ANALYSIS OF CHITINASE GENE EXPRESSION IN TOMATO IN RESPONSE TO *Fusarium oxysporum* f. sp. *lycopersici.*

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One of the greatest problems for tomato producers is the causal agent of Fusarium wilt disease in tomatoes, the fungus *Fusarium oxysporum* f. sp. *lycopersici*. This study aimed to investigate the participation of four chitinases (*Chi1, Chi2, Chi3* and *Chi4*) in the resistance mechanism of tomato to crown and root rot. Specific primers to amplify these chitinase genes were used to analyze the temporal expression in the resistant cultivar BRH. Total RNA was extracted from the plant roots 0, 1, 2, and 3 days after fungal infection and cDNA obtained using the One-Step RT-PCR kit (Invitrogen). The amplified RT-PCR products were subjected to sequencing and the sequences analyzed for homology/similarity with sequences of the databank. There was no amplification of the chitinase genes *Chi3* and *Chi4* in any study period. The expression of the chitinase genes *Chi1* and *Chi2* was identified two days after inoculation with fungi of 850 and 1000 base pairs (pb), respectively. Our results suggest a possible participation of two of the hydrolytic enzymes under study in the defense mechanism of tomato against *Fusarium*.

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