Stacey, G., Keen, N.T. (ed.): **Plant-Microbe Interactions. Vol. 4.** - The American Phytopathological Society, St. Paul 1999. 283 pp. USD 59.00. ISBN 0-89054-228-7.

The goal of this book series is to contribute to the advancement of rapidly growing area of science dealing with plant-microbe interactions. The book comprises eight reviews on main topics of contemporary phytopathology: pathogenicity, symbiosis and biocontrol.

Symbiotic interactions are demonstrated on *Rhizobium*-plant relationships. Plant response and signal perception are discussed and the chapter is mainly focused on the early events of nodulation, particularly those involving production of Nod-factors and their role in host specifity. The role of *avr* genes in plant pathogenesis is explained on the other plant-microbe interaction, *Xanthomonas avr/pth* gene family. Presented is a perspective on the largest group of *avr* genes cloned to date, in the light of recent discoveries in the field of bacterial pathogenesis. Exploiting of hypovirulent fungal strains as biocontrol agents represents another approach to plant protection. Studies on *Cryphonectria parasitica* and its naturally-occurring strains with reduced ability to produce disease, reveal the nature of hypovirulence. Following chapter is devoted to role of active oxygen in pathogenesis. Stimulation of active oxygen production during both early events in plant-pathogen interactions and in subsequent active defence processes, like hypersensitive response and subsequent signalling mechanisms that lead to resistance, are discussed. Host-parasite specificity mechanisms and suppressors as factors determining this specificity, are the topics of the next chapter. Suppressor substances block active plant defence responses and so enable full pathogen virulence. Suppressor properties, their effect on defence gene expression, plasma membrane functions, cell wall functions, and oxidative burst induction are given in detail. there follows comprehensive chapter covering identification of plant genes involved in plant-microbe interactions, which is focused on the strategies used to isolate plant genes that control interactive processes such as signalling, response and development, with the emphasis on plant genes involved in soybean root nodule symbiosis. Next chapter describes how competition for iron, a limiting nutrient in most environments, can be used to influence the microbial population, and thereby function as a mechanism for microbial control, and its importance in the interaction between micro-organisms and plants. The last chapter deals with transcriptional regulation of plant genes responsive to pathogens and elicitors, especially concerning the *cis*-acting and *trans*-acting factors involved in mediating pathogen-induced expression of such genes.

The book provides compilation of hot topics in plant-microbe interactions and is very useful not only for specialists in phytopathology but also for teachers and students interested in plant defence mechanisms.

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