

**Title: VIRULENCE OF ENTOMOPATHOGENIC FUNGI FOR LARVAE OF *Galleria mellonella* (Lepidoptera: Pyralidae) and *Tenebrio molitor* (Coleoptera: Tenebrionidae)**

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**Summary:**

The entomopathogenic fungi varies considerably in his action and virulence mode. The contamination depends mainly on the adhesion and penetration of the fungus in the host's integument. A variety of extracellular enzymes are produced during degradation of the insect's integument. The pathogenicity of four species of entomopathogenic fungi on traces of hives, *Galleria mellonella* and the flour worm, *Tenebrio molitor*, was evaluated. Fourth instar larvae were immersed for a minute and a half (1'30 ") at defined concentrations ( $1.0 \times 10^6$ ,  $1.0 \times 10^7$ ,  $1.0 \times 10^8$  and  $1.0 \times 10^9$  spores/mL) using 2 isolated *Beauveria* sp., 1 isolated from *Metarhizium* sp., 1 isolate *Paecilomyces* sp. and 1 isolated from *Fusarium* sp. Subsequently, the treated larvae were transferred to a humid chamber. We used the control of the larvae with distilled water and 0, 1% Tween 80. Observations were made daily for a period of 10 days. Of these isolated Fungi based on virulence half lethal concentration ( $LC_{50}$ ) was  $1 \times 10^6$  spores/mL for B12 strain of *Beauveria* sp. from *G. mellonella* larvae and *T. molitor*, the mortality was 86.7% and 76.7%, respectively. After 5 days of inoculation, the shortest time to kill 50% of the population ( $LT_{50}$ ) of insects was 3 days. The most virulent strains *Beauveria* was presented against the larvae of *G. mellonella*, *Metarhizium* (M6) showed the highest percentage of mortality against larvae *T. molitor* (96.6%) on day 7 after inoculation, the concentration of  $1 \times 10^7$  spores/mL, The  $LT_{50}$  was 2 days. For *Paecilomyces* (P2)  $LC_{50}$  against larvae of *G. mellonella* was  $1 \times 10^6$  spores/mL, with an 80% mortality after 6 days after inoculation, the  $LT_{50}$  was 3 days. The isolated F2 of *Fusarium*  $LC_{50}$  against *T. molitor* was  $1 \times 10^6$  spores/mL and  $TL_{50}$  was 4 days; mortality was 70% after 5 days the inoculated larvae. The *G. mellonella* and *T. molitor* were susceptible to infection with spores of *Beauveria* sp., *Metarhizium* sp., *Paecilomyces* sp. and *Fusarium* sp, isolated from soil.

**Keywords:** Pathogenicity, Mortality, Biological Control, *Beauveria*, *Metarhizium*, *Paecilomyces*.

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