

Stacey, G., Keen, N.T. (ed.): **Plant-Microbe Interaction**. Volume 5. - APS Press, St. Paul 2000. 323 pp. USD 64.00. ISBN 0-89054-260-0

This volume contains a series of reviews devoted to important microbial plant pathogens and symbionts and the responses they elicit on their plant hosts, given in 9 chapters. Chapter 1 by Yuan *et al.* deals with *hrp* genes of *Pseudomonas syringae*, describing their organisation and sequence homology, as well as their functions: gene regulation, protein secretion, and coding for secreted proteins. The second chapter by Smart *et al.* is devoted to the one of the best known pathogens *Phytophthora infestans* from oomycete group. Authors mainly focus on molecular techniques to the study of both the biology and host-pathogen interaction of this important pathogen. Quorum sensing and the role of diffusible signalling molecules in plant-microbe interactions are the topics of the following chapter written by Whitehead and Salmond. Bacteria use diffusible signal molecules to communicate with each other and to response to their environmental conditions. Their role in the interaction with their plant host is also explained in detail in this article. Chapter 4 by Meyer *et al.* describes all aspects of hairy root disease proliferation induced by the infection of plants with *Agrobacterium rhizogenes* and overviews molecular and functional analysis of *A. rhizogenes* T-DNA genes. The book continues with the chapter by Wilson and Somervill on *Arabidopsis* disease resistance genes. Their isolation and characterisation using up-to-date techniques and especially the importance of this small weed in the

understanding of a basic mechanisms underlying plant-pathogen interactions in more genetically recalcitrant crops represent the basal part of this chapter. Defence potentiation and elicitation are discussed in the following chapter written by Graham and Graham. This chapter presents some interesting ideas of how plant tissue is conditioned to pathogen attack and how this potential is translated into the cascade of resistance responses. Chapter 7 by Robert-Baudouy *et al.* describes our current understanding of the regulation and function of pectic enzymes in the pathogen *Erwinia chrysanthemi*. Their role in the development of soft-rot, induction of gene transcription, and interactions between regulatory systems are given in detail. Following chapter named Receptors for the microbial elicitors of plant defence responses by Ito and Shibuya concentrates on several well studied binding proteins of the microbial elicitors, describes their characteristics responses, and discusses their suggested roles in plant defence. The final chapter by Lee *et al.* focuses on endophyte of sugarcane *Acetobacter diazotrophicus*, characterisation of nitrogen fixation genes and plant growth-promoting properties of this pathogen.

In conclusion, this book comprises useful reviews written by world specialists in this quickly developing field. Therefore it can be highly recommended to researchers as well as advanced students engaged in plant pathology.

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