

PROTEOMIC CHARACTERIZATION OF *BACILLUS THURINGIENSIS* S811 STRAIN AND EVALUATION OF PROTEINS TOXICITY TOWARDS *ANTHONOMUS GRANDIS*.

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Bacillus thuringiensis (*Bt*) is a sporulating bacterium that produces entomopathogenic proteins, including Cry toxins. A characterization of the proteins accumulation during cell cycle of the *B. thuringiensis* S811 strain has been determined in order to screen for new entomotoxic proteins. The proteins characterization was followed by contrast phase microscopy analysis, aiming to classify the different stages during *Bt* cell cycle: 8 hours after inoculation (HAI), 16 HAI, 24 HAI and 32 HAI. Proteins present in the supernatant and pellet fractions of each stage were bioassayed against *Anthonomus grandis* larvae. The different fractions were also characterized by two-dimensional electrophoresis and analyzed by Western blotting using anti-Cry 1a and Anti-Cry 8 antibodies, two proteins present in the studied *Bt* strain. The toxicity to *A. grandis* larvae was found at 8 HAI (pellet fraction) and 32 HAI (supernatant fraction). The data indicate a association between Cry 8 presence and the toxicity of the pellet fraction at 8 HAI. However, the toxicity of supernatant proteins at 32 HAI seems be not related to the presence of Cry 8, nether to the Cry 1a toxin, indicating the presence of other proteins involved in the toxicity. According to 2DE/MS/MS analysis a chitin binding protein might be responsible for the entomotoxic activity of supernatant fraction.

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