

Genes Expressed in *Ascochyta rabiei*-Inoculated Chickpea Plants and Elicited Cell Cultures as Detected by Differential cDNA-Hybridization

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In response to the exogenous application of elicitors and attempted invasion by pathogens, plants exhibit a wide range of defense reactions. To understand the defense mechanisms at the level of gene activation and deactivation, differential screenings were performed to isolate cDNA clones which are differentially expressed in pathogen-inoculated resistant chickpea plants and elicitor-treated cell cultures. A plenty of genes were isolated and arranged in 5 groups, namely defense-related pathways, signal transduction pathways, regulation of gene expression, catabolic pathways and primary metabolism. Most of these genes were activated although several genes were also found to be suppressed. We discuss the plausible functions of cDNA products in plant defense responses. The cDNAs provide a variety of tools to investigate molecular mechanisms of defense responses and clearly reflect the massive genomic and metabolic changes which occur during manifestation of antimicrobial defense.