

**Title: ISOLATION OF ENDOPHYTIC MICROORGANISMS FROM THE *Aloe vera* ROOTS IN THE CERRADO DOMAIN**

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**Abstract:**

The *Aloe vera* (L.) Burm has wide distribution in tropical and subtropical regions around the world. It is a medicinal plant with expressive activity, able to provide raw material for several purposes as medicinal, cosmetic and food industry. This plant is naturally associated with microorganisms which interact in mutualistic form and can maximize its productivity and quality of the products obtained. Endophyte community structure within the plant is dynamic and is influenced by abiotic and biotic factors such as soil conditions, biogeography, plant species, microbe-microbe interactions and plant-microbe interactions, both at local and larger scales. This work aimed to isolate and know the endophytic microbiota from the roots of *A. vera*. The isolation of endophytic bacteria and fungi was done from the roots of herbaceous species grown in three environments: nursery, garden and field. Root samples were collected, disinfected, cut into 1 cm fragments and incubated in Petri dishes containing potato dextrose agar. Plates were incubated at 28 °C and the endophytic microorganisms growth monitored during 10 days. The colonization frequency was assessed considering the percentage of fragments with at least one endophytic isolate in relation to the total fragments analyzed. It was equivalent to 100% for plants from the garden and nursery environments and 99% for the field root samples. A total of 340 endophytic isolates were obtained (135 bacteria and 205 fungi isolates). Among the bacteria, 55, 16 and 29% were isolated from the nursery, field and garden, respectively. For fungi it was equivalent to 20, 30 and 50%. Little is still known about this microbial community. Further studies should be focused in order to know this microbial community and their potential benefits to *A. vera* due to its high economic interest.

**Keywords:** isolation, microbial community, babosa.

**Funding agency:** FAPEG