



Book Reviews

Food Biotechnology. R. Angold, G. Beech and J. Taggart, Cambridge University Press, Cambridge, 1989. ix + 171 pp. Price: £32.50. ISBN 0 521 26631 9.

Biotechnology has been defined as the unified use of principles of biochemistry, microbiology and chemical engineering, leading to industrial applications of microorganisms. As far as food production is concerned, those applications of biotechnology are mainly to bread- and cheese making, syrups and brewing. The diversity within these product ranges illustrates the complexity of the practice of food biotechnology.

Food Biotechnology provides a selected and well focused overview, considering the technological, economic, social and nutritional aspects. The early chapters briefly describe the evolution of biotechnology in the food industry, government policies concerning the motivations and impediments to food uses, patent protections, and prospects for future development.

A further chapter deals with the theory of food production, discussing dairy products (milk, cheese, yoghurt, whey), cereal products (bread, cakes, biscuits, gluten), beverages (beer, cider, wines, vinegar) and the preservation of fruits and juices.

The importance of two chapters and one appendix dedicated to high fructose corn syrup (HFCS) should be emphasised. They contain a timely and compact discussion about technology and market factors for and against its use to beet sugar in the EC in competition. Noteworthy is the chapter on mycoproteins, showing a full description of the production processes involved, the market and future perspectives.

Food Biotechnology is designed to be used by food technologists, researchers, managers and all those interested in food science.

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Neurobiology of Glycoconjugates. Edited by R. U. Margolis and R. K. Margolis, Plenum Publishing Corporation, New York, 1989. xviii + 453 pp. Price: US\$79.50. ISBN 0 306 43128 9.

Gangliosides, glycoproteins and proteoglycans are glycoconjugates composed of saccharides linked to another component, such as, lipids and proteins. They are found in all tissues and fluids of the body and are particularly abundant in the nervous system. The extracellular space is filled with a matrix of insoluble glycoconjugates through which neutral cell precursors migrate to take up final position in the central nervous system.

Gangliosides play an important role in the excitability of the nervous system and regulation of cell proliferation. Certain glycoproteins and glycoaminoglycans (synthesised as components of proteoglycans) are important constituents of the extracellular matrix and are involved in modulating cell-cell interactions.

Neurobiology of Glycoconjugates describes in its first six chapters the structure, localisation, biosynthesis, metabolism and degradation of brain glycoconjugates. Later chapters deal with synapse and myelin glycoproteins, transport, recognition and interaction functions of glycoconjugates. Hyaluronate, a glycoaminoglycan that promotes aggregation and movement of a wide variety of cell types in the brain is afforded a separate chapter. The final chapter focuses on diseases resulting from errors of complex carbohydrate catabolism of the nervous system.

This book contains a large amount of information on glycoconjugates and it will be very useful for neurobiologists, biochemists, students and researchers working in this field.

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