

Elicitor-Induced Defence Reactions in Cell Suspension Cultures of Soybean Cultivars

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Suspension cultured soybean (*Glycine max* [L.] Merr.) cells of four cultivars (Wilis, Lumut, Kalmit, Doko RC) were compared for their response to different fungal and bacterial elicitors. Cells were treated either with crude cell wall extracts of the fungal pathogens *Phytophthora sojae* (Pmg-elicitor) and *Rhizoctonia solani* (Riso-elicitor) or with two isolates of the bacterial pathogen *Pseudomonas syringae* pv. *glycinea* (Psg01/02) and a broad spectrum of antimicrobial defence reactions was measured. Cells of all four cultivars showed the same elicitor-induced rapid (H_2O_2 accumulation, alkalinization of the culture medium, peroxidative cross-linking of cell wall proteins) and slow (activation of phenylpropanoid metabolism, accumulation of phenolic compounds, induction of PR-proteins) defence responses. However, the reactivity of the cultivars was not identical in terms of time courses and intensities. Furthermore, the ability of the various elicitors to induce defence responses varied markedly. These differences indicate that (1) cells of the same species but of different cultivars are equipped with the same array of perception systems to recognise various stimuli but (2) the sensitivity of these perception systems or later steps in the signal transduction seem to be stimulated to a different extent in the analysed cultivars.