Ornithogalum saundersiae is reported by Y. Sashida. His research gives an outstanding example of the fact that phytochemicals from ornamental plants with no medicinal folkloric background sometimes have unexpected biological activity. The other 20 odd reports concern glycosides whose aglycones belong to flavonoid, lignan, other simple phenolic, and isothiocyanate. Their structures are less complex than those of saponins. However, several glycosides have significant biological activities. The importance of *Citrus* fruit peels for medicinal materials is shown by A. Sawabe and Y. Matsubara. They discuss the isolation and structural determination of the flavonoid, phenylpropanoid, lignan, monoterpenoid, limonoid, and alkayl glycosides from 11 kinds of *Citrus* fruit peels and their in vivo hypotensive and hypertensive effects. The above mentioned topics have been selected by my own interest in the plant glycosides with medicinal potentials. However, not a few scientists must have much interest in the allelochemical role of plant glycosides. I introduce one example of this sort of topic reported in this volume. G. R. Waller and co-workers describe the identification of saponins produced during the life cycle of mungbeans and their role as an allelochemical agent. Their research provides the first definitive evidence that when saponins produced by mungbean plants are added to the soil, they work as an allelochemical plant growth regulator and enhance the growth of new mungbean plants.

Plant glycosides are attracting attention of research workers not only by their chemical structures, but recently also by their biological activities. The editors appropriately coordinated the reviews of plant glycosides in this compact volume. This book is an excellent reading for all interested in plant glycosides, especially in steroid and triterpene glycosides. A lot of useful information and insight are to be found in it.

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Phytochemical Signals and Plant-Microbe Interactions John T. Romeo, Kelsey R. Downum, Rob Verpoorte, Recent Advances in Phytochemistry Vol. 32, Plenum Press, New York and London, 1998. 254 pp. ISBN 0-306-45917-5

The papers assembled in this volume of Recent Advances in Phytochemistry were originally presented at the joint meeting of the Phytochemical Societies of North America and Europe held in The Netherlands in April 1997. In twelve chapters leading scientists review recent research progress on structure, biosynthesis and biological activity of chemical signals mediating communication between plants and microbes (bacteria, fungi, nematodes) in both antagonistic as well as in symbiotic beneficial interactions. Particularly, the central role of natural products in pathogenesis and disease resistance in plants is nicely highlighted. Most contributions place emphasis on the elucidation of the molecular basis of intra- and interspecific signaling processes. An array of plant and microbial metabolites comprising simple phenolics, salicylic acid, hydroxamic acids, flavonoids, polysaccharides, fatty acid derived octadecanoids, trichothecenes and perylenequinones are discussed. Unfortunately, the role of microbe and plant-derived peptides as signals for activating a plant's defensive arsenal in response to infection or herbivore attack was only scarcely addressed here.

It is a major asset of this volume that it includes two chapters describing the biotechnological application of knowledge and technology emerging from such research for modifying the chemistry of plants for the benefit of human health and nutrition.

This compilation of research papers should be essential reading for anyone interested in the molecular mechanisms underlying communication of plants with the environment. The comprehensive bibliography attached to each chapter will facilitate also non-experts to keep up with recent developments in this rapidly developing area of plant biology.

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