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[9112] EFFECTS OF *CRYPHONECTRIA PARASITICA* INFECTION BY THE HYPOVIRUS CHV1 ON CELLULASE ACTIVITY

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Abstract: *Cryphonectria parasitica* is the causal agent of *Castanea sativa* chestnut blight, an economically important disease. Hypovirulence is due to the presence of a virus, the *Cryphonectria hypovirus* 1 (CHV1), that attenuates fungus pathogenicity by reducing the sporulation, and the enzymatic activity of pathogenesis-related enzymes. In several regions affected by *C. parasitica*, the release of *C. parasitica* hypovirulent strains on chestnut blight affected trees of *C. sativa*, has been used as a biological control. The objective of this work is to evaluate the effect of hypovirulence by CHV1 on the activity of cellulase, a pathogenesis-related enzyme, in different isolates of *C. parasitica*. For this, several virulent and hypovirulent (donors: RBB111, SR442, Serra05; and converted: Cast13RBB111, Cast13SR442, Curopos15SR442) isolates were grown in appropriate microbiological media, containing Carboxymethyl cellulose (CMC) and the enzyme activity was qualitatively evaluated.

Contrary to expected, the hypovirulent donors (RBB111, SR442, Serra05) and converted strains showed higher cellulolytic activity than the virulent ones, evidencing higher ratio halo/growth (RHG). In the two converted Cast13 isogenic isolates, Cast13 RBB111 and Cast13 SR442 the obtained RHG were significantly different ($p < 0.01$), the last presented higher cellulolytic activity. In virulent strains, only Cp33PAR presented a small RHG, significantly different from the other virulent strains ($p < 0.05$), without reaction.

Keywords: Hypovirulence; *Cryphonectria hypovirus* 1 (CHV1); Cellulase.

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