

Research Article

Evaluation of Antimicrobial Activity of Methanolic Extract of the *Pseudarthria viscida* linn

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ABSTRACT

Pseudarthria viscida linn, belonging to the family of fabacea. It is distributed in all over india. It is used in fever, asthma, heart disease, worms, intestinal posion, piles and excessive heat (Nadkarni KM 1976). present study is carried out to determine the anti microbial properties of the methnolico extract of *pseudarthria viscida*.

Keywords: Methanolic extract of *Pseudarthria viscida*, antimicrobial activity, zone of inhibition.

INTRODUCTION

Pseudarthria viscida linn is a semi extract diffuse (Warrier PK 1995) under sharp 60-120cm. which was collected from kolli hills namakkal. *Pseudarthria viscida* linn is indigenous to india, the plant has been repored for its anti diabetic, anti tumor (Gincy M Mathew et al 2007), anti oxidant activities (Vijayabaskarna M et al 2008). Because of its high therapeutic values, we have made an attempt to investigate anti microbial properties of the whole plant of the *pseudarthria viscida* linn.

MATERIALS AND METHODS

PLANT COLLECTION

The whole plant of *pseudarthria viscida* linn were collected and authenticated by the Taxonomist, Raphint Herbarium, St. joeph' college, Tiruchirappalli. The voucher specimen has been deposited (No-TRCP\002\16) in the Department of pharmacognosy, Thanthai Roever college of pharmacy, perambalur, for future refernce. The collected whole plant were subjected to shade drying and the coarse powder is used for extraction and phytochemical analysis.

PHYTOCHEMICAL STUDIES

The plant of *Pseudarthria viscida* Linn reduced to fine powder (# 40 size mesh) and around 300 gms of powder was subjected to successive hot continuous

extraction (soxhlet) with petroleum ether, alcohol. Finally the drug will be macerated with water. Each time before extracting with the next solvent the powdered material will be air dried in hot air oven below 50°C. After the effective extraction, the solvent were distilled off, the extract was then concentrated on water bath and the extract obtained with each solvent will be weighed (c.k. kokate 1998). The various extract of the whole plant of *Pseudarthria viscida* Linn were subjected to chemical tests for identification of its active constituents.

ANTIMICROBIAL STUDIES

The 25, 50, 75 and 100 µg/ml of methanol extract were used to find out the antimicrobial properties using streptomycin, Nystatin (10 µg/ml) as a standard against the various strains of gram positive, negative bacteria and fungi (IP 1985 & Kanan S et al 2010).

The nutrient agar medium was prepared and sterilized by autoclaving at 120°C 15 lbs pressure for 15 minutes then aseptically poured the medium into the sterile petri plates and allowed to solidify the bacterial and fungal broth culture was swabbed on each petri plates using sterile buds. Then wells made by well cutter. The methnolic extract of whole plant were added to each well aseptically. This procedure was repeated for each petri plates then the plates were incubated at

37°C for 24hrs. after incubation the plates were observed for the zone of inhibition.

RESULTS AND DISCUSSION

The plant *Pseudarthria viscida* Linn belonging to the family *Fabaceae*. The present study on the whole plant of methanol extract of *Pseudarthria viscida* Linn the chemical screening show that

the presence of Alkaloids, Carbohydrates, Flavonoids, Proteins & Amino acid, Glycoside, Steroids. The concentration 100µg/ml of whole plant extract *Pseudarthria viscida* Linn has significant antibacterial and antifungal activity. The concentration of 25 & 50 & 75µg/ml of methanolic extract of *Pseudarthria viscida* Linn have moderate antibacterial and antifungal activity (Table no:1 & 2).

Table 1: Anti Bacterial Activity of Methanolic Extract of *Pseudarthria Viscida* Linn

| S.No | ORGANISM | Concentration of methanolic extract added and Zone of inhibition (mm) | | | | Standard |
|------|------------------------|---|---------|---------|----------|----------|
| | | 25µg/ml | 50µg/ml | 75µg/ml | 100µg/ml | |
| 1. | Bacillus megaterium | 10 | 11 | 12 | 12 | 12 |
| 2. | B. subtilis | 10 | 12 | 15 | 18 | 11 |
| 3. | Escherichia coli | - | - | - | 10 | 14 |
| 4. | Enterobacter faecalis | - | - | - | 10 | 13 |
| 5. | Proteus vulgaris | 10 | 12 | 13 | 14 | 12 |
| 6. | Pseudomonas aeruginosa | - | - | - | 10 | 18 |
| 7. | Staphylococcus aureus | - | - | - | 10 | 14 |

Table 2: Anti Fungal Activity of Methanolic Extract of *Pseudarthria viscida* linn

| S.No | ORGANISM | Concentration of methanolic extract added and Zone of inhibition (mm) | | | | Standards |
|------|------------------|---|---------|---------|----------|-----------|
| | | 25µg/ml | 50µg/ml | 75µg/ml | 100µg/ml | |
| 1. | Aspergillusnigar | - | 10 | 11 | 12 | 12 |
| 2. | A.fumigatus | - | 10 | 11 | 12 | 11 |
| 3. | Candida albicans | 10 | 11 | 12 | 13 | 12 |

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