

NOTE**Isolation of Potential Antifungal Agent Olean-12-ene-28-oic Acid-3-O- α -L-arabinofuranosyl(1 \rightarrow 2)- α -L-rhamnopyranosyl(1 \rightarrow 4)-O- β -D-glucoopyranoside from the Seeds of *Jussiaea suffruticosa***

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The seeds of *Jussiaea suffruticosa* is plant were extracted with petroleum ether and methanol by using reflux condenser. The viscous mass extract from methanol yields a light yellow colour compound which responded to positive test for saponin. The antimicrobial activity of saponin was tested to poses high activity for inhibiting the growth of fungi.

Key Words: *Jussiaea suffruticosa*, Saponin, Antifungal agent.

It is well known that the plant extracts destroy the microorganism. *Jussiaea suffruticosa*¹ (belongs to natural order oragraceae) is an indigenous plant and is described by the Ayurvedic system of medicine to be useful as tonic, stomachic, diuretic and diaphoretic².

Due to its great medicinal importance it was taken up for phytochemical investigation for its antifungal activity. The present communication reports the activity of the saponin which has been isolated from the seeds of *J. suffruticosa*.

The seeds of *J. suffruticosa* were extracted with petroleum ether (40-60°C) in a soxhlet apparatus and the defatted seeds were extracted with methanol by a reflux condenser. The methanol extract was concentrated to a viscous mass. The viscous mass when worked up by column chromatography yielded a light yellow colour compound which responded to positive test for saponin m.f. C₄₇H₇₆O₁₆, m.p. -221-2°C, m/z 896 and was identified as olean-12-ene-28-oic acid-3-O- α -L arabino furanosyl (1 \rightarrow 2)-O- α -L rhamnopyranosyl (1 \rightarrow 4)-O- β -D-glycopyranoside.

The antimicrobial activity of saponin was tested³ on the following fungi. *Aspergillus niger*, *Aspergillus flavous*, *Asplgillus fumigatus*, *Fusarium oxysporum*, *Microsperumum gypsum*, *Pencillium notatum*, *Pencillium digitalium* and *Rhizophus stolonifer*.

The antifungal activity was studied by Saborauds broth which was used for inoculum. The media was prepared by adding 2% agar to the Saborauds broth while the antimicrobial activity was studied by using the oxide nutrient broth for making the inoculum. The agar media was prepared by adding 2% agar to the oxide nutrient broth.

The antimicrobial activity was studied by paper disc diffusion plate method. The sterile discs (6 mm in diameter) were prepared from the discs of highly absorbant paper.

An aqueous solution of saponin in different dilution was prepared and the paper discs dipped in it, were placed over the seeded medium and there after incubated for 75 h.

The experiments were performed in triplicate and average zone of inhibition recorded in Table-1:

TABLE-1

Fungi	Diameter of zone of inhibition (mm)			Mycostation (15 mg/mL)
	1:5	1:10	1:15	
<i>Aspergillus niger</i>	6.0	8.0	14.1	15.5
<i>Aspergillus flavous</i>	9.0	11.0	13.0	16.0
<i>Aspergillus fumigatus</i>	9.5	12.5	12.0	18.4
<i>Fusarium oxysporium</i>	5.0	6.5	10.0	16.0
<i>Microsperum gypsum</i>	10.0	12.0	13.0	14.2
<i>Pencillium notatum</i>	4.5	5.0	5.5	10.4
<i>Pencillium digitalum</i>	4.0	4.5	5.0	10.0
<i>Rhizophus stolonifer</i>	8.0	8.5	9.0	12.0

The saponin was found to possess high activity for inhibiting the growth of *Aspergillus nigher* (zone of inhibition 14.1), *Aspergillus flavous* (13.0) and moderate activity against *Aspergillus fumigatus* (12.0), *Fusarium oxysporum* (10.2), *Microsperum gypsum* (13.0) and low activity against *Pencillium notatum* (9.5), *Penicillin digitalum* (5.0) and *Rhizophus stolonifer* (9.0).

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