

Harwood, J.L., Quinn, N. (ed.): **Recent Advances in the Biochemistry of Plant Lipids.** - Portland Press, London 2000. 985 pp. GBP 75.00. ISBN 1-85578-146-8.

The book represents proceedings of the 14th International Symposium on Plant Lipids. The meeting was held in Cardiff, UK in July 2000. This symposium was a great opportunity to present and discuss the recent progress in the field of lipid metabolism. The range of this research area is clear from the extent of the book – almost a thousand pages. There were eight major colloquia dealing with important topics: Lipid analysis, Fatty acid biosynthesis, Complex lipid biosynthesis, Lipid catabolism, Sterols and isoprenoids, Lipids and signalling, Environmental effects on lipids, and Biotechnological aspects. Most of individual colloquia were divided into several subsections.

The book is dedicated to N. Murata, an outstanding scientist, who has contributed to lipid research during past three decades to a great extent. The proceedings begin with the plenary lecture given by J. Ohlrogge who was awarded with Terry Galliard Medal. The chapter Fatty acid biosynthesis consists of 5 sections. The first of them is focused on acetyl-CoA, the second deals with fatty acid synthase. Desaturation of plant fatty acids is covered in the next section. The fourth one describes many aspects of fatty acid elongation. This part is completed with a control of biosynthesis of fatty acids and lipids. In the colloquium called Complex lipid biosynthesis several enzymes acting in Kennedy pathway in plants were studied. Further, various aspects of phospholipid synthesis are discussed. Among complex lipids, glycosylglycerids as important constituent of thylakoid membranes are dealt. Further, sphingolipids are discussed from point of view of their function both as a membrane structural component and a signalling molecule. The colloquium called Lipid catabolism was divided into two parts: Fatty acid breakdown and

Complex lipid degradation. The prevalence of mitochondrial β -oxidation cycle in various developmental stages was confirmed. Most of contributions dealing with lipid degradation concern lipase. The colloquium Sterols and isoprenoids involves discovery of novel non-mevalonate pathway for isoprenoid biosynthesis. The role of lipids in cell signalling was discussed in four colloquia. The considerable role in this process plays phospholipase, namely under stress conditions. The other signalling pathway consists of lipoxygenase forming jasmonic acid and other effective oxylipins. Such oxygenated fatty acid derivatives have a number of functions particularly in development and defence reactions. However, metabolism of oxylipins is strongly dependent on the plant species. Environment has an essential influence on plant lipid composition. Moreover, the seasonal and developmental variations in lipids can be also observed. The question of changing climate and pollution on lipid metabolism is of special interest. The last three colloquia are concentrated on various biotechnological aspects of lipid modifications. Special attention is payed to improved lipid composition convenient both for food and industrial use.

All contributions involved in this book illuminate the broad area of plant lipids as important compounds participating in plant development, defence, signalling and energy storage. The most recent progress in the area of lipid metabolism and function are reviewed in this book. New aspects in the role of lipids in cell signalling are elucidated, and suggestions for future research are given. The book can be recommended to range of experts dealing with this topic, *i.e.* biochemists, molecular biologists, and physiologists.

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