

EVALUATION OF *Beauveria bassiana* CHITINASES ACTIVITY TOWARD *Callosobruchus maculatus* exoskeleton.

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Vigna unguiculata is an important subsistence crop for Africa and Latin America. Unfortunately, stored cowpea seeds are often attacked by bruchid *Callosobruchus maculatus*, causing severe economical losses. Diverse studies have been carried in order to decrease the pest damage. In last years, the use of entomopathogenic fungi such as *Beauveria bassiana* and *Metarhizium anisopliae* became an important alternative in biological control. These species secrete different enzymes that can be used as defense molecules against insect-pests. In this report, two chitinases from *B. bassiana*, synthesized in response to *C. maculatus* cuticle, were isolated and biochemically characterized. *B. bassiana* conidia were grown in minimal media (0.2% KH₂PO₄, 0.03% MgSO₄, 1.4% (NH₄)₂SO₄ and FeCl₃ trace) containing 0.5% *C. maculatus* cuticle. Fungal secretion was applied onto a SP-Sepharose chromatography generating two retained peaks. Both presented chitinase activities in a colloidal chitin assay. Moreover, SDS-PAGE showed protein bands with molecular masses of 37 kDa and 25 kDa, being those proteins, possible chitinases. Further analyses of this fungus enzymes could lead to a development of novel bioinsecticides and in a near future on the production of transgenic plants with enhance resistance to the cowpea weevil *C. maculatus*.

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Key words: cowpea, *Callosobruchus maculatus*, exoskeleton, biological control.