

## OXIDATIVE STRESS ACQUIRED RESISTANCE OF *Moniliophthora perniciosa* DEPENDING ON THE CARBON SOURCE

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The basidiomycete fungus *Moniliophthora perniciosa* (Mp) is the causal agent of Witches' Broom Disease of Cacao (*Theobroma cacao* L.). To help to understand how Mp responds to oxidative stress, dikaryotic broken-hyphae was grown for 7 days (25°C, liquid culture, no shaking) either in glycerol (+2% peptone, GLY) or glucose (+2% peptone, GLU) and exposed to two different oxidative stress agents: hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) and paraquat (PAQ). After 7 days, old media were replaced by new media and the cultures grown for another 24 hours (or not); one mL aliquots of each culture were exposed to two different mutagens in agar plates: H<sub>2</sub>O<sub>2</sub> (0.5; 1.0; 2.0; 3.0; 4.0 mM) or PAQ (25; 50; 100; 200; 400 µM). Cells exposed to H<sub>2</sub>O<sub>2</sub> exhibited increased resistance when shifted from GLU to GLY and from GLY to GLY, and were more sensitive when not shifted to new media. When exposed to PAQ, cells were all more resistant after growth in new media, independent from the carbon source. We suppose that GLY and/or new media, but not old GLU media, modulates (up-regulates) oxidative stress defenses of this fungus.

Key words: *Moniliophthora perniciosa*, oxidative stress, hydrogen peroxide, paraquat.

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