

### Review article

## Shigru – The wonderful plant

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### ABSTRACT:

*Shigru* is native of the north western India, in southern foothills of the *Himalayas*, botanically identified as *Moringa oleifera* Lam. a tree growing all over the tropical area of world. It is fast-growing and most widely cultivated species. It belongs to Moringaceae family and Moringa genus. *Shigru* is one of those few species which are used as *Aushadi* (medicine) and *Ahara* (food). According to Ayurveda *Aushadidravys* are mainly *Viryapradhan* and *Ahariyadravys* are *Rasapradhan*, *Shigru* possesses both of them make it unique from other plants. It has an impressive range of medicinal uses with high nutritional value. All parts of the tree have been used in traditional & Ayurvedic medicine practices. In the indigenous system of medicine different parts of *Shigru* are being employed for the treatment of different ailments. The different parts of this plant are useful in treatment of *vidradhi* (internal abscess), *Pleeha* (spleen disorders), *Netraroga* (eye diseases) *Medoroga* (obesity), *Kustha* (skin diseases), *Shula* (pain), *Shiroroga* (ENT disorders). In the recent past, a lot of studies, articles and other publications have included *Shigru*. The various medicinal uses explained in Ayurvedic classics and studies carried out for scientific research have been reviewed and discussed in this article.

**KEY WORDS:** *Shigru*, *Moringa oleifera*, *Ayurveda*, *Pterygosperma*.

### INTRODUCTION:

In India, drugs of herbal origin have been used since ancient times in traditional systems of medicine such as *Ayurveda*. *Shigru* (*Moringa oleifera*) is a perennial angiosperm plant member of the Moringaceae family, it is native to sub-Himalayan tract and, commonly found in the Indian Subcontinent, *Shigru* is one of the among those few plants where its various parts have been utilized throughout history as food and medicine. It is sun and heat loving plant, grown mainly in semiarid, tropical, and subtropical areas, including coastal areas. It is a drought-resistant tree and prefers sandy dry soil,<sup>1</sup> Not only in Indian subcontinent but in Asia, Africa, and Cambodia and in Philippines leaves and pods are used as a food. As per *Ayurveda* *Shigru* known as synonym *Mochaka* (can use in many diseases)<sup>2</sup>. In *Ayurveda* it extensively used in disease-like *Krimi* (warms/bacteria), *Shotha* (swelling), *Shula* (pain), *Vidradhi* (internal abscess) and also used as *Chakshushya* (eye tonic). The most amazing thing

about *Shigru* is that all parts of this plant including its bark, roots, leaves, flowers, seeds, sap and pods are a storehouse the all essential nutrients, antioxidants, vitamins, minerals and amino acids needed by the body. Thus this plant possesses innumerable health benefits and has the capacity of curing several diseases. The Different parts of *Shigru* plant has Anti-Bacterial, Antioxidant, Analgesic, Hepato protective, Diuretic, Antihypertensive, Hypoglycemic, Antispasmodic, Antitumor, Anticancer, Antiulcer and Lipid lowering effect which is proven by scientific research. *Shigru* is a plant for future hope.

### Literary review

Description of *Shigru* is available from *Vedic kala*, *Rigveda* documented *Shigru* as a domestic plant. it is applied externally (mix with butter) in *Krimi Rogas* (*Kousika Sutra* 29/26), *Dharma Sutras* prohibit its

utility as a Tooth Brush as well as in Rituals.

In *Charaksamhita* *Shigru* is described in *Krimighna Mahakashay*, *Swedopaga Mahakashay*, *KatuSkand* and *ShakaVarga* and its uses in *Krimiroma*, *Sotha*, *Kustha* and various *Kaphaj* and *Vataj* disorders<sup>3</sup>. *Acharya Sushruta* has included *Shigru* in *Varunadi Gana*, *Sirovirechaka Gana* & *KatuVarga* & *ShakaVarga*. Its *Shaka* possess properties like *Ruchi Vardhak* and *Vata Kaphahara* action<sup>4</sup>. *AshtangaHridaya*, *Vagbhatacharya* cited *Shigru* in *ShiroVirechanaGana* & *MustadiGana*. *Shigru* is also prescribed as *PathyaAhar* for *GulmaRogi*<sup>5</sup>. In *Sharangadhara Samhita*. *Shigru* is described for the treatment of *Anta-Vidradhi* (Internal Abscess), *Sukraroga* (a type of eye disease), *Kapha Pradhana Shotha* (Swelling), *Tandra*<sup>6</sup>. In *HaritaSamhitaSwarasa*, *Kalka* and *Kwatha* of *Shigru* is recommended for *Shodhana Upakarma* and diseases like, *Kasa*(cough) and *Krimi*<sup>7</sup>. *AcharyaChakradatta* explained specific use of *Shigru BeejaKalka* for *Krimij Shiroroga*, *Pralepa* for *Granthi* and *Gandamala*(Small Tumours)<sup>8</sup>.

In *Raj Nighantu*, *NilaShigru* the type of *Shigru* their properties described in *MulakadiVarga*<sup>9</sup>. *Kaiydeva Nighant* mentioned *Shigru* in *AusadhiVarga*, it is said that all part of *Shigru* are beneficial for *Netra*<sup>10</sup>. *Shigru* mentioned in *KaraviradiVarga* with *Krumighna*, *Vidradhi Nashak* (useful in Internal Abscess), *Amahar*-properties in *Dhanwantarinighantu*<sup>11</sup>. In *Bhavaprakash Nighantu* it is included in *GuduchyadiVarga*. Also *ShwetaMaricha* term is used for seed of *Shigru* and explained its benefit in eye disease<sup>12</sup>.

From this we can see that *Shigru* is mentioned in both *Ahariya* and *Aushadi varga*.

### Synonyms of Shigru:-

synonyms are key words, from one word which gives a vast meaning of one single drug this is an old style of identification and databasing of the any Medicinal Plant.

*Shobhanjan*:- A beautiful tree or that which gives attractive look; *Akshiv*:- Specifies *Mada*(Used as anti-narcotic); *Shweta Marich*:-They are like *Marich* (*ushna,katu*) but white in color; *Tikshna Ganda*:-It has strong smell; *Tikshna moola*:-With pungent smell and taste; *Bahu moola*:-Having multiple roots; *Mochak*:-Useful in many diseases; *Vidradhighna*:-Useful in *vidradhi*; *Moolparni*:- With pungent smell; *Harithshak*:-Leaves and fruits used as vegetables; *Ghanachchhada*:-Having dense and luxuriant foliage.

### Types of Shigru as per Ayurveda :-<sup>13</sup>

*Shweta/KatuShigru* and *Rakta /MadhuShigru* are the two types of *Shigru* mentioned in Ayurveda classics on the basis of flower color and taste. *Shweta Shigru* possesses white colour flowers and bitter in taste whereas *Rakta Shigru* has a Red colour flowers and sweet in taste. *KatuShigru* botanically identified as *Moringa oleifera* Lam., is available commonly almost throughout country, whereas *Madhushigru*, botanically identified as *Moringa concanensis* Nimmo., is comparatively scarce in occurrence with restricted distribution, for the instance, in *Bengal*, *Rajputana*, *Sindha* and certain other areas including dry hills of *Konkan*, *AndhraPradesh* and *Coimbatore*. Third type of *Shigru* is *NilaShigru*(blue variety) mentioned by *Raj nighantu*. The medicinal properties of these kinds of *Shigru* are also specified in textual sources of medicine.

### Chemical Constitution:<sup>14</sup>

#### Phytochemical constituents isolated from *Moringa oliefera*.

**Roots:** - 4-(alpha L-rhamnopyranosyloxy)-benzylglucosinolate and benzylglucosinolate. **Stem:** - 4-hydroxymellein, Vanillin, beta-sitosterone, octacosanic acid and beta-sitosterol 11. **Bark:** - 4(alpha-L-Rhamnopyranosyloxy) -benzylglucosinolate. **Whole gum:** - exudates L-arabinose-galactose, D-glucuronic acid, L-rhamnose, D- mannose-Xylose and leucoanthocyanin. **Leaves:** - Glycoside niazirine, niazirine and three mustard oil glycosides, 4-(4'-O-acetyl-alpha-L-rhamnopyranosyloxy benzyl), isothiocyanate, niaziminin A and B. **Mature flowers:** -D-mannose-glucose, protein, ascorbic acid, polysaccharide. **Wholepods:**-Nitrile, isothiocyanate, thiocarbanates, 0-2(2'-hydroxy-3'-(2"-heptenyloxy) -propylundecanoate, 0-ethyl-4-(alpha-1-rhamnopyranosyloxy)-benzyl. Carbamate, methyl-p-hydroxybenzoate and beta-sitosterol. **Mature seeds:**- Crude protein, crude fat, carbohydrate, Flavonoids, Phenols, Saponins and Tannins. Methionine, cysteine, 4-(alpha-L-rhamnopyranosyloxy)-benzyl glucosinolate, benzylglucosinolate, moringyne, mono-palmitic and di-oleic Triglyceride. **Seed Oil:** - Vitamin A, beta carotene, precursor of Vitamin A.

#### Phytonutrients present in *Shigru*:-<sup>14</sup>

*Shigru* is popular worldwide for its nutrition values, leaves, pods and seeds are rich in phytonutrient. *Shigru* contain 2 times more protein than the yogurt, 3 times more potassium than bananas, 4 times more calcium than milk, 4 times more vitamin A than

carrots, 7 times more vitamin C than oranges.

**Leaves:**The leaves of *Shigru* are rich in carotene and ascorbic acid. Analysis gave the following values: energy 64 Kcal moisture 75.0%, protein 6.7%, fat (ether ext.) 1.7%, carbohydrates 13.4%, fiber 0.9%; vitamin A 47%, Thimine(B1) 22%, riboflavin (B2) 55%, niacin(B3) 15%, pantothenic acid(B5) 3%, vit B6 92% & vit C 62% .Mineral matter 2.3%, calcium 185, phosphorous 16 and iron 4.0mg./100g.; copper (1.1ug./g.) and iodine 51ug./kg.); **Pods:-** The pods of *Shigru* contains moisture 86.9, protein 2.10, fat 4.8 and mineral matter 2.0%, calcium 30, phosphorous 1.10, and iron 5.3mg/100g., copper (3.1ug/g.) iodine (18ug./kg.) and oxalic acid (0.01). Pods also contain carotene (as vitamin) 184 I.U., nicotinic acid 0.2mg. And ascorbic acid 120mg. /100g. Pressed juice of the Pods contains ascorbic acid oxidase. Pods contain a globulin (N 15.6 and sulphur 1.58%) and a prolamin (N 14.02, sulphur 1.43%). The Pods are remarkably rich in free leucine. The vitamins presents in pods are vitamin A 1%, Thimine(B1) 5%, riboflavin (B2) 6%, niacin(B3) 4%, pantothenic acid(B5) 16%, vit B6 9%, Folate (B9) 11% & vit C 170% ; **Seeds:-** contain dietary minerals ,high level of vit C, moderate level of Vit. A & B complex vitamins Seed **Oil:-** mature seeds contain 38-40 % edible oil called ben oil from its high concentration of behenic acid, ben shown to contain nutritionally significant quantities of vitamins A, C and E.

#### Ayurvedic pharmacology:

- **Raspanchak:-** *Shigru* is *Katu*(pungent ) *Tikta* (bitter) in *Rasa* ,*Katu* in *Vipaka*, *Ushan* in *Virya* and possess *Laghu* (Light), *Ruksha*(dry), *Tikshna* (penetrating) properties which alleviate *Kapha* and *Vata* and aggravate the *Pitta*
- **Action on Dhātu:-** *Rasa-Rakta:-* *Kushthaghna* (cures skin diseases), *Kandughna*(cures Itching), *Pleehaghna*(useful in spleen disorders); **Meda:-** *Medoroghna* (useful in obesity), *Apachihara*; **Asthi:-** *Vidradhihara* (useful in internal abscess).
- **Action on mala:-** *Mutra-* *Ashmarighna*(useful in urinary calculi), *Shothaghna*(useful in swelling); **Purish-** *Sara* (laxative).
- **Action on Strotasa:-** *Medavaha* - *Medorogaghna*; **Mansavaha** - *Granthi* (useful in small tumors), *Apachi*; **Annavaha-** *Rochana*, *Agnivivardhana* (carminative action), *Aamhara* (increase digestive capacity); **Mutravaha-** *Ashmarighna*, *Shothaghna*.

#### Action of *Shigru* on different diseases as per *Ayurveda*

The *karma* (Medicinal Properties) of *Shigru* are mentioned by *Ayurveda* classics (*Samhitas* and *Nighantus*) given in Table no.1

**Table no.1 : The karma (Medicinal Properties) of *Shigru* mentioned in *Ayurveda* classics**

Karma	Ch.	Su.	A. H	B. N	D. N	K. N	R. N	M. N	P. N	S. N	So. N
<i>Krumighna</i>	✓			✓	✓	✓	✓		✓		✓
<i>Vishaghna</i>				✓	✓	✓					✓
<i>Medoghna</i>		✓		✓	✓	✓				✓	✓
<i>Shophaghna</i>		✓		✓	✓	✓	✓		✓		
<i>Vidradhighna</i>		✓		✓	✓	✓		✓	✓	✓	
<i>Gulmahar</i>			✓	✓	✓	✓			✓	✓	
<i>Shukral</i>				✓		✓					✓
<i>Shiroro-virechak</i>		✓		✓							✓
<i>Kushtaghna</i>						✓					✓
<i>Vranaghna</i>				✓	✓	✓	✓	✓			
<i>Chakchushya</i>				✓		✓	✓	✓	✓		
<i>Dipan/ Amapachak</i>				✓	✓	✓	✓	✓	✓		✓
<i>Shulaghna</i>					✓	✓	✓		✓		
<i>Pliaghna</i>				✓	✓	✓		✓	✓		
<i>Sangrahi</i>				✓	✓	✓		✓			
<i>Hrudya</i>				✓	✓	✓					

The *Rogaghnata* (action on specific disease) of *Shigru* are mentioned by *Ayurveda* classics (*Samhitas and Nighantus*) given in Table no.2

Table no.2 : The *Rogaghnata* of *Shigru* mentioned by *Ayurveda* classics

Vyādhi	Ch.	Su	A.H	Sha r	Y.R.	V. M	C. D.	B.N	D. N	K. N	R.N	M. N	P. N	S.N	So. N
<i>Agnimandya</i>			√					√		√	√	√	√		√
<i>Apachi</i>		√						√							
<i>Granthi</i>				√	√		√								
<i>Aruchi</i>			√					√		√	√		√		√
<i>Medoroga</i>		√	√					√	√	√				√	√
<i>Krimi</i>	√		√		√	√		√	√	√	√		√		√
<i>Kustha</i>	√					√		√		√					√
<i>Pliha</i>								√	√	√			√		
<i>Gulma</i>		√	√			√		√	√	√			√	√	
<i>Shotha</i>	√	√		√	√		√	√	√	√	√		√		
<i>Shoola</i>	√				√		√			√	√		√		
<i>Vrana</i>								√		√		√			
<i>Netraroga</i>	√			√		√	√	√		√	√	√			
<i>Visha</i>								√	√	√					√
<i>Vidradhi</i>	√	√				√	√	√	√	√		√	√	√	

*Shigru* is a drug of choice in many diseases, like *Kustha*, *Krumi*, *Pliha*, *Vidradhi*, *Gulma*, *Sotha*, *Netraroga*, *Medoroga* etc. The all above mentioned conditions comes under *Kapha-Vataj* disorders. *Shigru* is *Kapha-Vata Shamak* drug by its *Katu Tikta Rasa*, *Ushna Virya*, and *Laghu*, *RukshaTikshna Guna*. It also exhibits *Amapachana*, *Stroto-Shodhak* and

*Vatanulomana* activity which plays important role in *Samprapti-Bhanga* (to break the pathogenesis) of above diseases.

Different parts of *Shigru* used as medicines in different diseases as per *Ayurveda*.

Table no. 3 : Uses of Different parts of *Shigru* in different diseases as per *Ayurveda*.

Disease	Part used						
	Valkal	Patra	Beeja	Kusuma/ Pushpa	Mula	Phala	Niryas
<i>Shula</i>	√	√	√		√		
<i>Shiroroga</i>			√				
<i>Chakshushya</i>		√	√	√	√	√	
<i>Vishahara</i>			√				
<i>Kustha</i>	√		√		√		
<i>Gulma</i>			√	√		√	
<i>Gandamala</i>			√				
<i>Vidhradhi</i>	√			√	√		
<i>Shotha</i>	√	√					
<i>Ashmari</i>	√				√		
<i>Karnashula</i>			√		√		√
<i>Snayuka</i>					√		
<i>Udar</i>	√						
<i>Pratishyaya</i>			√				
<i>Shwasa</i>			√			√	
<i>Tandra</i>			√				
<i>Medoroga</i>	√	√	√				
<i>Granthi</i>			√				
<i>Jantughna</i>				√			
<i>Krumi</i>				√			

In *Ayurveda* classiscs the different parts of *Shigru* indicated for specific disorders, *VrundaMadhava* enumerated it in *Varunadi Gana*, theBeejaof *Shigru* indicated in *Krimij Shiroroja* for *Nasya*, *Mula Varti* for eye diseasesand oil in headache and *Kwatha* in urinary calculi and internal abscess. The *Dhupa* of

newtender leaves is indicated for *Sotha*, fruit indicated in *Gulma* and *Krumiroga* and bark for *Sotha*.Likewise all Samhitas, Chikitsa *Grantha* and Nighantu described the uses of different part of Shigruin different disorders<sup>15</sup>.

Table no.4 : Classical formulations of Shigru

Formulation	Uses	Reference
<i>Chandraprabha Varti</i>	<i>Timir, kach</i> (useful in eye diseases & conjunctival blindness)	B.R.64/203-205
<i>Chandrodaya varti</i>	<i>Timir, Netrakandu</i> (useful in clear the vision & itching)	B.R.64/193-194
<i>Mahabhutavara Grutam</i>	<i>Graha, Unmad, Kustha, Jwar</i> (it removes all kinds of celestial effects on children, insanity, skin disease & fever)	B.R.71/76
<i>Bruhat Agni Gruta</i>	<i>Agnimandya, Gulma, Pliha</i> (indigestion, Phantom Tumour, Spleen disorders)	B.R.10/289-295
<i>Taptaraja Taila</i>	It cures severeHeadache, useful in ENT diseases, fever, burning sensation, morbid thirst, jaundice	B.R.65/144-151
<i>Rudra Taila</i>	Useful in all <i>Kapha</i> related indispositions of <i>Urdhavajatru</i> ( ENT disorders)	B.R.65/126-133
<i>Vyaghri Taiaam</i>	useful in <i>Puti Nasa</i> (minor swelling around nasal passage)	B.R.63/30
<i>Manikya Rasa</i>	<i>Vatarakta, Shitpitta, Kustha, Hikka</i> (skin disease, urticaria, hiccups)	B.R.54/124-132
<i>Ratna Giri Rasa</i>	Fever	B.R.5/562-567
<i>Antavidradhi Yoga</i>	treatment of internal abscess	B.R.46/14
<i>Shobhanjan Lepa</i>	<i>Apaci</i> (suppurated gland)	B.R.44/28
<i>Himsradi Lepa</i>	<i>Granthi</i> (Tumors)	B.R.44/35
<i>Bilvadi Churna</i>	<i>Bradhna</i> (growth in inguinal region)	B.R. 43/58
<i>Bruhad Agnimukha Churna</i>	<i>Agnimandya, Gulma, Pliha</i> (indigestion, phantom tumour, spleen disorders)	B.R.10/67-75
<i>Jwarbhairava Churna</i>	Various type of Fever	B.R.5/455-466
<i>Shigrukwatha</i>	<i>Phleeha</i> (enlargement of spleen)	B.R.41/4
<i>Varunadi kwatha</i>	<i>Kaphamedahar</i> (obesity)	B.R.32/39-41

**Presently rigorous researches done on this plant and also conforms the medicinal properties mentioned in *Ayurveda*.**

**Antihypertensive activity :** 1-Active ethanol extract of *Moringa* leaves led to the isolation of four pure compounds, niazinin A(1),niazinin(1) B, & niazimicin (4) & niazinin A & B which showed blood pressure lowering effect in rats medicated possibly though a calcium antagonist effect.. Methyl phydroxybenzoate and alpha-sitosterol (14), found in the pods of *Oleifera* also revealed positive hypotensive activity.<sup>16</sup>

**Lipid lowering activities:** The *Moringa* fruit has been found to lower the S. Cholesterol, phospholipids, triglycerides, LDL, VLDL cholesterol to phospholipid ratio, antherogenic index lipid and reduced the lipid profile of liver, heart and aorta in hypercholesteremic

rabbits and increased the excretion of fecal cholesterol. The crude extract of *Moringa* leaves has shown significant cholesterol lowering activities in high fat diet fed rats.<sup>17</sup>

**Diuretic activities:** -leaves, flowers, gum, roots, & aqueous infusion of seeds have been found to possess diuretic activity.<sup>18</sup>

**Antibacterial activities:** pterygospermin has been isolated from the roots; which has powerful antibacterial effect against gram positive and gram negative bacteria including *Mycobacterium tuberculosis* var. *hominis*, pathogenic moulds and fungi. Similar compound is found to be responsible for antibacterial and fungicidal effects of its flower. Juice from the stem bark showed antibacterial effects against *staphylococcus aureus*. Ethanolic and hydro-



alcoholic extract of steam bark of *Shigru* reveals significant antimicrobial efficacy against *E.coli* and *P.aeruginosa* in vitro.<sup>19, 20</sup>

**Antitumor and Anticancer activities:** - The seed extract have been found to be effective on hepatic carcinogen metabolizing enzymes, antioxidant parameters and skinpapilloma genesis in mice. It has been found that niaziminin, a thiocarbamate from the leaves of *Moringa oleifera*, exhibits inhibition of tumor promote-induced Epstein-Barr virus activation.<sup>21</sup>

**Hepatoprotective activities:** -The methanol fraction of *Moringa oleifera* leaf showed hepatoprotective and anticoagulant effect in rats. Roots have also been reported to have hepatoprotective activities.<sup>22</sup>

**Antispasmodic activities:** -roots of *Moringa oleifera* had shown antispasmodic activity. Pharmacologically it has been found that ethanol extract and its constituent's exhibit antispasmodic effect possibly through calcium channel blockade.<sup>23</sup>

**Antiulcer activities:** - aqueous leaf extracts a showed antiulcer effect indicating that the antiulcer component is widely distributed in *Moringa oleifera*.<sup>24</sup>

**Anthelmintic activities:** - anthelmintic activity of *Moringa oleifera* seed oil was studied on adult Indian earthworm<sup>48</sup>. Bioactive compounds (Tannin and Saponins) found in aqueous and ethanolic extracts of *M. oleifera* seed shows anthelmintic activity against *H. Contortus* eggs and third stage larvae<sup>49</sup> with in-vitro study.<sup>25</sup>

**Anti-inflammatory activities:** -Extracts from *M. oleifera* leaves have been shown to modulate humoral and cellular immunity in rats and They have exhibited strong anti-inflammatory properties in rodent models of chemically induced inflammation of the paw. These properties have been more extensively studied with fruit and seed extracts.<sup>26</sup>

**Antidiabetic activities:** - The anti-diabetic activity of *Moringa Oleifera* was evaluated in research. The research was focused on investigating the anti-diabetic and antioxidant actions of the methanol extracts of the pods of this plant in the streptozotocin-induced diabetic rats. The rats were treated with 150 to 300 mg per kg body weight of this extract for 21 days. The anti-diabetic effect was evaluated by measuring the changes in the biochemical parameters of the pancreatic tissue and serum. The study showed

an improvement in the parameters of diabetes in the experimental mice. The progression of diabetes was also significantly reduced after the treatment with the *Moringa Oleifera* extract.<sup>27</sup>

**Use in Arsenic Toxicity:** - The protective effect of the leaves of *Moringa Oleifera* against the Arsenic toxicity in the experimental mice was investigated during research. The serum indices of the cardiac, renal, and liver functions were analyzed to assess the anti-toxic effect of *Moringa Oleifera* in the mice. The results of this study revealed that the supplementation with *Moringa Oleifera* could abrogate the arsenic-induced elevation in the levels of triglyceride, urea, and glucose.<sup>28</sup>

**Effect on Thyroid function:** -aqueous leaf extracts regulate thyroid hormone and can be used to treat hyperthyroidism and exhibit an antioxidant effect.<sup>29</sup>

## CONCLUSION:

On comprehensive review, it was found that different parts of *Shigru* are used as a food and medicine from *Vedicka*. In Ayurveda classics description of *Shigru* is available in all Samhitas and Nighantus. There are many herbal plants in world even though *Shigru* is having greater medicinal as well as nutritional value. Pharmacological actions attributed to *Shigru* (*Moringa oleifera*) in Ayurvedic text have evidence suggest that this drug has huge potential in modern pharmaco-therapeutics. *Shigru* is rich in phytonutrient hence the utility of pods and leaves are advisable in diet.

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