Title: Molecular Diversity of Fungal Endophytes Isolated from *Schinus terebinthifolius*

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Abstract

Schinus terebinthifolius Raddi is a native plant provenient from South America, this species presents a wide usage in the popular medicine, which allows its choice in biological studies, clinical, pharmacological and chemical. The Brazilian pepper tree, the same way as the plants in general, presents colonization by endophytics microorganisms, which inhabit the intercellular regions of plants, without causing visible disease symptom. Despite its importance, there are few records about the endophytic community in *S. terebinthifolius.* Therefore, the aim of the present study was to isolate and characterize endophytic fungi collected from leaves of *Schinus terebinthifolius* as well as antimicrobial activity of different isolates. In this study, 133 endophytic fungi were successfully recovered from *Schinus terebinthifolius* leaves. The characterization of endophytic fungi was performed based on the preserved region internal transcribed spacer (ITS), from different genus and species such as *Diaporthe sp, Diaporthe terebinthifolii, Guignardia vaccinii, Anthostomella leucospermi, Fusarium equiseti, Nigrospora* sp*, Colletotrichum* sp*,. Penicillium commune* e *Epicoccum nigrum.* Among the isolates, the Diaporthe genus was the most frequent. Three isolates demonstrated activity against microorganisms pathogenics. The results of this study indicate that *S. terebinthifolius* serves as a host to numerous endophytic fungi. These fungi could have significance as a source of novel metabolites, and for the fitness of this tree species. The antibacterial activities of endophytic lineages were promising, since of them inhibited the growth of at least one of the tested bacteria and yeasts. The characterization of compounds with antibacterial activity represents a path to elucidate the application of substances produced by endophytics isolated from the leaves of the *S. terebinthifolius.*

Keywords: Fungal endophyte, *Schinus terebinthifolius* , antibacterial

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