

## Roles of MAP Kinase Signaling in Plant-Microbe Interactions

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Plants are in constantly in contact with myriads of microbes, but disease is the exception and not the rule. Plant health relies on pathogen-associated molecular pattern-triggered immunity and only in some specialized cases on effector-triggered immunity. In both cases, the mitogen-activated protein kinase (MAPK) modules of MPK3, 4 and 6 play a key role in *Arabidopsis* innate immunity via massive reprogramming gene expression. To find out the signaling network of these pathways, we used various genetic, transcriptomic, proteomic and phosphoproteomic approaches. I will highlight some of the approaches and recent findings uncovering some of the underlying mechanisms and help explain how the MAPK modification of specific proteins can exert large scale gene expression reprogramming during pathogen signaling.

Selected literature:

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