# CARACTERIZATION OF A THAUMATIN-LIKE GENE EXPRESSED BY *MONILIOPHTHORA PERNICIOSA* FUNGUS, THE CAUSATIVE AGENT OF CACAO WITCHE'S BROOM DISEASE

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*Moniliophthora perniciosa* is a hemibiotrophic phytopathogen that causes cacao tree Witches' Broom disease, which is responsible for large-scale losses in southern Bahia plantations. Taking account of cacao's economical importance, we have been studying this interesting pathosystem. Upon pathogen infection, plant Pathogenesis Related (PR) proteins are expressed, including PR-5 (Thaumatin-like protein - TLP). These proteins show antifungal properties and have been characterized in plants, insects, and more recently in fungi. Curiously, we found a TLP gene in *M. perniciosa* EST database, being named as *MpTLP*. The main objective of this project is the expression analysis of this gene and activity assays of recombinant MpTLP. Pulse-field gel electrophoresis and Southern blot analyses indicated that *MpTLP* may have two copies in the same chromosome. Northern blot experiments showed that *MpTLP* can be controlled by carbon sources. Interestingly, this gene was up-regulated when cacao extract was added to the fungi growth media. *MpTLP* was cloned in pMAL-p2X plasmid and recombinant expression assays are in progress. In addition, *MpTLP* promoter was identified, amplified and cloned in YEP358 plasmid. We believe that our gene expression results suggest that MpTLP participate in cacao - *M. perniciosa* interaction.

Keywords: Thaumatin, *Moniliophthora perniciosa*, cacao, Witche´s Broom disease

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