cotton plants react differently to their colonization with *Metarhizium anisopliae* by up-/down-regulating mainly SA, JA, ABA and IAA, these differences were also detected when comparing the different treatments of each experiment.

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104 - The role of stress-induced signaling proteins in endophyte induced defense responses against root-knot nematodes

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Endophytic fungi can stimulate defense responses in plants, thus making them more resistant towards specific pathogens, like nematodes. Although the exact molecular and biochemical mechanisms underlying this phenomenon is not clear, the use of split root experiments indicate that particular systemically induced defense responses are triggered. The endopytic *Fusarium oxysporum* isolate Fo162 causes a reduction in infection of the root-knot nematode, *Meloidogyne incognita*, in various plant species, including *Arabidopsis thaliana*. Because of this and the extensive molecular knowledge on Arabidopsis together with the availability of a significant number of well-characterized mutants, the role of particular defense signaling pathways in the induction of defense responses triggered by the endophyte can be studied in more detail. We therefore tested the Arabidopsis *oxi1*- and various *mpk*-mutants, which lack or over-express proteins that play a role at various levels in transferring the signal in the stress-induced defense pathway. All tested mutants were still capable of restricting *M. incognita* infection to the same level as the wild type when inoculated with Fo162, thus showing that these signaling proteins are not relevant for inducing nematode defense responses, either because other redundant signaling proteins can compensate for the lack or the particular signaling pathway is irrelevant.

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