

Antifungal activity of allelopathic plant extracts
VI: *In vitro* control of fungal pathogens by aqueous leaf
extracts of *Eucalyptus*

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Abstract

The present research work was designed to evaluate *in vitro* antifungal activity of aqueous leaf extracts of two *Eucalyptus* spp., viz., *E. camaldulensis* Dehnh and *E. citriodora* Hook, against three pathogenic fungi, namely, *Alternaria alternata*, *Drechslera hawaiiensis* and *D. tetramera* to screen effective natural substances as an alternative to chemical fungicides. The test fungal species were grown in 100 ml of liquid malt extract medium, containing 20 ml of each of 0, 10, 20, 30, 40, 50 and 60 % w/v leaf extract of the test allelopathic species. Fungal growth was recorded after 7 and 14 days of incubation. The results of the study exhibited strong antifungal activity of employed extract treatments against all the three pathogens. Generally, the lower concentrations of 10 to 40 % extract exhibited marked antifungal activity resulting in pronounced decrease in fungal biomass production. However, the extent of response to extracts was species specific. *D. tetramera* was found to be more susceptible than *A. alternata* and *D. hawaiiensis*. Amongst the test *Eucalyptus* spp., *E. camaldulensis* exhibited highly pronounced antifungal potential. Higher concentrations of both the *Eucalyptus* species were generally less effective as compared to lower concentrations of the employed extracts.

Key words: *Eucalyptus*, antifungal activity, *Alternaria alternata*, *Drechslera hawaiiensis*, *D. tetramera*.