

## Book Review

### Flaxseed in human nutrition

LU Thompson and SC Cunnane  
AOCS Press, Champaign, Illinois, 2003  
458 pp ISBN 1-893997-38-3

*Flaxseed in Human Nutrition* seeks to bring together a number of scientific disciplines necessary to understand health benefits of consuming flaxseeds. The book covers a large number of topics, ranging from composition of flaxseed to its role in functional foods. The book is conveniently divided into four sections: composition, metabolism and bioavailability; effects on human development and diseases; and processing and products containing flaxseed or its components. The book appears to be aimed at research scientists and health professionals interested in the nutritional effects of consuming foods containing flaxseed or components of flaxseed, particularly  $\alpha$ -linolenic acid and lignans. This second edition has retained all the good qualities of the first edition plus it emphasises recent advances in understanding, particularly the non-lipid components of flaxseed, lignans—their safety and mechanism of action in providing health benefits has given rise to a book to which all food and nutritional scientists, both academics and those employed in the food industry, working in the area of flaxseed and its components should have easy access.

The book opens with a chapter on chemical composition of flaxseed and variations in composition caused by variety and environmental conditions, and points out the strengths and weaknesses of the analytical

methods as well as the need for improvements to get a clearer picture about flaxseed components for value adding to human foods. This is followed by a chapter on metabolic pathways of lignan biosynthesis which, in my opinion, does not fit well with the overall theme of the book—nutritional aspects of flaxseed. While the chapter is well written and would form part of a book on the biochemistry of flaxseed components, it does not add much to the role of flaxseed in human nutrition. Other chapters cover the metabolic and nutritional effects of consuming flaxseeds and their components, particularly  $\alpha$ -linolenic acid and lignans, on cancer, cardiovascular disease, diabetes, renal disease, inflammatory diseases and immune function. The book also has chapters on the effects of flaxseed consumption on sex hormones, haematological parameters, bone metabolism and the reproductive function. Finally, it covers the use of flaxseed and its biologically active components in the production of functional foods for the benefit of human health.

Overall, *Flaxseed in Human Nutrition* is a very useful book for people who are new to the field as well as for experienced researchers. The author has organised the literature on the health effects of consuming flaxseed in a readily accessible form. New areas such as lignans and the evolution of flaxseed in relation to functional food development are clearly covered. If the editors are thinking of a 3rd edition, it would be useful to include a further chapter describing the unique metabolic and health effects of  $\alpha$ -linolenic acid, which are separate from the general effects of the longer chain omega-3 fatty acid, docosahexaenoic acid.

**Manohar Garg**

[DOI: 10.1002/jsfa.2233]