JASMINUM AURICULATUM – AN OVERVIEW

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Abstract:
In the history of medical systems we come across many plants, used by physicians of that time as agent for the treatment of diseases. In consideration to their active chemical principles and medicinal properties these find use in the traditional systems like Ayurveda, Siddha and Unani. Each of these plants has its own therapeutic use(s). Some of these therapeutic uses have been scientifically proved while others need to be proved. One of such plants is Jasminum auriculatum. It belongs to family Oleaceae. It is a fit candidate to lay claim amongst the best medicinal plants in the country. So far this plant has been studied for its chemical constituents and few of its pharmacological activities. The herb attracts the attention due to remarkable variations in its chemical constituents and uses. A number of researchers have attempted to substantiate the claims of the plant and succeeded in proving some. Still many of the traditional uses of this plant are not backed by scientific proof(s). This article features the review of traditional uses, botany, chemical constituents and pharmacological activities of Jasminum auriculatum. This will hopefully, support and helps the future research on the plant.

Keywords: Jasminum auriculatum, Ethnobotany, Phytochemistry, Pharmacology

Introduction:
In last few decades, the field of herbal medicine has gained popularity, in both the developed and developing countries. WHO has reported that nearly 65–80% of world’s population in developing countries depends on the traditional medicine for their primary health care and treatment of ailments. The reasons for wide acceptance of herbal medicines are of their being comparatively less expensive, lesser side effects and being natural in origin and hence socially and culturally acceptable [1]. Jasminum auriculatum is a shrub used in traditional medicines, Ayurveda, Siddha and Unani [2, 3]. Studies conducted on it show that it possess beneficial effects as aphrodisiac, antiseptic, anthelmintic, aromatherapy,

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cardiotonic, corns, diuretic, deobstruant, emollient, hyperdipsia, leprosy, nephrolithiasis, odontalgic, ophthalmopathy, stomatopathy, strangury, suppurative, skin diseases, thermogenic, urolithiasis, ulcers and wounds \(^2\). The present review highlights the various folk, ayurvedic uses, pharmacognostical, phytochemical and pharmacological studies conducted on \(J. \text{auriculatum}\) and also the unexplored potential of the plant.

**Taxonomical Classification:** \(^6\)

Kingdom: Plantae  
Subkingdom: Tracheobionta – Vascular plants  
Super division: Spermatophyta – Seed plants  
Division: Magnoliophyta – Flowering plants  
Class: Magnoliopsida – Dicotyledons  
Sub class: Asteridae  
Order: Scrophulariales  
Family: Oleaceae – Olive family  
Genus: Jasminum – jasmine  
Species: \(auriculatum\) vahl

**Classical Names:** \(^3,5,7\)

**Sanskrit:** Yoothika; **English:** Needle flower  
**Jasmine; Hindi:** Juhi, Jui; **Telugu:** Adavimolla, Ettadavimolla, Magadhi; **Tamil:** Usimalli-gai Udigai,Usimalli; **Kannada:** Kadarmallige Soojimallige, Madhyanamallinge, Vasantmulle; **Bangla:** Jui, Gunica Umbustha, Gunica,Yodthika  
**Marathi:** Jai, Jui; **Gujarati:** Juhi; **Malyalam:** Juthika, Bolidda, Soochimulla, Toosimulla

**Synonyms:** \(^5\)

Sumanaaa, Bahupushpee, Ganikaa, Ambasthaaa, Heampushpikaa, Malle, Mokggu, Mallai, Juhi, Jui and Ambus mallige

**Ayurvedic Properties:** \(^5\)

Rasa: Tikta, Kashaya, Madhura  
Guna: Laghu  
Veerya: Sheeta  
Vipaaka: Katu  
Actions: Hridya, Pittaghna, Kaphavaatala, Vranahara, Mukharogahara, Dantrogaapaha, Akshirogaghna, Vishaapaha.

**Botanical Description:** \(^3,8\)

It is spreading woody shrub growing up to 2 meters in height, native to Deccan Peninsula, Circars and Carnatic extending south wards to Trvancore. It is commercially cultivated for its fragrant flowers mainly in Ghazipur, Jaunpur, Farrukhabad and Kanauj districts of U.P, Bihar and Bengal. It is a scandent, pubescent or velvety shrub with grey -pubescent branchlets having shiny leaves with minute lateral leaflets; leaves are mostly simple and occasionally trifoliate with the two lower leaflets small or reduced to auricles or frequently wanting, central leaflets broadly ovate, acuminate or rounded, main nerves few inconspicuous, petioles very short. The plants produce numerous star shaped white scented blooms and are very good as loose flowers in paniculate cyme or trichotomous paniculate
cymes, corolla lobes 5-8; fruits globose, black. It bears flowers from spring to summer and in rainy season.

**Parts used:** [2, 3]

Leaves, Roots, Flowers

**Chemical constituents:**

**Leaves** - Lupeol[9], Epilupeol, Hentriacontane, n-triacontanol[10], Jasmino[11], malvalic acid, C<sub>20</sub>-C<sub>34</sub> Hydrocarbons, iso-C<sub>26</sub>, C<sub>28</sub>, C<sub>30</sub> wax alcohols, palmitic acid, stearic acid, linolenic acid, linoleic acid, xylitol, inositol, and sorbitol[12], Jasmone[13], D-mannitol[14], Cis-Jasmone, dihydrojasmone[15].

**Flowers** - Indole, methyl-anthranilate[16] Benzyl acetate[17], Linalool.

**Medicinal Uses:**

**Traditional Uses:** [2, 3, 4]

The roots are useful in skin diseases especially for ring-worm. The flowers are fragrant, bitter, acrid, astringent, cardiotonic, diuretic, depurative, sweet and refrigerant. They are useful in burning sensation, hyperdipsia, odontalgic, thermogenic, aphrodisiac, antiseptic, emollient, anthelmintic, ulcers, stomatopathy, ophthalmopathy, urolithiasis, nephrolithiasis, strangury, deobstruant, suppurative, leprosy, skin diseases, wounds, corns and aromatherapy.

**Scientifically Reported Uses:**

**Wound Healing Activity:**

The juice of the leaves in the form of jelly, on local application to a linear-uniform excised wound in the rats was found to promote wound healing, as assessed by histological, biochemical and contraction rate studies[18].

The fresh juice of the leaves was found to increase and early gain of the tensile strength in the treated linear wounds in rats. The study indicated that early collagenisation contributed to improved tensile strength in the early phase of healing[19].

2.5% Leaves extracts injected intramuscularly showed wound healing promoting activity on musculo-peritoneal wounds on the abdomen of rats[20].

Ghee medicated with *J. auriculatum* was found to accelerate the healing time of second degree burn wound in rats by 30% where as with unmedicated ghee was found to be 20%[21].

**Antilithiatic Activity:**

The aqueous and alcoholic extracts of flowers of *J. auriculatum* were found to be effective against ethylene glycol induced lithiasis by reducing and preventing the growth of urinary stone[22].

**Diuretic Activity:**

The aqueous and alcoholic extracts of flowers of *J. auriculatum* exhibit diuretic effect at dose of 250mg/kg body weight by increasing the total volume of urine and concentrations of potassium and sodium salts in urine as compared to Frusemide. The alcoholic extract showed more effect (94.81%) as compared to aqueous extract (91.81%)[23].
Conclusion:
In recent years, emphasis of research has been on utilizing traditional medicines that have long and proven history of treating various ailments. Extensive literature survey has revealed that ‘Juhi’ has a long history of traditional uses for wide range of diseases. Root leaves and flowers of this plant are widely used to cure a number of diseases. It has been experimentally proved that J. auriculatum possess, wound healing, anti-lithiatic and diuretic activities. So, further studies need to be carried out to explore J. auriculatum for its potential in curing and treating disease like deobstruant, leprosy, nephrolithiasis, odontalgic, ophthalmopathy, strangury.

References:
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Phytoconstituents of *Jasminum auriculatum*: