

approaches to studies on wall development is most welcome, although it is perhaps a pity that it was not possible to include a chapter on the possible roles of plant cell-wall fragments as informational molecules.

The two chapters dealing with the isolation of cell-wall components should be of practical value to workers in this area, as they present critical assessments of the factors affecting wall-component composition as a function of extraction procedure. Wall biosynthesis is discussed in individual chapters on the role of lipid-linked glycosides as precursors for glycoproteins and polysaccharides, enzymic interactions during heteropolysaccharide formation, the enzymology of hydroxyproline-rich glycoprotein biosynthesis, the control of wall formation at the biochemical and cytological levels and the problems of studying the relationships between 1,3- and 1,4- β -D-glucan synthesis *in vivo* and *in vitro*. These chapters could perhaps have been arranged in a more logical order. The pen-

ultimate chapter provides a brief summary of the nature and turnover of cell-wall storage carbohydrates in legumes, and this leads into a discussion of wall-component degradation in relation to auxin-induced cell extension and mechanical changes in wall properties.

The concentration on topics related to the dynamic aspects of cell walls should help to increase the appeal of this book to students of plant biochemistry and the reputations of many of the authors should ensure its success. With the advent of improved analytical techniques for polysaccharide analysis and the application of immunological and recombinant DNA techniques to studies on the control of plant development, plant cell walls will become increasingly important subjects for research. In this context, this book can be firmly recommended, as it contains much to stimulate future efforts in these areas.

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Structure, Function and Metabolism of Plant Lipids (Developments in Plant Biology, Vol. 9)

Edited by P.-A. Siegenthaler and W. Eichenberger

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xvii + 634 pages. \$125.50, Dfl. 326.00

The size of this book is testimony to the increasing interest in plant lipids amongst biologists and biochemists. It records the proceedings of the 6th International Symposium on the Structure, Function and Metabolism of Lipids, held at Neuchâtel, Switzerland, in July 1984, and is appropriately dedicated to Morris Kates, who has been a leading figure in the development of plant lipid biochemistry for several decades.

The 126 contributions within the volume are divided into eight sections. Three of these deal with the biochemistry and biosynthesis of fatty acids, acyl lipids and isoprenoid compounds, whilst a fourth, short section, concerns the catabolism of lipids. A further three parts cover the various roles

of lipids in the biogenesis of plant cell organelles, non-photosynthetic and photosynthetic membranes. The final section, which encompasses 131 pages, discusses the role of plant lipids in relation to environmental and physiological factors.

As would be expected, the papers are mostly short (on average 4 pages) and obviously some of the material has been published elsewhere, including by now, I expect, the data quoted as 'in press' or 'submitted'. In this context, I wish that all the authors had stated which journals should be perused for these forthcoming publications.

The contributions were all prepared as camera-ready copy, and so there is considerable variation in the typescripts used. The editors did not proof

read the manuscripts in order to avoid delays in publication. Inevitably, therefore, there are some typographical errors as well as a lack of standardisation of abbreviations, units, etc. For instance, I was intrigued by the term 'um' in one table. Is this a new SI unit, or μM ? Also the contents on pages xv and xvi are in reverse order. I would like to have seen an index of plant species for ease of reference. On balance, however, the

editors' decision was correct, as it enabled the book to be published within five months.

In conclusion, this volume makes a valuable contribution to the literature on plant lipids as it brings together a wide range of topics and provides an excellent indication of the current areas of interest in this field of research.

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