

ANTIBACTERIAL ACTIVITY OF EXTRACTS OF ARTEMESIA ANNUA

A. Ravi Kumar¹ and KM. Subbu Rathinam²

¹Department of Pharmacognosy, Bapatla College of Pharmacy, Bapatla- 522 101, Andhra Pradesh, India.

²Department of Zoology Raja Serfoji Government College Thanjavur- 613 005, Tamil Nadu, India.

ABSTRACT

Artemesia annua is used as having medicinal values in traditional medicine. The Antibacterial activity was carried out using Chloroform and Ethylacetate Extract by Agar Well Diffusion Method. Phytochemical study was carried out to find the presence of Carbohydrates Glycosides Tannins and Alkaloids. Zone of Inhibition was observed and it is concluded that the extracts of the plant *Artemesia annua* inhibit growth of bacteria.

Keywords: Antimicrobial activity Plant Extracts, *Artemesia annua*.

INTRODUCTION

The plant *Artemesia annua* as per literature review possesses medicinal uses in curing diseases. The plant *Artemesia annua* is found in Southern Parts of India. *Artemesia annua*, also known as sweet wormwood, sweet annie, sweet sagewort or annual wormwood, is a common type of wormwood native to temperate Asia.

MATERIALS AND METHODS EXPERIMENTAL SECTION

The different parts of the plant *Artemesia annua* were collected, authenticated and preserved. It was then dried under shade and then the crude dried powder was obtained and subjected to extraction process.

Extraction

The shade dried plant was extracted using chloroform and later by Ethyl acetate by continuous hot percolation method. The excess of solvent was removed by evaporation under reduced pressure and then stored in a desiccator. The extract was subjected to preliminary phytochemical studies and antibacterial activity evaluation.

Antibacterial Activity Evaluation

The Antibacterial activity of the plant was conducted in vitro using Agar well diffusion Method. Muller Hilton Agar Medium was prepared and it was inoculated with bacterial cultures *Proteus vulgaris*, *S. aureus*, *E. coli* and *K. pneumonia*. Wells were made in each Agar Plate and the plant extracts were tested in the concentration of 100mg/100ml. The test extracts were prepared by dissolving the plant material in dimethyl sulphoxide (DMSO). The standard used is Levofloxacin in the concentration of 10mg/100ml. Inhibition of microbial growth was determined by observing the zone of inhibition both in test as well as the standard.

RESULTS AND DISCUSSION

Phytochemical screening of the plant *Artemesia annua* confirms the presence of Carbohydrates, Glycosides, Alkaloids, Tannins as its principle chemical constituents. The zone of inhibition was clearly observed in the Petri dishes cultured with *Proteus vulgaris*, *S. aureus*, *E. coli* and *K pneumonia* both in test and standard.

Table: Antibacterial activity of Plant Extracts of *Artemesia annua*

Organism	Zone of Inhibition (mm)			
	Chloroform Plant Extract		Chloroform Plant Extract	
	Test	Standard	Test	Standard
<i>P.vulgaris</i>	30	32	22	23
<i>S.aureus</i>	30	31	22	32
<i>E.Coli</i>	35	33	24	30
<i>K.Pneumonia</i>	31	31	23	29

The Chloroform extract showed comparable antibacterial activity were as ethylacetate extract showed moderate antibacterial activity. The observed zone of inhibition were given in table in the test sample of chloroform plant extract of organism *P vulgaris S. aureus E coli K pneumonia* respectively . Similarly ethyl acetate plant extract showed a zone of inhibition for organisms *P vulgaris S aureus E coli K pneumonia* Similarly Ethylacetate plant extract showed zone of inhibition were given in table of organisms *P. vularis S aureus E coli K pneumonia* respectively.

CONCLUSION

It is concluded that the plant *Artemesia annua* posses Antibacterial activity of both Chloroform and Ethylacetate extracts tested with Standard Levofloxacin against tested selected Organisms. There is need of study of screening of pharmacological activities of the plant extracts further isolation of new phytochemical constituents.

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