

RESEARCH ARTICLE

ANTIBACTERIAL ACTIVITY OF AERIAL PART OF EXTRACT OF *ELEPHANTOPUS SCABER* LINN.

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Crude petroleum ether, chloroform and methanolic aerial part extracts of *Elephantopus scaber* Linn were investigated for its antibacterial potential against *Staphylococcus aureus*, *Salmonella paratyphi A*, *Klebsiella pneumonia*, *Pseudomonas aeruginosa*, *Shigella sonnei*, *Escherichia coli*, *Salmonella typhimurium* to observe the chemotherapeutic value of the plant. All the extracts showed very good antibacterial activity but the methanolic extract was found to be the most effective against the tested organisms.

Key words: *Elephantopus scaber* Linn, Compositae, Aerial part extract, Antibacterial activity.

INTRODUCTION

The *Elephantopus scaber* Linn, a plant belonging to family 'Compositae', is a rigid herb, usually perennial with short root stock, erect, 15-38 cm high, giving off many stout fibrous roots, stem usually dichotomously branched, strigose with appressed white hairs (**Figure 1**).



Fig. 1. *Elephantopus scaber* Linn (Garg, 2008)

All different parts of the plant like leaf, flower, fruit, root, stem and rhizome are used. However, the activities varies in nature and content in the different parts of the plant. The different parts of the plant are used as astringent, antipyretic, diuretic, laxative, analgesic, anti-inflammatory, in bronchitis, small pox and cancer, in diseases of

blood, skin and heart, anti-diarrhoeal, as a hepatoprotective, antipoison, cardiotonic, alexipharmic, aphrodisiac, expectorant, in piles, dysuria, urethrorrhea, cough, swelling, snakebites, haemorrhoids and as a febrifuge (Nadkarni, 1976; Ruppelt *et al* 1991; Poli *et al* 1992; Kirtikar and Basu, 1993; Rajesh and Latha, 2001; Sankar *et al* 2001; Yam *et al* 2008; Muthumani *et al* 2010). Root decoction is specific for haemorrhoids and the paste made is used for skin diseases, in dysuria, diarrhea and dysentery. The paste is also useful in children suffering from fever, crushed root applied to cattle wounds and given to patients with heart and liver trouble. Paste is applied in rheum and roots with mustard oil in amoebic dysentery and roots are used to cure filariasis (Nair and Anisha, 2011). Decoction of root and leaves with cumin and buttermilk is given in dysuria and other urethral discharges or complaints. In pains and piles, leaves are used whereas juice is a good collyrium. Also leaves have good antitumor property (Raj Kapoor *et al* 2002) and fine paste of leaves with honey is used for treatment of pittaja arbuda (Jain *et al* 2009). The flowers are astringent, bitter, sweet ophthalmic, aphrodisiac, expectorant and cure biliousness, liver troubles,