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Molecular biology and ultrastructure of basidiospores of *Ganoderma* species at urban areas in Brazil and Colombia

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Leguminosae are intensively used in distributing vegetation in urban areas in South America. Those trees are very susceptible to attacks by *Ganoderma* species bringing serious consequences to road traffic, falls of electric wiring and risks to the human health. Out of the approximately 80 *Ganoderma* species in the world, about 20 can be found in the neotropical regions. The species are very similar, making it difficult to clearly delimitating them. Based on collections made in the cities of São Paulo and Uberlândia in Brazil, and in Cali, Colombia, in 2012/2013, mainly on *Caesalpinia ferrea, C. peltophoroides, Inga vera, Leucaena leucocephala* and *Tipuana tipu,* 48 *Gonoderma* specimens were isolated in MEA. Than they were submitted to DNA extraction, amplification and sequencing of the ITS region. Those analyses enabled delimitating five *Gonoderma* species (*G. australe, G. gibbosum, G.applanatum* with non-laccate basidiomes and *G. weberianum* and *G. multipileatum* with laccate basidiomes). It is the first time *G. multipileatum* has been mentioned for Brazil and Colombia. Observation of ultrastructures, on its turn, showed three different patterns of ornamentation on the basidiospores' wall: grooves, pores and waves. The SSU and LSU regions will be sequenced to identify the species better. The lack of species sequencing of the gender from neotropical regions at Genbank makes it difficult to understand the group. Thus, this study will contribute to fill up the gap.

Keywords: basidiomycetes, diversity, leguminosae, neotropical

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