

**Cowpea x *Colletotrichum lindemuthianum* interaction: Role of salicylic acid and hydrogen peroxide**

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Activation of plant defense mechanisms upon pathogen infection involves a signal cascade that is often accompanied by cell death, oxidative burst, hypersensitive reaction (HR) and induction of PR-Proteins. Salicylic acid (SA) and hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) are compounds associated with the plant defense mechanisms and there is a body of evidence suggesting they play an important role in the plant signaling after biotrophic pathogen attack. However the function of these compounds in interactions involving hemibiotrophic pathogens is not well understood. This present work aimed to evaluate the levels of enzymes (APX, CAT, SOD and PAL) involved with the oxidative burst and the role of SA and H<sub>2</sub>O<sub>2</sub> in compatible and incompatible interactions of the hemibiotrophic fungus *C. lindemuthianum* with cowpea. Seeds of two cowpea genotypes, Mulato (incompatible) and Gurguéia (compatible), were planted in conical jars and maintained in a growth chamber under controlled conditions of temperature and humidity. Primary leaves of 10-day-old plants were challenged with the fungus (10<sup>1</sup> spores/mL suspension) and the leaves collected at 24, 48, 72, 96 and 120 hours after inoculation (hai). Leaf crude extracts were prepared and used to determine enzyme activities. H<sub>2</sub>O<sub>2</sub> and SA accumulation were measured according to Gay *et al.* (1999) and Hüeckelhoven *et al.* (1999), respectively. CAT, APX and SOD activities were induced in cv Mulato after spore treatment. PAL activity as well as H<sub>2</sub>O<sub>2</sub> and SA accumulation increased under spore treatment in cv. Gurguéia when compared to cv. Mulato. These results suggest that the HR and SA accumulation induced after the fungal treatment facilitate the fungal infection of cowpea plants susceptible to *C. lindemuthianum*.

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