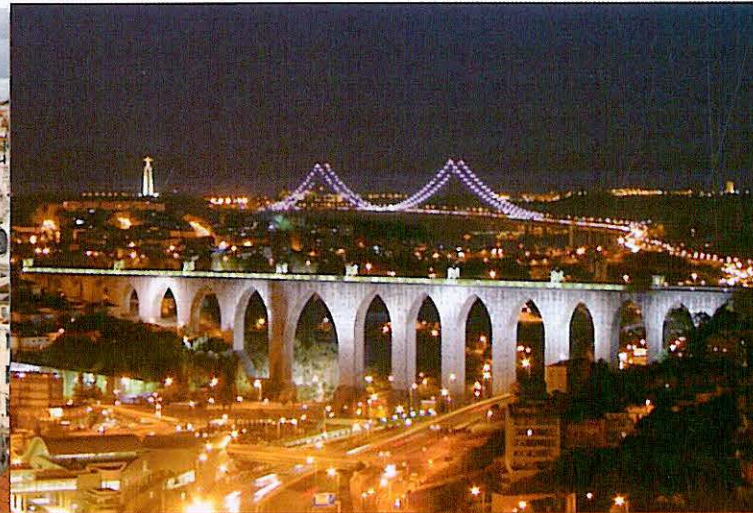




# BOOK OF ABSTRACTS



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## Effect of preservation methods on *Beauveria bassiana* viability

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*Beauveria bassiana* is an important entomopathogenic fungus (EF) that has been currently used as a biocontrol agent of insect pests. Maintaining and preserving *B. bassiana* cultures is essential for the effective evaluation of its potential as microbial agent against insect pest, for biodiversity studies and also for exchange of fungal material between laboratories. There are many possible methods for the preservation of fungal cultures. However, none of them could be universally applied to all fungi. In the present work we intended to evaluate the suitability of different storage methods, in order to maintain the viability of *B. bassiana* isolates. Fungal isolates were obtained from naturally infected *Prays oleae* pupae, collected in different olive groves in the Trás-os-Montes region (Northeast of Portugal). Three isolates were selected and their conidia were stored, either in 30% (v/v) glycerol at -20°C or lyophilized. Subculture on PDA medium was used as control. After one year of storage the vegetative growth, sporulation, spore germination and morphological characteristics of each fungal culture were assessed. The results obtained showed that *B. bassiana* viability depended on both storage method and isolate. Cultures of all isolates were growth after one year of storage in 30% (v/v) glycerol at -20°C, whereas in freeze-drying isolates only two were growth. The number of conidia produced by isolates was significantly lower on cultures preserved by lyophilisation, when compared to cultures preserved in glycerol. However, no significant differences were found on the percentage of spores germinated between the several storage methods tested. Also, there were no macroscopic nor microscopic alterations in mycelial morphological characteristics between isolates preserved in the different storage methods. From these results, freezing at -20°C seems to be the best storage method for *B. bassiana*. However, the viability of the isolates was probably more strain-specific than dependent on the preservation technique used.

**Keywords** Fungus stock preservation, viability, *Beauveria bassiana*, entomopathogenic fungal.