

## Book Reviews

**Keen N.T., Mayama S., Leach J.E., Tsuyumu S. (eds.). 2000. Delivery and Perception of Pathogen Signals in Plants. APS Press – The American Phytopathological Society, St. Paul, Minnesota. IBN 0-89054-259-7. Price 59 dollars.**

This book contains 26 papers presented at the 8<sup>th</sup> Japan–United States seminar, held June 19–23, 1999 at Marina del Rey, California. All papers deal with a variety of topics concerned with plant–pathogen communication. They range from discussion of plant resistance genes against nematodes or bacteria to fungal host selective toxins or apoptic defense responses of plants to infections and elicitors.

Due to great number of chapters it is not possible to make an analytical review of that book. However in order to make this review useful to persons with specific authors and research area interest I provide a list of chapter titles:

Chapter 1 – T. Tani “Perception of pathogen signals to initiate active defense” (p. 1–11). Chapter 2 – L. Sequeira “Delivery of pathogens signal: historical approach” (p. 12–24). Chapter 3 – H. Kunoh et al. “Adhesion of fungal spores and effects on plants cells” (p. 25–35). Chapter 4 – A. Collmer et al. “Bacterial Avr proteins: secreted agents of parasitism and elicitors of plant defense” (p. 36–45). Chapter 5 – N. Shibuya et al. “Rice receptors for chitin and glucan elicitors” (p. 46–53). Chapter 6 – F. Jurnak et al. “Understanding pectate lyase C at the atomic level” (p. 54–67). Chapter 7 – H. Otani et al. “A new type of host selective toxin, a protein from *Alternaria brassicola*” (p. 68–76). Chapter 8 – C.L. Bender “Chlorosis-inducing phytotoxins: virulence factors produced by *Pseudomonas syringae*” (p. 77–86). Chapter 9 – T. Tsuge et al. “Molecular genetics of host specific toxin biosynthesis in *Alternaria alternata*” (p. 87–96). Chapter 10 – T.J. Wolpert et al. “Victorin, apoptosis and the mitochondrion” (p. 97–111). Chapter 11 – T. Shiraiishi et al. “Suppressors of defense – suppressins and plant receptor molecules” (p. 112–121). Chapter 12 – Y. Ohashi et al. “Signalling pathways for TMV – and wound-induced resistance in tobacco plants” (p. 122–130). Chapter 13 – B. Staskawicz et al. “Genetic relationships specifying bacterial disease resistance in *Xanthomonas* – pepper interactions” (p. 131–136). Chapter 14 – P. Ronald “Signalling in rice disease resistance” (p. 137–144). Chapter 15 – I. Koloshian, O.M. Ilarduya “Mi-1, a dual function disease resistance gene in tomato” (p. 145–153). Chapter 16 – G. Martin et al. “Pathogen recognition and signal transduction mediated by the product of the Pts disease resistance gene” (p. 154–163). Chapter 17 – T. Yamada et al. “Regulation of nuclear gene expression in relation to signal molecules” (p. 164–173). Chapter 18 – B. Valant et al. “Molecular interactions between the rice blast resistance gene Pi-ta and its corresponding avirulence gene” (p. 174–183). Chapter 19 – N. Doke et al. “The oxidative burst in plants: mechanism and function in induced resistance” (p. 184–193). Chapter 20 – D. Slaymaker, N. Keen “Perception of the syringolide elicitors by soybean cells” (p. 194–201). Chapter 21 – K. Akimitsu et al. “Citrus response to a pathogenicity factor: the brown spot disease caused by the rough lemon pathotype of *Alternaria alternata*” (p. 201–211). Chapter 22 – J.L. Dangel et al. “Effectors of bacterial virulence and mediators of disease resistance responses: the two faces of Avr” (p. 212–219). Chapter 23 – S. Mayama et al. “Apoptic response in defense of oats to infections and elicitors” (p. 220–228). Chapter 24 – S. Tsuyumu et al. “Trafficking of pathogenicity-related gene products from *Xanthomonas citri* into plant cell” (p. 229–239). Chapter 25 – J.E. Leach et al. “Trafficking of plant defense response compounds” (p. 240–250). Chapter 26 – S. Ouchi “Biotechnology as an approach to improving disease resistance in plants” (p. 251–264).

Recapitulation of topics and highlights of the symposium is given in “Synopsis” (p. 265–268) in which D. Mills and S. Ouchi stressed that this seminar “.. served to remind us of the need to look closely at the entire infection process to find some of the signal molecules important in host–pathogen interactions”.

I recommend this book for all phytopathologists and researchers in plant biotechnology.

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