

Toxicity of proteic extract partially purified from *Coffea canephora* seeds on the development larvae of *Callosobruchus maculatus*

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In this study, we investigate the effect of proteins partially purified from *Coffea canephora* seeds against development of the *Callosobruchus maculatus* larvae. Proteins from seeds were extracted with buffer Tris-HCl, pH 8.0. The partial purification of the proteic extract was resolved by an ion-exchange chromatography on DEAE-Sepharose on two fractions named P1 and P2. The P1 fraction revealed proteins of low molecular weight and one of 9 kDa presented homology with previously characterized non-specific lipid transfer protein (LTP). This fraction was initially incorporated into artificial two seeds at 2% and presented to three fertilized females of *C. maculatus*. The larvae were fixed in conformity with method usually of light microscopy and transmission electron microscope. The microscopy results demonstrated that the treated larvae present a lower accumulation of lipids and the presence of unidentified structures in the fat body stained with toluidine blue, damage to the intestinal epithelium, presence of smooth endoplasmatic reticulum and mitochondria in the cells of basal lamina and middle gut lumen deformed. In this way, we suppose that the majority peptide in P1 fraction, the LTP, be involved in the toxicity to the digestive process of the larvae of *C. maculatus*. Inhibition tests with the purified LTP and the larvae of *C. maculatus* are been done.

Support: CNPq, CAPES, UENF, FAPERJ.