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A Review on *Sumbulteeb* (*Nardostachys jatamansi* DC)

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Abstract

Sumbulteeb (*Nardostachys jatamansi* DC) is a perennial herb containing a cylindrical rhizome covered with brown to deep greyish fibres It is found in India and Bhutan and its species is strewn in Himalayas, Nepal, Pakistan, Tibbet, Bhutan, and Sikkim between 3000-to-4500-meter elevation. The dried rhizomes, dark brown 2.5-7.5 cm long, cylindrical, covered with reddish brown fibres forming a network with a skeleton of seedling leaf bases, brittle, internal colour reddish brown, strongly aromatic taste acrid, slightly bitter.

Key words: Sumbulteeb, *Nardostachys jatamansi* DC, Review, Unani

1. INTRODUCTION [1, 2]

The term Sumbul means aroma and it is of three types:

a. Sumbulteeb
b. Sunbulhindi
c. Sumbul jail

All mentioned Jatamansi are found in India.The best Sumbulteeb is that which has more hair and yellowish in colour, aroma like nagarmotha whereas Sumbuteeb causes abrasions or cut on the tongue.

2. NOMENCLATURE [1, 2, 3]

Botanical Name: *Nardostachys jatamansi* DC

Vernacular Names

English: Spikenard

Urdu: Sumbulutteeb

Arabic:	Sumbul-e-hindi, Submulasafeer
Persian:	Sumbulutteeb
Hindi:	Jatamansi, Balcharh
Sanskrit:	Jaila, Mamsi, Jaa

3. GEOGRAPHICAL DISTRIBUTION

It is found in India and Bhutan and its species is strewn in Himalayas, Nepal, Pakistan, Tibbet, Bhutan and Sikkim between 3000 to 4500 meter elevation.[4] Sumbulteeb is a perennial herb containing a cylindrical rhizome covered with brown to deep greyish fibres. The fibres came into existence due to an accumulation of skeletonsat the base.[1, 5, 6]

4. MORPHOLOGICAL DESCRIPTION

The dried rhizomes, dark brown 2.5-7.5 cm long, cylindrical, covered with reddish brown fibres forming a network with a skeleton of seedling leaf bases, brittle, internal colour reddish brown, strongly aromatic taste acrid, slightly bitter. [1, 3, 6]

5. PARTS USED [1, 2, 7]

I. Root
II. Dried rhizome
III. Oil of dried rhizome

6. TEMPERAMENT [7, 8, 9]

Hot and Dry 2^0
Hot 1^0 and Dry 1^0
Hot 1^0 and Dry 2^0

7. DOSE [8, 9, 10]

I. 4.5 masha
II. 3-6 grams
III. 2-5 masha
IV. 2 masha

8. SUBSTITUTE [1, 8]

I. Sumbulromi
II. Tejpaat
III. Doda
IV. Iskhar makki

9. ADVERSE EFFECT [1, 8]

Renal system

10. CORRECTIVE [2, 4, 8]

I. Aspagol
II. Tabasheer
III. Kateera

11. CHEMICAL CONSTITUENTS

Volatile oil of Jatamansi possesses an alcohol and its isovaleric ester, a saturated bicyclic sesquiterpene ketone, named jatamansone, and jatamansi.[5] *N. jatamansi*has been discovered with both volatile and non-volatile constituents. Sesquiterpenes and coumarins present in considerable amount in the, roots of Sumbulteeb plant are mainly responsible for its essential oil. Sesquiterpenes contribute to the major portion of the volatile compounds while coumarins, lignans, and neolignans.[11]

Alkaloids form the major components of the non-volatile extracts. Major sesquiterpenes are jatamansone and valerone while the rest of sesquiterpenesarejatamansol,jatamansic acid, dihydrojatamansin, nardosatchone· Some minorcontributors like jatamol A, jatamol B, nardosinone, jatamansinone, valeranal, seselinnardostachyins, seychelane, seychellene, cuomarin and xynthogalin have also been reported.[12]

In addition, it contains epoxy iridoidesters, amino acids (GABA,tyrosine, arginine), alkaloids, phenolic acids, flavanoids. Carbohydrates, tannin, steroid,sterols, mucilage, gums, terpenes and glycosides. The compounds responsible for the pharmacologic activities of the plant have not been completely identified;however two main groups of valerenic acids and valepotriatcs would be more responsible for the plant activity. Hydrophilic valcrenic acids arc from sesquiterpenoids whereas hydrophobic valepotriates are from monoterpenoids.[13]

12. MEDICINAL PROPERTIES [14, 15, 16, 17, 18, 19, 20, 21]

I. Anti-inflammatory
II. Hepato-tonic
III. Nervine-tonic
IV. Stimulant
V. Carminative
VI. Cardio-tonic
VII. Diuretic
VIII. Stomachic
IX. Lithotryptic
X. Anticmetic

XI. Antacid

XII. Antispasmodic

XIII. anti-diaphrotic

XIV. blood purifier

13. MEDICINAL USES [22, 23, 24, 25, 26]

I. Palpitation

II. Epilepsy

III. Ascites

IV. Asthma

V. Bronchitis

VI. warm-e-rahim (endometritis)

VII. Warm-e-Maida (Gastritis)

VIII. Warm-e-Kabid (Hepatiits)

IX. Duwar (vertigo)

X. Ghashi (Syncope)

XI. Zoaf-e- dimagh

XII. all types of *yaraqan*

XIII. relieves the *sudda*(obstruction) of uterus

XIV. alleviates halitosis

XV. chloasma.

XVI. cognitive and neurological disorders

XVII. seizures.

14. SOME IMPORTANT COMPOUND FORMULATIONS [9, 10, 11, 14, 15]

I. Dawaulkurkum

II. KhamiraAbresham Hakeem Arshadwala

III. Jawarishjalinoos

IV. Majon-e-Dabidul ward

V. Dawaulmisk moatadil

VI. Habb-e-ayarij

VII. Labob-e-kabeer

VIII. Mufarreh yaqooti

IX. Barshasha

15. RESEARCH STUDIES

N. jatamansi essential oil demonstrated fungi static activity against *Aspergillus flavus, Aspergillus niger* and *Fusarium oxysporum, Mucor fragilis, Rhizopus stolonifer* and the oil was found to be fungi static or fungicidal to one of the molds, depending upon the concentration.[25]

Root extract of jatamansi also possess hepatoprotective activities and it has been proved by several studies.[26]

Valeranone prolonged barbiturate anesthesia, impaired rotarod performance, inhibited electroshock convulsions, potentiated the hypothermic effects.[27]

Rao VS *et al.* observe the effect of ethanolic extract of the roots of *N. jatamansi*DCfor its anticonvulsant activity and neurotoxicity, alone and in combination with phenytoin in rats.[28]

Salim S *et al* observed neuroprotective effect of *N Jatamansi.* Pre treatment with an alcoholic extract of *N jatamansi*DC dosed at 250 mg/kg of for 15 days protected rats against focal ischemia caused by middle cerebral artery occlusion.[29]

Parkinson's disease is the most common neurodegenerative disease, and oxidative stress has been evidenced to play a vital role in its causation. It was evaluated that the ethanolic extract can slow the neuronal injury parkinson's rats.[30]

German R *et al* investigated sesquiterpene valeranone (Yatamanson) isolated from *Nardostachys jatamansi* DC rhizomes for tranquilizers activity in rodents and significantly the prolongation of barbiturate hypnosis, the impairment of rotarod performance, as regards the hypotensive property was demonstrate.[31]

The antiperoxidative property of jatamansi was investigated as an iron-induced lipid peroxidation model in rat liver, quantified by thiobarbituric acid reactive substance (TBARS) content.[32]

The extract of jatamansi has been shown to a significant hypoglycemic activity. It decreases glucose level significantly in diabetic and non-diabetic rats as compared torespective controls.[33]

Animal studies done on jatamansone have reported anti estrogenic activity, moreover, jatamansone have reported antiarrhythmic and antihypertensive activity. Anti asthmatic activity, nematicidal activity, and antibacterial were also reported.[34, 35, 36]

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