and James N. Woody, 1985 *Inositol and Phosphoinositides*, edited. Humana Press © Clifton, New Jersey. Library of Congress Cataloging-In-Publication Data. Main entry under title: *Vitamins and cancer*. (Experimental biology and medicine) "The Second International Conference on the Modulation and Mediation of Cancer by Vitamins was held in Tuscon, Arizona, from February 10-13, 1985--Pref. Includes index.