Título: Phylogenetic analysis based on ITS1-2 region and diversity of endophytic fungi from *Goniorrhachis marginata* Taub and *Cavanillesia arborea* in Mata Seca

Autores Santos, E.M.[1], Xavier, L.F.S.[1], Martins, A.[1], Alves, J.M.S.[1], Valério, H.M.[1]

Instituição [1]UNIMONTES - Universidade Estadual de Montes Claros (Campus prof. Darcy Ribeiro, 39.401-089, Vila Mauricéia - Montes Claros, MG).

Resumo:

The endophytic fungi, mostly belonging to the phylum Ascomycota, are commonly found in aerial parts of all known plant classes, but can also develop in the root structures. The diversity of endophytic fungi in tropical areas such as tropical dry forests are fundamental to estimate clearly how this diversity varies in different vegetation formations. The aims of this study was to compare the diversity of endophytic fungi isolated of tree species *Goniorrhachis marginata* Taub and *Cavanillesia arborea* at the beginning of leafiness cycle, and in the period leading leaf fall for both species. For this research was carried out DNA extraction, by scraping colony of fungi grown on PDA. For amplification of the target sequence was used nuclear rDNA region from internal transcribed spacer (ITS) with primers ITS-1 and ITS-4 (ITS1F 5'TTGGTCATTTAGAGGAAGTA A3' and ITS4R 5'TCCTCCGCTTATTGATATG C3'). The PCR mixture consisted of 50 ng of DNA, *Taq* DNA polimerase, buffer and 0.1 mM dNTPs and 1 mM each primers. The gene was amplified perform an initial denaturation at 95ºC for 5 min, followed by 35 cycles at 94ºC for 1 min, 56ºC for 1 min and 72ºC for 1 min, with a final extension at 72ºC for 7 min. The sequences were deposited in GenBank NCBI (KP122749 and KP122806). A total of 58 isolates of endophytic fungi were obtained from apparently healthy periods of leafiness leaves and leaf fall were identified and 48 different species of Ascomycetes and one species of Zygomycota. The genera found as endophytes were belonging to *Acremonium, Aspergillus, Cephalosporium, Cladosporium, Colleotrichum, Curvularia, Fusarium, Mycosphaerella, Paecilomyces, Passalora, Penicillium, Phaecocystroma, Phomopsis, Rhizopus and Scopulariopsis.* Regarding the presence of endophytic and leaf age, the endophyte as *Passalora*, *Mycosphaerella*, *Aspergillus* and *Penicillium* were present in both periods, and were most significant on leaves in *G. marginata*, while in *C. arborea* was only reported *Phomopsis* and *Fusarium* present in both periods. Finally, the tree species showed high diversity among fungal isolates, and are characterized by high specificity to these hosts.

Palavras-chaves: Endophytic fungi, diversity, tropical dry forests, ITS1-2 region

Agência de Fomentos: Fapemig, CNPQ