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Qualitative and quantitative analysis of lignin degradative enzymes in *Ganoderma* strains under arid conditions

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Abstract
Indian mesquite {*Prosopis cineraria* (L) Druce} is the most important component of the prevailing agro-forestry system in agricultural fields. Recently, this important tree is prone to attack by a soil-borne plant pathogen *viz*., *Ganoderma lucidum* (L) Karst, which is becoming a continuous threat by large scale mortality in these standing trees. *Ganoderma* spp. cause extensive heart rots of standing trees by growing in the central, non-living woody tissue decomposing lignin and cellulose. Lignin, the second most abundant renewable organic polymer on earth, is a major component of wood. Wood and other lignocellulosics are the important resources for the production of paper products. White rot fungi produce various extra cellular enzymes, which can oxidize phenolic compounds creating phenoxy radicals, and non phenolic compounds *via* cation radicals. In this paper, we identified *Ganoderma* species producing more degradative enzymes.

Keywords: *Ganoderma*, Laccase, Lignin degradation, Total antioxidant capacity