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# **Review Article**

## REVIEW OF SNUHI (EUPHORBIA NERIFOLIA LINN.) W.S.R. TO ITS RASAPANCHAKA AND KARMA

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# **ABSTRACT**

**S**nuhi (Euphorbia nerifolia Linn.) is a large branched, erect, glabrous, succulent, xerophytic shrub occurring wild on rocky ground throughout central India and extensively grown as a hedge plant. Euphorbia nerifolia Linn. belongs to family Euphorbiaceae, commonly known as Sudha, Snuk in Sanskrit; Thuhar, Sehunda in hindi and Thor, Kantalo in Gujarati. Snuhi, Snuhi ksheera and its compound formulations are widely used in Ayurvedic classics to treat vitiated conditions. It possesses Katu-Tikta Rasa (taste), Guru-Tikshna Guna (properties), Ushna Virya (potency) and Katu Vipaka. It's Rasapanchaka and therapeutic properties are explained in different Samhita and Nighantu. It has various proved pharmacological actions like Immunomodulatory, wound healing, Anti-Bacterial activity, Hepatoprotective activity, Anti-inflammatory, Analgesic, Antioxidant, Diuretic, Antipsychotic activity, Anti-diabetic and anti-hyperlipidemic activity. Snuhi Kshara is prepared by processing the ash of Snuhi Panchanga and it is used for various therapeutic purposes. In present study, an attempt to collect information regarding Snuhi and its Pharmacological activities from available classical literature and previous research articles in a systematic manner, which can be useful in conducting further clinical trials.

KEYWORDS: Snuhi, Euphorbia Nerifolia, Pharmacological action, Rasapanchaka.

### INTRODUCTION

n Ayurveda, substances of natural origin, including whole plant or their part, animal parts and minerals are used as medicine either alone or in combination. Snuhi and its compound formulations are widely used in Ayurvedic classics to treat vitiated conditions. Snuhi (Euphorbia nerifolia Linn.) is a large branched, erect, glabrous, succulent, xerophytic shrub occurring wild on rocky ground throughout central india and extensively grown as a hedge plant 11. Euphorbia nerifolia Linn. belongs to family Euphorbiaceae, commonly known as Sudha, Snuk in Sanskrit ; Thuhar, Sehunda in hindi and Thor, Kantalo in Gujarati [ii]. Rasaratnasamucchaya mentioned eleven types of Upavisha and Snuhi is one among them [iii]. Upavisha are the group of drugs which were less toxic in nature and not so lethal but produce certain toxic symptoms on consumption. According to Acharya Charaka even an acute poison becomes an excellent drug if it is administered properly and vice-versa [iv]. According to Ayurveda it is clasiified under Sthavara Visha Varga, and Upavisha Varga. According to modern, it is classified as Irritant organic vegetative poison. Brihat trayi highlighted its importance and categorized under Virechana, Shat Shodhana Vriksa, Ksirtraya; Adhobhagahara, Shyamadi and Nikumbhadi (Virechana) Varga respectively [v]. Acharya Charaka mentioned it in Virechana Dravya and give its twenty Virechana formulations in Sudha Kalpa Adhyaya of Kalpasthana [vi]. Snuhi Kshara which is prepared by processing the ash of Snuhi Panchanga [vii] is used in Arsha, Kustha and Bhagandara. It's

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*Rasapanchaka* and therapeutic properties are explained in different *Samhita* and *Nighantu*. Hence, in this article an attempt has been made to collect information regarding *Snuhi* and its Pharmacological activities from available classical literature and previous research articles in a systematic manner, which can be useful in conducting further clinical trials.

#### Aim of Study:

To review the Pharmacological action (*Rasapanchaka*) and *Karma* of *Snuhi* (Euphorbia nerifolia Linn.)

#### MATERIALS AND METHODS

In this article, information of *Rasapanchaka* (Pharmacological action) are compiled and analyzed from *Rajanighantu*, *Bhavaparkasha nighantu*, *Madanpal nighantu*, *Dhanvantari nighantu*, *Priya nighantu*, *Nighantu Ratnakara*, *Nighantu Adarsha* and Ayurvedic Pharmacopeia of India.

 Guna
 : Guru, Tikshana [viii].

 Vipaka
 : Katu [ix]

 Virya
 : Ushna [x].

 Karma Acc to A.P.I: [xi]

 Tikshnavirechana, Bhedana and Aama-kapha-vata hara

#### Chemical Constituents:

Resin, gum and triterpenes [xii].

Major : Cycloartenol, euphol

**Others** : n-Hexacosanol, euphorbol hexacosanoate, pelargonin 3, 5diglucoside, tulipan 3,5 diglucoside. 12 -deoxy-4B-hydroxyphorbol-13dodecanoate-20-acetate, friedelan-3 alpha-ol, friedelan-3beta-ol, glut5(10)-en-1-one, 24-methylenecycloartenol, neriifolione, nerifoliol, nerifoliene, taraxerol <sup>[xiii]</sup>.

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# Pharmacological Activities:

- Analgesic activity [xiv]
- Anti-inflammatory activity [xv]
- Antioxidant activity [xvi]
- Anti-Bacterial activity [xvii]
- Antipsychotic activity [xviii]

- Anti-diabetic and anti-hyperlipidemic activity [xix]
- Anti-carcinogenic activity in renal carcinogenesis [xx]
- Diuretic activity [xxi]
- Hepatoprotective activity [xxii]
- Immunomodulatory activity [xxiii]
- Wound healing activity [xxiv]

## Table No. 1: Showing Rasa of Suhi in different classical texts

	RASA	R.N	M.N	K.N	D.N	P.N	N.R	B.N	N.A	A.P.I
	KATU	-	+	+	-	-	+	+	+	+
	TIKTA	-		+	+	-	-	-	+	+
AT	Deinsigherster	MN Mada		ALL IZ NO	lead day. Non	Lante DN	Dhamman	and ada has		

R.N –Rajanighantu, M.N- Madanpal nighantu, K.N- kaidev Nighantu,D.N-Dhanvantari nighantu, P.N- Priyanighantu, N.R- Nighantu Ratnakar, B.N- Bhavaparkash nighantu, N.A- Nighantu Adarsha,A.P.I- Ayurvedic Pharmacopeia of India.

#### Table No. 2: Showing Therapeutic uses of Snuhi in different classical texts.

Sr. No.	Name of Classical text	Therapeutic Uses					
1	Charak Samhita <sup>[xxv]</sup>	Pandu, Udarroga, Gulma, Kushtha, Dushivisha, Shavathu and Madhumeha.					
2	Sushruta Samhita [xxvi]	Dushtavrana, Arsha, Bhagandara, Kushtha and Udarroga.					
3	Yogratnakara <sup>[xxvii]</sup>	Rechana, shulaghana, Ashthilika, Adhaman, Gulma, Udararoga, Pliharoga, Kushtha, Unmada, ashmari and Panduroga.					
4	Raja nighantu <sup>[xxviii]</sup>	Pitta disorder, Poisons, Kustha, Vata disorders, Prameha. Snuhi milk is indicated in Vataroga, poisons, adhmaan, Gulmaroga and Udararoga.					
5	Madanpal nighantu <sup>[xxix]</sup>	Shoola, Aam, Asthilika, Adhaman, Gulma, Udararoga, Vataparkopa, Dushivisha, Plihavriddhi, Kustha, Unmada, Ashmari and Pandu.					
6	Kaiyadeva Nighantu <sup>[xxx]</sup>	Rechana, Vata, Shoola, Aamdosha, Kapha, Gulma, and Udara roga. Snuhi milk is indicated in Gulma, Kustha, Udara roga and best Virechaka drug.					
7	Dhanvantari nighantu <sup>[xxxi]</sup>	Dushtavranahar, Ashmarihara, Vishahar, adhaman, Gulma and Udararoga					
8	Priya nighantu <sup>[xxxii]</sup>	Kapha and Vata disorders, Tikshnavirechaka, Udararoga, adhmana and Vivandh					
9	Nighantu Ratnakaa <sup>[xxxiii]</sup>	Pitta disorder, Poisons, Kustha, Vata disorders, Prameha. Unmada, Kustha, Piles, Shotha, pliha vriddhi, visharoga.					
10	Bhavaparkash nighantu <sup>[xxxiv]</sup>	Shoola, Ashthilka, Adhamana, Kapha, Gulma, Udararoga, Unmada, Meha, Kushtha, Arsha, Shoth, Medoroga, Pandu, Ashmari, Vranashothahar, jwara, Visha, Gulma and Dirgharoga.					
11	Shodala Nighantu [xxxv]	Karnashoola, Udararoga, Moodagarbha, Krimidanta.					
12	Vaidyamanorama [xxxvi]	Arsha, Vrana,					
13	Shastrayoga <sup>[xxxvii]</sup>	Dushta Vrana					
14	Quality Standards of Indian Medicinal Plants Vol. 11 [xxxviii]	Wound healing and inflammatory disorders.					
15	A.P.I [xxxix]	Gulma, Udararoga, Meha, Kustha, and Shotha.					

#### DISCUSSION

**S***nuhi* possesses *Katu-Tikta* Rasa (taste), *Guru-Tikshna Guna* (properties), *UshnaVirya* (potency) and *Katu Vipaka*. Acc. to Ayurvedic Pharmacopeia of India *Snuhi* is *Tikshnavirechana* and *have Bhedana* and *Aama-kapha-vatahara Karma*. Cycloartenol and euphol are the major active constituent of *Snuhi*. On reviewing Classical literature it is found that *Snuhi* is useful in treatment of *Shoola,Aam*, *Asthilika*, *Adhaman*, *Gulma*, *Udararoga*, *Vataparkopa*, *Dushivisha*, *Plihavriddhi*, *Kustha*, *Unmada*, *Ashmari Dushitavrana*, *Arsha*, *Bhagandara* and *Pandu*. From ayurvedic literature and modern literature review it is found that the Pharmacological activities which are proved after following pharmacological studies; is already explained in our ayurvedic classics like *Vranahara karma* ressembles Wound healing property, *Shoolahara* ressembles Analgesics property

### **REFERENCES:**

- 1. The Ayurvedic Pharmacopoeia of India part 1.Government of india. 1:Pg no.100.
- 2. The Ayurvedic Pharmacopoeia of India part 1.Government of india. 1:Pg no.100.
- Shastri Ambikadatta (Suratnojivala) hindi Commentary, Rasaratnasammuchaya, Chaukhambha Amarbharti Prakashan, Varanasi, Ed. 8<sup>th</sup>, **1988**; Pg. no. 170.
- Dr. Tripathi Brahmanand. Charaka Samhita of Agnivesha, Chaukhamba Surbharati Prakashan, Varanasi, Su. S 1/127, 1: Pg no. 47.

and so on. It is the need of time to understand our classics and enhance our knowledge so, the drugs explained in our classics can be used clinically for various therapeutic actions and wellbeing of the mankind.

#### CONCLUSION

According to Ayurvedic Literature and investigations of various researchers it is concluded that *Snuhi* (Euphorbia nerifolia Linn.) has active medicinal potential and various proved pharmacological actions. Snuhi is *Tikshnavirechana, Bhedana* and *Aama-kapha-vata hara*. This study helps in conducting further clinic trials, so that *Snuhi* can be used for more therapeutic purposes.

- 5. Dr. Shastry JLN, Dravyaguna Vijnana. Chaukhambha Orientaliya, Varanasi, Ed 2<sup>nd</sup>, **2005**;2: pg no. 925.
- 6. Dr. Tripathi Brahmanand ;Charaka Samhita of Agnivesha. Chaukhamba Surbharati Prakashan, Varanasi, kalpa Sthana 10, 2: Page no.1124.
- Sharma anant ram, Shusruta Samhita of Maharshri Sushruta; Vol 2 (Revised ed) Varanasi Chaukhamba Surbharti, Sutra sthana, 11/12.
- 8. The Ayurvedic Pharmacopoeia of India part 1.Government of india. 1: Pg no.100.
- 9. The Ayurvedic Pharmacopoeia of India part 1.Government of india. 1: Pg no.100.
- 10. The Ayurvedic Pharmacopoeia of India part 1.Government of india. 1: Pg no.100.

- 11. The Ayurvedic Pharmacopoeia of India part 1.Government of india. 1: Pg no.100.
- 12. The Ayurvedic Pharmacopoeia of India part 1.Government of india. 1: Pg no.100.
- 13. Quality Standards of Indian Medicinal Plants. 11: Pg no. 206.
- Kalpesh Gaur, Rana AC, Nema RK, Kori ML and Sharma CS. Analgesic activity of hydroalcoholic leaves extract of Euphorbia nerifolia Linn; Asian J Pharm Clin Res 2009;2(1): 26-28.
- 15. Bigonia P , Shukla Alok, Singh Chandra Shekhar. Dermal irritation and sensitization study of Euphorbia nerifolia latex and its anti-inflammatory efficacy. Int J Phytomed **2010**;2: 240-254.
- Bigonia P and Rana AC. Subacute effect of Euphorbia nerifolia Linn. On Haematological, Biochemical and Anti-oxidant Enzyme parameters of rat. Acad J Plant Sci 2009;2(4):252-259.
- Kumar Swamy, Neeraj Pokharen, Santosh Dahal. Phytochemical and antimicrobial studies of leaf extract of Euphorbia nerifolia. J Med Plant Res 2012;5:5785-5788.
- Bigonia P, Rana AC. Psychopharmacological profile of hydroalcoholic extract of Euphorbia nerifolia leaves in mice and rats. Ind J Exp Biol 2005;43(10):859-862.
- 19. Mansuri MI, Patel VM. Evalution of anti-diabetic and antihyperlipidemic activity of Euphorbia nerifolia Linn in high fat diet streptozotocin induced type 2 diabetic model. Int J Pharm Res Sch **2013**;2(1):83-89.
- Veena Sharma and Pracheta. Anti-carcinogenic potential of Euphorbia nerifolia leaves isolated flavonoid against N-Nitrosodiethylamine- induced renal carcinogenesis in mice. Ind J Biochem Biophy 2013;50:521-528.
- Bigonia P, Rana AC. Pharmacological screening of Euphorbia nerifolia leaf hydroalcoholic extracts. JAPP Pharma 2010; 1(2):1-7.
- 22. Bigonia P and Rana AC. Protective effect of Euphorbia nerifolia saponin fraction CCl<sub>4</sub> induced acute hepatotoxicity. Afr J Biotech **2010**;9(42):7148-7156.
- Shaikh Arshad Ahmed, Sayyed Nazim, Shaikh Siraj, Patel M. Siddik, Chauda AB. Wahid. Euphorbia nerifolia Linn.: A Phytophormacological review; Int Res J Pharm 2011;2(5):41-48.
- 24. Rasik AM, Sukla A, Patnaik GK, Dhawan BN and Kulshreshta DK. Euphorbia nerifolia Linn. Ind J Pharmacol **1996**;28(2): 107-109.
- Dr. Tripathi Brahmanand. Charaka Samhita of Agnivesha, Chaukhamba Surbharati Prakashan, Varanasi, kalpa Sthana 10/5, 2: Pg no.1125
- Sharma anant ram. Shusruta Samhita of Maharshri Sushruta. (Revised ed) Varanasi Chaukhamba Surbharti, **2008**;2: Pg no. 169, 187, 229, 247, 252, 285.
- 27. Shastri Lakshmipati; Yogratnakar with Vidyotani Hindi commentary; Chaukhamba Sanskrit Sansthana; Fifth edition Pg. no. 167.
- Pandit Narahari, Rajanighantu, Tripathi Indra dev editor, 5<sup>th</sup> edition, Chowkhamba Krishnadas Academy, Varanasi. Pg no. 242.
- Nripa Madanpala Madan vinod, Madanpala Nighantu, Prof. Dr. Gyanedra Pandey editor, Chaukhamba Orientalia, Varanasi. Pg no.78-79.
- 30. Kaiyadeva. Kaiyadeva Nighantu.Priyavat Sharma, Chaukhamba Orientalia, Varanasi, **2006**;Pg no. 170.
- Diwedi BK. Editor. Dhanvanatari Nighantu, Guduchyadi Varga. Chaukhamba Krishnadas Academy, Varanasi, 2008; Pg no. 76.
- Priyavrat Sharma. editor, Priya Nighantu. Shatapushpadi varga, Chaukhamba Surbharti Prakashan, Varanasi, 2004;87-88.
- Brihad Nighantu Ratnakara, Khemraj Shri Krishana Das, Guduchyadi Varga, Chaukhamba Sanskrit Series, Varanasi. Pg 224-226.
- 34. Bhavamishra, Bhavaprakash, by Prof. K.R. Srikantha Murthy, Chowkhamba Krishnadas Academy, Varanasi.

- 35. Shodala, Shodala Nighantu. Editor Prof. R.R. Dwivedi, Chowkhamba Krishnadas Academy.
- 36. Bapalal Vaidya, Nighantu adarsha. Amlakyadi varga, Chaukhamba Bharati Academy, **2013**;2:Pg no. 424.
- 37. Bapalal Vaidya, Nighantu adarsha. Amlakyadi varga, Chaukhamba Bharati Academy, **2013**;2:Pg no. 425.
- 38. Quality Standards of Indian Medicinal Plants. 11:Pg no. 210.
- 39. The Ayurvedic Pharmacopoeia of India part 1.Government of india. 1:Pg no.100.

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