

Antibacterial activity of *Sauropus androgynus* (L.) Merr.

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SUMMARY

The leafy vegetable *Sauropus androgynus* (L.) Merr. which belongs to Family- Euphorbiaceae is commonly used as an effective medicinal herb in the treatment of diabetics, cancer, inflammation, microbial infection, cholesterol and allergy due to its antioxidant effect. In the present study an attempt was made to test the antibacterial effect against *Klebsiella pneumoniae* and *Staphylococcus aureus*. The response of antibacterial effect of the plant varies with the medium of extraction-aqueous or ethanol medium. The ethanol extract was having the higher inhibitory effect than the aqueous medium for both the type of bacteria. The inhibitory effect of plant extract was compared to the effect of antibiotic *Gentamicin* on bacterial culture.

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Key words : *Sauropus androgynus*, *Klebsiella pneumoniae*, *Staphylococcus aureus*, Antibacterial screening, Antibiotic Gentamicin

India is the store house of medicinal plants. About 70% of the rural folk depend on medicinal plants for their health care. Plants are known to contain innumerable biologically active compounds which possess antibacterial properties. Many life saving and essential drugs such as morphine, digoxin, aspirin, emetine, ephedrine etc. are extracted from medicinal plants and introduced into modern therapeutics. The phytochemicals can be extracted from natural source or can be synthesized artificially by drug industries.

Sauropus androgynus has been a popular leafy green perennial vegetable with high level of provitamin A, vitamin B, C, A and K, carotenoids, protein, fibre and minerals like potassium, calcium, phosphorus, magnesium and iron (Fletcher, 1998). It is also known as Chekkurmanis or Sweet leaf bush or tropical asparagus. The dark green leaves provide a rich source of chlorophyll which is a valuable blood building element, cell rejuvenator, beneficial to blood circulation, and for regular bowel elimination. Mathew (2000) and Kumaran (2003) analyzed the nutritive value of leafy vegetables in Kerala and indicated that they are rich in various micro nutrients and phytochemicals having antioxidant properties which offer

protection against heart disease and certain types of cancer (Saxena, 1999). *S. androgynus* is identified as potentially rich source of dietary flavonoids and antioxidants (Andarwulan *et al.*, 2010). According to Pullaiah (1999) *Sauropus* has a number of medicinal uses. Powdered roots and leaves are reported to be used as poultice for ulcers in the nose. The juice of the leaves mixed with the roots of *Punica granatum* and the leaves of *Jasminum sambac* is used in eye troubles. High blood pressure is lowered by eating raw leaves. Leaves are given as vegetable to nursing mothers to stimulate breast milk production. In lactating sheep also it induced milk production (Superayogy, 2000). It is also beneficial to cure anemia. It is suitable to prevent tiredness, to promote absorption from alimentary tract and to prevent chronic cardiovascular diseases.

The present study is concentrated to analyze the antibacterial activity of *Sauropus androgynus* taking *Klebsiella pneumoniae* and *Staphylococcus aureus* as experimental organisms.

MATERIALS AND METHODS

Glasswares:

Petri plates, conical flasks, test tubes, beakers, glass rods etc were used for the study. All these were washed thoroughly, dried and then sterilized in an autoclave.

Other requirements:

Autoclave, laminar airflow chamber, hot air oven, inoculation loop, Bunsen burner was unavoidable. In addition to these, filter paper discs, swabs, distilled water;

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