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# Determination of antifungal activity of some endophytic fungi isolated from *Geophila repens*

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*Geophila repens* is a perennial herb with medicinal properties in the Rubiaceae plant family. Interestingly, the plant is reported to exhibit antifungal, antioxidant, antibacterial, and anticholinesterase activity. Previous studies have shown the antioxidant and antibacterial effects of this plant; however, these effects in relation to its inhabitant endophytes are poorly explored. The present study was conducted to isolate endophytic fungi and investigate the antifungal activity of different extracts of endophytic fungi prepared from *G. repens.* The *G. repens* plants were collected and was authenticated by National herbarium, Peradeniya. In order to isolate endophytic fungi of the plant, surface sterilized stem segments were cultured on PDA media for 10-15 days at room temperature. Four endophytic fungi (GR1, GR2, GR3 & GR4) were isolated and morphologically identified (*Trichophyton* spp., *Trichoderma* spp, *Aspergillus* spp., *Xylaria* spp, respectively). Ethyl acetate and methanol extracts of these fungi were prepared and each extract was tested for its antifungal activity and results were obtained by the mean of three replicates. Antifungal study was carried out by poison food technique using four endophytic fungi crude extracts of *G. repens* against *Aspergillus* spp., *Rhizopus* spp. and *Penicillium* spp. The intensity of the antagonistic activity was recorded on basis of the size of the growth inhibition from the place where fungus was inoculated to the edge of the spreading fungal mycelium. Remarkably the antifungal activity of four ethyl acetate extracts of endophytic fungi showed that, 80% inhibition of the mycelial growth of *Rhizopus* spp., *Penicillium* spp. and *Aspergillus* spp. at the concentration of 5 mg/ml with the positive control of Nystatin. Comparatively, the antifungal activity of methanol extracts showed poor inhibition (40%) against *Rhizopus* spp., *Penicillium* spp. and *Aspergillus* spp. but still it showed the antifungal activity. The result of antifungal screening showed that different extracts exhibit different extent of antifungal activity against all the fungi tested. All together, these results revealed that the four endophytic fungal strains isolated from *G. repens* has potential antifungal activity and further research is required to isolate and identify the active compounds.

**Keywords:** Antifungal activity, endophytic fungi, *Geophila repens*, poison food technique

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