Master Thesis / PhD. Thesis

**SUMMARY**

ISOLATION AND VIRULENCE OF ENTOMOPATHOGENIC FUNGI AGAINST THE

GREAT SPRUCE BARK BEETLE, *DENDROCTONUS MICANS* (KUGELANN)

(COLEOPTERA: SCOLYTIDAE)

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Twelve fungal strains including *Lecanicillium muscarium* (Petch.) Zare and Gams, *Isaria farinosa* (Holmsk.) Fr., *Fusarium* sp., *Beauveria bassiana* Sensu Lato and *Beauveria* sp. were isolated from larvae and adults of *D. micans*. In addition, virulence of these isolates against this pest was determined. Conidia suspensions of 1106 conidia mL-1 were applied to larvae and adults. The highest mortality and mycosis for larvae were obtained from isolate ARSEF 9271 (*Beauveria bassiana*) with 90% mortality and mycosis within 10 days. ARSEF 9271 also produced 93% mortality and mycosis in adults. On the other hand, the highest mortality and mycosis for adults were obtained with isolate ARSEF 9272 (*Beauveria* sp.), with 100% mortality and 80% mycosis within 10 days. These results indicate that isolates ARSEF 9271 and ARSEF 9272 seem to be the most promising potential fungal biocontrol agents against *D. micans*.

**Key Words**: *Dendroctonus micans*, Entomopathogenic fungi, *Beauveria* sp; Microbial control