

# Involvement of *PpWRKY70* in the methyl jasmonate primed disease resistance against *Rhizopus stolonifer* of peaches via activating phenylpropanoid pathway

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## Abstract

The molecular mechanisms underlying methyl jasmonate (MeJA) primed defense against *Rhizopus stolonifer* through regulating phenylpropanoid pathway in peaches and the involvement of WRKY transcription factor were investigated. MeJA treatment enhanced the activity of phenylalanine ammonia-lyase (PAL) and 4-coumarate-CoA ligase (4CL), and promoted the accumulation of total phenolics, total flavonoids and lignin content as well as the main individual phenolic compounds, including chlorogenic acid, neochlorogenic acid and epicatechin. Moreover, transcripts of *PpPAL* and *Pp4CL* transcription were substantially and rapidly enhanced upon inoculation with the pathogen in MeJA-treated fruit, indicating that MeJA triggered a priming defense via enhancing phenylpropanoid pathway in peaches. Furthermore, MeJA primed the expression of *PpWRKY70*, which was identified as a transcription activator of *PpPAL* and *Pp4CL* via binding to their W-boxes. Taken together, our results demonstrate that *PpWRKY70* is involved in the MeJA-primed defense by activating the phenylpropanoid pathway.