

Book Reviews

Functional foods: biochemical and processing aspects

G. Mazza (Ed.); Technomic Publishing Co., Lancaster, 1998, 480 pages, ISBN 1-56676-487-4 (£77.00)

Foods are composed of numerous biologically active constituents that may contribute to enhancing good health. Increasing consumer demand and interest in optimising health benefits via food intake has been the driving force behind the rapid expansion of the functional food market. Functional foods have therefore become increasingly important in the food industry, and can be classified as foods or isolated food ingredients that deliver specific non-nutritive physiological benefits that may enhance health. This volume provides an in-depth coverage of the nature and physiological effects of biologically active components of major plant food products (cereals, oilseeds, fruits and vegetables), and dairy and fish products, capable of promoting good health and preventing or alleviating diseases.

The volume is composed of thirteen chapters, and begins with several chapters on cereal products, namely functional oat products, physiologically functional wheat bran, and functional products from rice. Consumption of diets high in oatmeal, oat bran or oat flour has been associated with a reduced risk of coronary heart disease. The next two chapters are concerned with flaxseed products for disease prevention, and functional grape and citrus products. Flaxseed is a natural source of phytochemicals (e.g. flavonoids and phenolic acids). Flax has been specifically targeted for study as a cancer-preventive food. Numerous studies have shown that flavonoids present in grape and citrus products possess beneficial effects (e.g. anticarcinogenic, anti-inflammatory, and antioxidant effects).

Functional vegetable products, the processing and properties of mustard products and components, designer vegetable oils, and functional products of plants indigenous to Latin America, are discussed in subsequent chapters. Cruciferous vegetables, such as broccoli, cabbage, and cauliflower, provide sources of non-nutrient phytochemicals, which play a role in cancer prevention. Onions and garlic contain a range of biologically active compounds and have potential anticarcinogenic and cardiovascular-protective effects. Specific attention to fatty acids in health and disease has created interest in speciality oils, especially γ -linolenic acid (GLA), which may play an important role in the aetiology of a number of diseases.

Other chapters presented in this volume cover the physiological components and health effects of ginseng, echinacea

and sea buckthorn, functional milk and dairy products, functional seafood lipids and proteins, and the regulatory aspects of functional foods. With over 1800 literature references, this volume is of great value as a reference tool for food scientists and technologists, biochemists, nutritionists and public health professionals, and is therefore highly recommended for all researchers interested in the nutritional and medical benefits of food components, especially individuals involved in the design of functional food based products.

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Biochemistry and Molecular Biology, 2nd ed., by William H. Elliott, Daphne C. Elliott

Oxford University Press Inc., New York, 2001: pp. xxvii + 586, £22.99, ISBN: 0-19-870045-8

The advances that have been made in biochemistry and molecular biology over the last few decades have been phenomenal, with an ever-increasing avalanche of new information. *Biochemistry and Molecular Biology, 2nd ed.* is an introductory textbook covering topics of special interest as well as traditional areas of biochemistry. It contains more biological background information than most other biochemistry texts, and also focuses slightly more on areas of medical interest. Special emphasis has also been placed on areas of molecular biology such as cell signalling, cancer molecular biology, protein targeting, regulating protein degradation, the immune system and eukaryotic gene control.

The book is divided into six parts and starts with an introduction on the chemistry of the cell. The second part covers the structure of proteins and membranes and this is followed by a part on metabolism. Subsequent parts cover information storage and utilisation, transport of oxygen and CO₂, and mechanical work by cells. The text has been extensively updated since the *1st edition* with several chapters having been significantly rewritten, and several additional