

## BRIEF REVIEW OF BAKUCHI (*Psoralea corylifolia* Linn.) AND ITS THERAPEUTIC USES

Sunita Rajput<sup>1\*</sup>, Meena<sup>2</sup>, Satyendra Singh<sup>3</sup>, Rama Murthy A<sup>4</sup>

1. PG Scholar, Dept. of PG Studies in Dravya Guna, National Institute of Ayurveda, Jaipur, Rajasthan, India.
2. PG Scholar, Dept. of PG Studies in Dravya Guna, National Institute of Ayurveda, Jaipur, Rajasthan, India.
3. PG Scholar, Dept. of PG Studies in Dravya Guna, National Institute of Ayurveda, Jaipur, Rajasthan, India.
4. Assistant Professor, Dept. of PG Studies in Dravya Guna, National Institute of Ayurveda, Jaipur, Rajasthan, India.

Received: 07-10-2014; Revised: 04-11-2014; Accepted: 10-11-2014

### Abstract

Bakuchi (*Psoralea corylifolia* Linn.) is belongs to Fabaceae family, it is an endangered and medicinally important plant grows throughout India. It has multifarious uses as it is an important component of Ayurvedic as well as Allopathic system of medicines. Bakuchi is one of the main herbs in traditional Indian and Chinese herbal medicine for the treatment of skin disorders. It has been used in the treatment of eczema and hair loss. Roots of the plant are useful in dental caries, fruits are laxative, aphrodisiac, and are used for the treatment of leucoderma, leprosy and in inflammatory diseases of the skin and leaves are good for the treatment of diarrhoea. The plant has been used in Ayurvedic medicinal system as a cardiac tonic, vasodilator and pigmentor. It possesses important activities like antibacterial, anti-inflammatory, antiplatelet, antitumor, immunomodulatory. Various other activities like hepatoprotective, antioxidants and antihelminthic have also been reported. This article reviews the various references of Bakuchi in Ayurvedic texts regarding its therapeutic uses and different formulations. The review also encompasses the pharmacological activities and various folklore uses of this plant.

**Key words:** Bakuchi; Skin disorders; Ayurveda; Endangered; Antibacterial.

### \*Address for correspondence:

Dr. Sunita Rajput,  
PG Scholar, Dept. of P.G. Studies in Dravya Guna,  
National Institute of Ayurveda,  
Jaipur, Rajasthan, India – 302 002  
E-mail: [dr.sunni.rajput@gmail.com](mailto:dr.sunni.rajput@gmail.com)

### Cite This Article

Sunita Rajput, Meena, Satyendra Singh, Rama Murthy A. Brief review of Bakuchi (*Psoralea corylifolia* Linn.) and its therapeutic uses. Ayurpharm Int J Ayur Alli Sci. 2014;3(11):322-330.

## INTRODUCTION

Bakuchi (*Psoralea corylifolia* Linn.) is widely described in the Ayurvedic classics for the treatment of skin diseases. This herb has its own ethno-medicinal importance since it plays a significant role in the treatment of various diseases. It is having both curative and nutritive values. Bakuchi is described in Shaka varga by Charaka<sup>[1]</sup> and Vriddha vagbhata.<sup>[2]</sup> It is used as single drug and in compound formulations. Bakuchi is used in various Ayurvedic treatments as in Kushtha (skin disorders); Keshya and Tvachya (Hair and Skin treatments); Krimi (as a germicidal); Shwasa and Kasa (Bronchial Asthama and Cough); Pandu (Anaemia) and Shotha (Oedema).<sup>[3]</sup>

The most amazing aspect of this plant is that every part of it is useful. Roots, stems, leaves, seeds, and whatever blooms it has, all are used to treat a variety of skin problems, such as leukoderma, skin rashes, infections, and others.<sup>[4]</sup> It is given the name Kushta nashini (leprosy destroyer).<sup>[5]</sup> *P. corylifolia* Linn. is a very ancient remedy for leukoderma; it has been tried extensively not only by the practitioners of the Indian medicine but also by the followers of the Western system.<sup>[6]</sup> The furanocoumarins, which contain psoralens, promote pigmentation.<sup>[7]</sup> In this study, review of various uses of Bakuchi is done through Brihat trayees, other samhitas, and various Nighantus. It will give an insight into its pharmacological properties, therapeutic or dietary utility as conceived by various authors at different stage of the history.

## MATERIAL AND METHODS

The literature regarding Bakuchi is compiled from Brihat Trayee (Charaka Samhita, Sushruta Samhita and Ashtanga Hridayam) and other samhitas. Nighantus has described Bakuchi in form of its Paryaya (Synonyms), Gana / Varga (Classification), Vernacular names, Rasa panchaka (pharmacological

properties), Karma (therapeutic actions) and Vyadhi haratva (indications) etc.

## Synonyms

Various synonyms of Bakuchi compiled from Nighantus are Suparnika (having good looking leaves), Krsnaphala, Kalamesi (Fruits are black), Putiphala (with foul smell), Shashilekha, Somaraji (Seeds have white steak inside),<sup>[8]</sup> Avalguja, Kusthaghni, Malayu,<sup>[9]</sup> Svitraghni ( Used in skin diseases particularly vitiligo).<sup>[10]</sup>

## Classification

Bakuchi is classified under tikta skandha in Charaka Samhita (Ca.S.Ci.8/143 p.782 ),<sup>[11]</sup> Katuk varga in Sushruta samhita (S.S.Su. 42/21 p.205 ),<sup>[12]</sup> Shaka varga in Ashtanga samgraha (As. S. Su 7/117);<sup>[13]</sup> as Rasayana in Ashtanga hridayam (As. H. Utt. 39/107 p.1196),<sup>[14]</sup> Guduchyadi Varga in Dhanwantari nighantu<sup>[15]</sup> and Shodhala nighantu,<sup>[16]</sup> Tripad varga in Hridaya dipaka nighantu,<sup>[17]</sup> Abhayadi varga in Madanapala Nighantu,<sup>[18]</sup> Haritakyadi varga in Bhavaprakasha Nighantu,<sup>[19]</sup> Asta varga in Shaligrama nighantu,<sup>[20]</sup> Shatahvadi Varga in Raja nighantu,<sup>[21]</sup> Aushadhi varga in Kaiyadeva nighantu,<sup>[22]</sup> Palashadi varga in Nighantu adarsha,<sup>[23]</sup> Shatapushpadi Varga in Priya nighantu.<sup>[24]</sup>

## Vernacular name

Sanskrit	: Avalguja, Somaraji
Assamese	: Habucha
Bengal	: Bakuchi, Somraji, Hakucha Veeja
English	: Babchi seeds, Psoralea seeds
Gujrati	: Bavachi
Hindi	: Babchi, Bavachi, Bakuchi
Kannada	: Bauchige, Bhavantibeeja, Bhavanchigid, Baukuchi
Kashmiri	: Babchi
Malayalam	: Karkokil
Marathi	: Bawchi

Oriya	: Bakuchi
Punjabi	: Babchi, Bavchi
Tamil	: Karpokarisi, Karpogalarisi, Karbogalarisi
Telugu	: Bavanchalu
Urdu	: Babchi <sup>[25]</sup>

### Properties

Screening the various classics like Bhavaprakasha nighantu, Rasa (taste) of Bakuchi is tikta (bitter) and madhura (sweet). Other properties are mentioned in the Table 1.

### Distribution

A large genus of herbs, shrubs or under-shrubs distributed in tropical and sub-tropical region of the world, found almost throughout India, especially in the semi-arid regions of Rajasthan and the eastern districts of Punjab, adjoining Uttar Pradesh.<sup>[32]</sup>

### Botanical discription

Bakuchi is an erect herbaceous annual, 60-120 cm height with grooved and gland-dotted stems and branches. Leaves simple, broadly elliptic, rounded and mucronate at apex, clothed with white hairs on both surfaces, covered with numerous black dots, main nerves 5, originating from base. Flowers blue, in dense, axillary, 10-30 flowered racemes. Pods 5 mm long, subglobose, slightly compressed, closely pitted, black, beaked without hairs. Seeds oblong, flattened, dark brown with an agreeable aromatic odour and taste.<sup>[33]</sup>

### Chemical composition

Seed contain an essential oil (0.05%), non-volatile oil, a dark brown resin, and traces of alkaloidal substance. Two new benzofuran derivatives - corylifonol and isocorylifonol - were isolated from the seeds. Very high concentrations genistein have been found in the leaves of *Psoralea corylifolia* Linn.<sup>[34]</sup>

Fruit contain corylinal and neobavaisoflavone.<sup>[35]</sup>

### Part used

The part used for therapeutic purposes are seed and seed oil.<sup>[36]</sup>

### Dose

3-6 g of the seed of Bakuchi in powder form.<sup>[37]</sup>

### Therapeutic actions

Kushthaghna (Leprosy destroyer), Jantughna (Insecticidal), Vranashodhana, Vranaropana (Wound healing), Keshya (In hair treatment), Nadibalya (nerve strengthen), Deepana (Appetizer), Pachana (Digestive), Anulomana (Laxative), Krimighna (Germicidal), Yakridottejaka (Choleretics), Hridayottejaka (Cardiac stimulant), Shothahara (Reduces swelling), Kaphaghna (Expectorant), Pramehaghna (Anti-Diabetic), Vajikara (aphrodisiac), Swedajanana (Diaphoretics), Jwaraghna (Antipyretic), Pandu (Anaemia), Kasahar (Relieves cough), Swasahara (Anti-asthmatic), Twaka roga (In Skin Disorders) are the therapeutic properties of Bakuchi.<sup>[38]</sup>

### Therapeutic uses

The plant is used both internally as well as externally. The powder is used by Vaidyas internally for leprosy and leukoderma and externally in the form of paste and ointment. Psoralen and isopsoralen obtained from the seeds are being invest against several diseases including AIDS.<sup>[39]</sup>

The seeds are prescribed with the other drug combination in snake bite and scorpion sting.<sup>[40]</sup> In deafness of ears, the seeds powder mixed with musali (*Curculigo orchioides* Gaetrn.) is suggested to be taken orally.<sup>[41]</sup>

**Tables 1: The properties of Bakuchi**

Properties	Rasa				Guna		Veerya		Vipaka
	Madhara	Tikta	Katu	Kashaya	Laghu	Ruksha	Sheet	Ushna	Katu
D.N. <sup>[26]</sup>	-	+	-	-	-	-	+	-	-
M.P. <sup>[27]</sup>	+	+	-	-	-	+	+	-	+
K.N. <sup>[28]</sup>	+	+	-	+	+	+	+	-	+
B.P. <sup>[29]</sup>	+	+	-	-	-	+	-	-	+
R.N. <sup>[30]</sup>	-	+	+	-	-	-	-	+	-
P.V. <sup>[31]</sup>	-	+	+	-	+	+	-	+	+

“+” Mentioned; “-” Not mentioned

D.N – Dhanwantari Nighantu; M.P.- Madanpal Nighantu, B.P – Bhavaprakasha nighantu; R.N – Raja Nighantu; K.N – Kaiyadeva nighantu; P.V.S – Dravyaguna vijnana by PV Sharma.

In leucoderma, the seed powder of Bakuchi mixed with Haratala Bhasma (Yellow arsenic), in 4:1 proportion and mashed with the cow's urine. This paste is applied on the lesions of leucoderma.<sup>[42]</sup> In scabies and ringworm infestations, the Bakuchi seed powder mixed with buttermilk is applied externally. In leprosy, the decoction of Bakuchi with amalaki (*Phyllanthus emblica* Linn.) and khadira (*Acacia catechu* Willd.) are recommended.<sup>[43]</sup>

The seeds oil is used in elephantiasis. The essential oil has powerful effect against the skin streptococci. It has a specific effect on the arterioles of the subcapillary plexuses; these it dilates so that in this area plasma is increased. The skin become red, the melanoblasts are stimulated leading to pigment formation.<sup>[44]</sup> Bakuchi is mainly known for its therapeutic properties shwitrahara (reduces leucoderma), kushthghna (skin diseases), Vishghna (Anti toxic) property in different dosage form. (Table 2 to Table 6)

## DISCUSSION

Bakuchi is used in treating kushtha, Kasa, shwasa etc. It is described as Pathya (wholesome diet) in Atisara (Diarrhoea) and Arsha (Piles) chikitsa by Acharya Charaka.<sup>[64][65]</sup>

The root is useful in caries of tooth.<sup>[66]</sup> The leaves paste is applied to check the bleeding from incised wounds. The decoction or paste of Bakuchi is used in case of insomnia.<sup>[67]</sup> The Paste of the fruit is bitter, diuretic, it causes biliousness; they cure leprosy, skin diseases; and alleviate kapha and vata; and they improve the complexion and promote hairs. They relieve vomiting, asthma, difficult micturition, piles, bronchitis, inflammation, anaemia.<sup>[68]</sup>

The seeds have great medicinal value. They are purgative, antipyretic, anthelmintic, they are good for heart troubles, asthma, leucoderma, urinary discharges; and they heal ulcers, skin diseases and scabies. The seeds are useful as an antiseptic, antibacterial and antiemetic; they are used as diuretic, irritant, nervine tonic and carminative. They are useful in haemorrhoids and impotency. *P. corylifolia* is used to promote bone calcification, making it useful for treating osteoporosis and bone fractures.<sup>[69]</sup> Katsura *et al* proved that bakuchiol is a useful compound against oral pathogens and has a great potential for use in food additives and mouthwashes for preventing and treating dental caries. The cell growth of *S. mutans* was inhibited in a bakuchiol concentration dependent manner and the growth of *S. mutans* was completely prevented with 20 µg of bakuchiol/mL.<sup>[70]</sup>

**Table 2: Few Vati /Vatak/ Gutika Formulation of Bakuchi**

Formulation	Indication	Reference
1. Chandrashakaladi Vatak	Kushtha	A.H.Ci.19/44.p.789
2. Triphala Gutika	Kushtha	Y.R.Kushtha Ni.Ci.86p.650
3. Shashilekha Vati	Switra	Y.R.Kushtha Ni.Ci.218-219
4. Khadir Vati	Kushtha, Prameha, Grahini	A.S.Ci. 41/68-70
5. Vidangadi Pindi	Kushtha	A.H.Ci 19/45.p.789
6. Vidangadi Vatika	Kushtha	G.N. 36/106.p.780
7. Triphala Gutika	Kushtha	Y.R.Kushtha Ni.Ci.86 p.650

A.H. - Ashtang Hridayam<sup>[45]</sup>; Y.R.-Yogaratanakar<sup>[46]</sup>; A.S.- Ashtang Samgraha<sup>[47]</sup>; G.N.-Gad Nigraha<sup>[48]</sup>

**Table 3: Few Ghrita-Taila Formulation of Bakuchi**

Formulation	Indication	Reference
1. Mahaneel Taila	Palitya	C.S.Ci.26/272.p.no.916
2. Mahaneel ghrita	Bhagandar, Krimi, Arsh	S.S.Ci.9/37p.no.67
3. Astang Ghrita	Medhya	A.H.Utt.1/43.p.no.884
4. Maheshwar Ghrita	Kandu, Kustha, Vicharchika	Y.R.Kustha ni.ci.196
5. Somaraji Taila	Kustha, Nilika, Vyanga	Cd.49/163-165
6. Somaraji Ghrita	Switra, Amavata, Aptantraka	V.S.kustha ci.295-300

A.H.-Ashtang Hridayam<sup>[49]</sup>; C.S.-Charaka Samhita<sup>[50]</sup>; S.S.-Sushruta Samhita<sup>[51]</sup>; Cd-Chakradatta<sup>[52]</sup>; V.S.-Vangsen Samhita<sup>[53]</sup>

**Tables 4: Few important Leha formulations of Bakuchi**

Formulation	Indication	Reference
1. Shashanklekhadi Leha	Kushtha	A.H.Ci.19/46.p.789
2. Mahabhallataka Avaleha	Switra, Dadru, Vatarakta	Y.R.Kustha ni.ci.101-115
3. Dhatrayavaleha	Kustha	Y.R.Kustha ni.ci.117

A.H.- Ashtana Hridayam<sup>[54]</sup>; Y.R.-Yoga Ratnakar<sup>[55]</sup>

**Table 5: Few important Churna formulation of Bakuchi**

Formulation	Indication	Reference
1. Panchnimba Churna	Kustha, Rasayana	Sa.S.M.10/150-155
2. Pashupati Churna	Kustha	G.N. 36/216 p.801
3. Bhallatakadya Churna	Kustha	G.N.36/215 p.801

Sa.S.-Sharangdhar Samhita<sup>[56]</sup>; G.N.-Gadnigraha<sup>[57]</sup>

**Table 6: Few important Lepa formulation of Bakuchi**

Formulation	Indication	Reference
1. Savarnakar Lepa	Switra	A.H.Ci20/13.p.799
2. Pathyadi Lepa	Kushtha	Y.R.Ni.Ci.55.p.647
3. Daradadi Lepa	Dadru, Visharpa, Bhagandar	Y.R.Ni.Ci.161-162.
4. Grahdhumadi Lepa	Kustha	G.N.36/138-140.p.786

A.H.- Ashtang Hridayam<sup>[58]</sup>; Y.R.- Yogaratanakar<sup>[59]</sup>; G.N.- Gadnigraha<sup>[60]</sup>

**Table 7: Other important formulations of Bakuchi**

Formulation	Indication	Reference
1. Vasishtha haritaki Rasayana	Kasa	A.H.Ci.3/133-140.p.603
2. Somaraji Rasayana	Rasayana	A.H.U.39/107.p.1196
3. Mahagandhastinamagad	Vishnashaka	C.S.Ci.23/80.p.no.764
4. Sarvaanga Sunder Rasa	All Types of Kustha	Y.R.Kustha ni.ci.81-85.p.650
5. Khadirasava	Kustha,Pandu, Kasa	Y.R.Kustha ni.ci.143-148.p.653
6. Kanakarishtha	Mahakustha, Vatarakta	Y.R.Kustha ni.ci.149-152.p.653
7. Khadirarishtha	Mahakustha, Hridaya roga	Sa.S.Md.10/62-63
8. Udayaditya rasa	Vicharchika, Dadru,Vatarakta	Sa.S.Md.12/306-307
9. Bhihatmanjishthadi Kwatha	18 types of Kushtha, Vatarakta, Slipad	Sa.S.Md.2/137-142.p.154

A.H.-Ashtanga Hridayam<sup>[61]</sup>; Y.R.-Yoga Ratnakar<sup>[62]</sup>; S.S.-Sharangdhar Samhita<sup>[63]</sup>

Antibacterial assay of Bakuchi seed extracts prepared in two different solvents was performed by agar well diffusion method against Gram positive skin pathogens, Bakuchi seed extract in methanol and diethyl ether exhibited broad spectrum antibacterial activity against skin pathogens. These results confirmed the potential of the Bakuchi seed extract in the development of Ayurvedic topical skin formulations.<sup>[71]</sup>

Bavachinin A isolated from fruits revealed a marked anti-inflammatory, antipyretic and mild analgesic properties at a dose of 25–100 mg/kg. It has demonstrated better antipyretic activity than paracetamol and showed no effect on the central nervous system, and the maximum lethal dose was greater than 1000 mg/kg in mice.<sup>[72]</sup> Bakuchiol, one of the major constituent of *P. corylifolia*, has been shown to possess a prominent cytotoxic effect on L929 cells in all cultures. It also showed cytotoxicity against cultured human cell lines, namely, A549, SKOV- 3, SK-MEL-2, XF-498, and HCT-15.<sup>[73]</sup> Chen *et al* studied the antidepressant activity of total furanocoumarins present in *P. corylifolia* (TFPC) in the chronic mild stress model of depression in mice. The results revealed that TFPC possess potent and rapid antidepressant properties that are mediated via MAO, the hypothalamic-pituitary-adrenal axis, and oxidative symptoms.

Thus, it makes *P. corylifolia*, a potentially valuable drug for the treatment of depression in the elderly.<sup>[74]</sup>

*Psoralea* seed extract has been found to stimulate the immune system in mice. Administration of extract was found to inhibit EAC ascitic tumour growth and stimulate natural killer cell activity, antibody-dependent cellular cytotoxicity, antibody-forming cells and the antibody complement-mediated cytotoxicity during tumour development.<sup>[75]</sup>

A cytotoxic coumestan derivative, psoralidin (1), was isolated from the seed of *Psoralea corylifolia* Linn. The IC<sub>50</sub> values of 1 against SNU-1 and SNU-16 carcinoma cell lines were 53 and 203 micrograms/ml, indicating cytotoxic activity against stomach carcinoma cell.<sup>[76]</sup>

## CONCLUSION

Bakuchi is widely used in treating various types of Kushtha (Leprosy), Switra (leucoderma), kasa (cough) and Vatarakta (Gout). Lot of formulation containing Bakuchi as an ingredient in various dosage forms are available. It is used as a single drug in the form of churna (Powder) and as Lepa (Paste) for treating switra. The various researches have proved many of its activities mentioned in Ayurvedic classics giving a strong scientific base.

## REFERENCES

1. Caraka. Caraka Samhita (Caraka Chandrika hindi commentary). Brahmanand Tripathi, editor. 1<sup>st</sup> ed. Varanasi: Chaukhambha Surbharati Prakashan; 2007. p. 512.
2. Vagbhata. Astanga Samgraha. Shailaja Shrivastava, editor. 1<sup>st</sup> ed. Varanasi: Chaukhamba Orientalia; 2006. p.71.
3. Chunekar KC, Pandey GS. Bhavprakasssha Nighantu. 1<sup>st</sup> ed. Varanasi: Chaukhamba Bharti Academy; 2010.p.119-121.
4. Retrieved from: <http://www.suyashherbs.trustpass.alibaba.com> [Accessed on: 27/02/2009]
5. Retrieved from: <http://www.herbsguide.net> [Accessed on: 27/02/2009]
6. Chopra RN, Chopra IC. Indigenous Drugs of India. 2<sup>nd</sup> ed. Kolkata: Academic Publishers; 1958. p. 391-394.
7. Sebastian P. Ayurvedic Medicine: The Principles of Traditional Practice, Vol. 2. 1<sup>st</sup> ed. New York: Elsevier Health Sciences; 2006.p. 135-136.
8. Chunekar KC, Pandey GS. Bhavprakasssha Nighantu. 1<sup>st</sup> ed. Varanasi: Chaukhamba Bharti Academy; 2010.p.119-121.
9. Sharma PV, Guruprasad Sharma, editors. Kaiyadeva Nighantu. 2<sup>nd</sup> ed. Varanasi: Chaukhambha Orientalia; 2006.p.130-131.
10. Sharma PV. Priya Nighantu. 2<sup>nd</sup> ed. Varanasi: Chaukhamba Surbharti Prakashan; 1983.p.106.
11. Caraka. Caraka Samhita (Caraka Chandrika hindi commentary). Brahmanand Tripathi, editor. 1<sup>st</sup> ed. Varanasi: Chaukhambha Surbharati Prakashan; 2007. p. 782.
12. Susruta. Susruta Samhita. Ambika Dutta Shastri, editor. 2<sup>nd</sup> ed. Varanasi: Chaukhambha Sanskrit Sansthan; 2007. p.205.
13. Vagbhata. Astanga Samgraha. Shailaja Shrivastava, editor. 1<sup>st</sup> ed. Varanasi: Chaukhamba Orientalia; 2006.p.71.
14. Vagbhata. Ashtanga Hridayam (Nirmala Hindi commentary). Brahmanand Tripathi, editor. 1<sup>st</sup> ed. Delhi: Chaukhamba Sanskrit Pratishthan; 2009. p.1196.
15. Sharma PV, Guruprasad Sharma, editors. Dhanvantari Nighantu. 4<sup>th</sup> ed. Varanasi: Chaukhambha Orientalia; 2005.p.46.
16. Sodhala. Sodhala Nighantu. Sharma PV, editor. 1<sup>st</sup> ed. Baroda: Oriental Institute; 1978.p.20.
17. Sharma PV. Vopadeva's Hridayadipaka Nighantu and Siddhmantra of Vaidyacharya kesava (Prakasa Commentary of Vopadeva). 1<sup>st</sup> ed. Varanasi: Chaukhamba Amarbharti Prakashan; 1977. p.3.
18. Sharma PV, editor. Madanpala nighantu. 1<sup>st</sup> ed. Varanasi: Chaukhamba Vidyabhavan; 1973.p.25.
19. Chunekar KC, Pandey GS. Bhavprakasssha Nighantu. 1<sup>st</sup> ed. Varanasi: Chaukhamba Bharti Academy; 2010.p.119-121.
20. Shrikrishna Khemraj. Shaligrama Nighantu. 1<sup>st</sup> ed. Mumbai: Shrikrishna Khemraj; 1993.p.161.
21. Narahari. Raja Nighantu. Indradeo Tripathi, editor. 5<sup>th</sup> ed. Varanasi: Chaukhambha Krishnadas Academy; 2010.p.73-74.
22. Sharma PV, Guruprasad Sharma, editors. Kaiyadeva Nighantu. 2<sup>nd</sup> ed. Varanasi: Chaukhambha Orientalia; 2006.p.130-131.
23. Bapalal Vaidya. Nighantu Adarsha, Vol. 1. 1<sup>st</sup> ed. Varanasi: Chaukhamba Bharati Academy; 2007.p.417.
24. Sharma PV. Priya Nighantu. 1<sup>st</sup> ed. Varanasi: Chaukhamba Surabharati Publication; 1983.p.106.
25. Anonymous. Pharmacopoeia of India. 2<sup>nd</sup> ed. New Delhi: Govt. of India, Ministry of Health and Family Welfare; 1978.p.42.
26. Sharma PV, Guruprasad Sharma, editors. Dhanvantari nighantu. 4<sup>th</sup> ed. Varanasi: Chaukhambha Orientalia; 2005.p.46.
27. Sharma PV. Madanpal Nighantu. 1<sup>st</sup> ed. Varanasi: Chaukhamba Vidyabhavan; 1973.p.25.
28. Sharma PV, Guruprasad Sharma, editors. Kaiyadeva Nighantu. 2<sup>nd</sup> ed. Varanasi: Chaukhambha Orientalia; 2006.p.130-131.
29. Chunekar KC, Pandey GS, editors. Bhavprakasha nighantu. 1<sup>st</sup> ed. Varanasi: Chaukhamba Bharti Academy; 2010.p.119-121.
30. Narahari. Raja Nighantu. Indradeo Tripathi, editor. 5<sup>th</sup> ed. Varanasi: Chaukhambha Krishnadas Academy; 2010.p.73-74.
31. Sharma PV. Dravyaguna Vijnana, Vol. 2. 1<sup>st</sup> ed. Varanasi: Chaukhambha Bharti Academy; 2003.p.250-252.
32. Sharma PC, Yelne MB, Dennis TJ. Database on Medicinal Plants used in Ayurveda, Vol. 2. 1<sup>st</sup> ed. New Delhi: C.C.R.A.S, Dept. of I.S.M. & H., Ministry of Health and Family Welfare, Govt. of India; 2001.
33. Sharma PC, Yelne MB, Dennis TJ. Database on Medicinal Plants used in Ayurveda, Vol. 2. 1<sup>st</sup> ed. New Delhi: C.C.R.A.S, Dept. of I.S.M. & H., Ministry of Health and Family Welfare, Govt. of India; 2001.
34. Retrieved from: [http://en.wikipedia.org/wiki/Psoralea\\_corylifolia](http://en.wikipedia.org/wiki/Psoralea_corylifolia) [Accessed on: 07/03/2014]
35. Khushboo PS, Jadhav VM, Kadam VJ, Sathe NS. *Psoralea corylifolia* Linn. –

- Kushtanashini. Pharmacogn Rev. 2010;4(7):69-76.
36. Sharma PC, Yelne MB, Dennis TJ. Database on Medicinal Plants used in Ayurveda, Vol. 2. 1<sup>st</sup> ed. New Delhi: C.C.R.A.S, Dept. of I.S.M. & H., Ministry of Health and Family Welfare, Govt. of India; 2001.
  37. Anonymous. Pharmacopoeia of India. 2<sup>nd</sup> ed. New Delhi: Govt. of India, Ministry of Health and Family Welfare; 1978.p.42.
  38. Sharma PV, Guruprasad Sharma, editors. Kaiyadeva Nighantu. 2<sup>nd</sup> ed. Varanasi: Chaukhambha Orientalia; 2006.p.130-131.
  39. Supriya kumar Bhattacharjee. Hand Book of Medicinal Plants. 1<sup>st</sup> ed. Jaipur: Pointer Publishers; 1998.p.287.
  40. Susruta. Susruta Samhita. Ambika Dutta Shastri, editor. 2<sup>nd</sup> ed. Varanasi: Chaukhambha Sanskrit Sansthan; 2007.p.67.
  41. Saxena Nirmal, editor. Vangsen Samhita. 1<sup>st</sup> ed. Varanasi: Chaukhambha Sanskrit series Office; 2004.p.864.
  42. Tiwari PV, editor. Vrinda madhava. 1<sup>st</sup> ed. Varanasi: Chaukhambha visvabharati; 2007.p.470.
  43. Tiwari PV, editor. Vrinda madhava. 1<sup>st</sup> ed. Varanasi: Chaukhambha visvabharati; 2007.p.470.
  44. Kiritkar KR, Basu BD. Indian Medicinal Plants, Vol. III. 2<sup>nd</sup> ed. Dehradun: International Book Distributors; 2008.p.1008-1009.
  45. Vagbhata. Ashtanga Hridayam (Nirmala hindi commentary). Brahmanand Tripathi, editor. 1<sup>st</sup> ed. Delhi: Chaukhambha Sanskrit Pratishthan; 2009.p.789.
  46. Intradev Tripathi, Tripathi DS, editors. Yogaratnakara (Vaidyaprabha Hindi commentary). 1<sup>st</sup> ed. Varanasi: Krishnadas Academy; 2012. p.650.
  47. Vagbhata. Astanga Samgraha. Shailaja Shrivastava, editor. 1<sup>st</sup> ed. Varanasi: Chaukhambha orientalia; 2006. p.71.
  48. Sodhala Gada nigraha (Vidyotini Hindi Commentary). Ganga sahaya Pandey, Intradeva Tripathi, editors. 1<sup>st</sup> ed. Varanasi: Chaukhambha Sanskrit Sansthan; 1968.p.780.
  49. Vagbhata. Ashtanga Hridayam (Nirmala Hindi commentary). Brahmanand Tripathi, editor. 1<sup>st</sup> ed. Delhi: Chaukhambha Sanskrit Pratishthan; 2009.p.884.
  50. Caraka. Caraka Samhita (Caraka Chandrika Hindi commentary). Brahmanand Tripathi, editor. Varanasi: Chaukhambha Surbharati Prakashan; 2007.p.916.
  51. Susruta. Susruta Samhita. Ambika Dutta Shastri, editor. 2<sup>nd</sup> ed. Varanasi: Chaukhambha Sanskrit Sansthan; 2007.p.67.
  52. Sharma PV, editor. Cakradatta. 1<sup>st</sup> ed. Varanasi: Chaukhambha Orientalia; 2007.p.409.
  53. Nirmal Saxena, editor. Vangsen Samhita. 1<sup>st</sup> ed. Varanasi: Chaukhambha Sanskrit Series office; 2004.p.760.
  54. Vagbhata. Ashtanga Hridayam (Nirmala Hindi commentary). Brahmanand Tripathi, editor. 1<sup>st</sup> ed. Delhi: Chaukhambha Sanskrit Pratishthan; 2009.p.789.
  55. Intradev Tripathi, Tripathi DS, editors. Yogaratnakara (Vaidyaprabha Hindi commentary). 1<sup>st</sup> ed. Varanasi: Krishnadas Academy; 2012.p.652.
  56. Sharangadhara. Sharangadhara Samhita. Brahmanand Tripathi, editor. 2<sup>nd</sup> ed. Varanasi: Chaukhambha Surbharati Prakashan; 2008.p.192.
  57. Sodhala Gada nigraha (Vidyotini Hindi Commentary). Ganga sahaya Pandey, Intradeva Tripathi, editors. 1<sup>st</sup> ed. Varanasi: Chaukhambha Sanskrit Sansthan; 1968.p.801.
  58. Vagbhata. Ashtanga Hridayam (Nirmala Hindi commentary). Brahmanand Tripathi, editor. 1<sup>st</sup> ed. Delhi: Chaukhambha Sanskrit Pratishthan; 2009.p.799.
  59. Intradev Tripathi, Tripathi DS, editors. Yogaratnakara (Vaidyaprabha Hindi commentary). 1<sup>st</sup> ed. Varanasi: Krishnadas Academy; 2012.p.647, 161-162.
  60. Sodhala Gada nigraha (Vidyotini Hindi Commentary). Ganga sahaya Pandey, Intradeva Tripathi, editors. 1<sup>st</sup> ed. Varanasi: Chaukhambha Sanskrit Sansthan; 1968.p. 786.
  61. Vagbhata. Ashtanga Hridayam (Nirmala Hindi commentary). Brahmanand Tripathi, editor. 1<sup>st</sup> ed. Delhi: Chaukhambha Sanskrit Pratishthan; 2009.p. 603,1196.
  62. Intradev Tripathi, Tripathi DS, editors. Yogaratnakara (Vaidyaprabha Hindi commentary). 1<sup>st</sup> ed. Varanasi: Krishnadas Academy; 2012.p.650,653.
  63. Sharangadhara. Sharangadhara Samhita. Brahmanand Tripathi, editor. 2<sup>nd</sup> ed. Varanasi: Chaukhambha Surbharati Prakashan; 2008.p. 258-259; 306-307; 254.
  64. Caraka. Caraka Samhita (Caraka Chandrika Hindi commentary). Brahmanand Tripathi, editor. 1<sup>st</sup> ed. Varanasi: Chaukhambha Surbharati Prakashan; 2007.p.678.
  65. Caraka. Caraka Samhita (Caraka Chandrika Hindi commentary). Brahmanand Tripathi, editor. 1<sup>st</sup> ed. Varanasi: Chaukhambha Surbharati Prakashan; 2007.p.531
  66. Nirmal Saxena, editor. Vangsen Samhita. 1<sup>st</sup> ed. Varanasi: Chaukhambha Sanskrit series Office; 2004.p.864.



67. Harita. Harita Samhita. Pandit Hariprasad Tripathi, editor, 1<sup>st</sup> ed. Varansi: Chaukhamba krishnadas Academy; 2005.p.298.
68. Chuneekar KC, Pandey GS. Bhavprakash nighantu. 10<sup>th</sup> ed. Varanasi: Chaukhamba Bharti Academy; 2010.p.119-121.
69. Krishnamurthi AK, Manjunath BL, Sastri BN, Deshaprabhu SB, Chadha YR. The Wealth of India: Raw Materials, Vol. 7. 1<sup>st</sup> ed. New Delhi: CSIR; 1969.p. 295-298.
70. Katsura H, Tsukiyama RI, Suzuki A, Kobayashi M. In vitro antimicrobial activities of bakuchiol against oral microorganisms. Antimicrob Agents Chemother. 2001;45:3009-3013.
71. Borate A, Khambhupati A, Udgire M, Paul D, Mathur S. Preliminary Phytochemical Studies and Evaluation of Antibacterial Activity of *Psoralea corylifolia* Seed Extract. American Journal of Phytomedicine and Clinical Therapeutics, 2014;2(1):95-101.
72. Khushboo PS, Jadhav VM, Kadam VJ, Sathe NS. *Psoralea corylifolia* Linn. – Kushtanashini. Pharmacogn Rev. 2010;4(7):69–76.
73. Rastogi RP, Mehrotra BN. Compendium of Indian Medicinal Plants, Vol. 5. Lucknow: CDRI and NISCAIR; 1998.p. 703-704.
74. Chen Y, Wang HD, Xia X, Kung HF, Pan Y, Kong LD. Behavioural and biochemical studies of total furocoumarins from seeds of *Psoralea corylifolia* in the chronic mild stress model of depression in mice. Phytomedicine. 2007;14:523-952.
75. Latha PG, Evans DA, Panikkar KR, Jayavardhanan KK. Immunomodulatory and antitumor properties of *Psoralea corylifolia* seeds. Fitoterapia, 2000;71(3): 223-231.
76. Yang YM, Hyun JW, Sung MS, Chung HS, Kim BK, Paik EH, Kang SS, Park JG. The cytotoxicity of psoralidin from *Psoralea corylifolia*. Plant Med.1996;62(4):353-354.

Source of Support: Nil

Conflict of Interest: None Declared