Antimicrobial and Antiproliferative assay of seven different high altitude medicinal plants of Nepal

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High altitude medicinal plants are significantly rich in secondary metabolites which have great medicinal values. Thus seven different high altitude medicinal plants viz. Genetiana depressa, Rhododendron setosum, Rhodiola spp, Elsholtzia strobilifera, Hedychium spicatum, Eriophyton wallichii, Rheum spp, were chosen as plant samples. From Thin Layer Chromatographic analysis cold methanol and cold petroleum ether were used for extraction process. The chemical constituents present in the extract were tested qualitatively by phyto-chemical analysis. Brine Shrimp bioassay was done to find the cytotoxic effect (LC50) of the extract using various concentrations at interval of 24 hours and 48 hours. Disc diffusion method was used to find the sensitivity of extracts against 13 different pathogenic bacteria and 5 different pathogenic fungi. Anti-proliferative effect of the extract (IC50) was observed in HeLa cell lines.

Key words: Genetiana depressa, Rhododendron setosum, Rhodiola spp, Elsholtzia strobilifera, Hedychium spicatum, Eriophyton wallichii, Rheum spp, LC50, IC50, HeLa, Thin Layer Chromatography