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DRUG REVIEW ON *PANCHKSHIRI* ACCORDING TO ANCIENT TEXT

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ABSTRACT

An *Ayurvedic* herb is a plant source which is used in the preparation of *Ayurvedic* medicine. *Panchkshiri or panchvalkal* is mentioned by the *Acharyas* in *Samhitas. Panchkshiri* has *kashaya* and sheet properties which are useful for *shotha. for this study panchvalkal are choosen as all five valkal i.e. bark of trees were easily available and often used in practice.* According to *Acharayas* it is mentioned for its *shotohara action. Shotha* is a diseases and sign mentioned by *Acharays*. in contemporary science it is correlate with inflammation. Panchvalkal is used as vranapaha and vranropana.

KEYWORDS: *Panchakshiri vrikha Panchvalkal, Shotha,* Inflammation.

INTRODUCTION

The word „Drug‟ is derived from French word “Drogue‟ means „Dry herb‟. A drug is defined as any substance that, when taken into living organism, may modify one or more of its functions or which is used for the purpose of diagnosis, prevention, relief or cure of a disease.[1] It does not include health enhancer materials or contraceptives. In modern, World Health Organization (1966) has defined a drug as „any substance or product that is used or intended to be usedto modify or explore physiological systems or pathological status for the benefit of the recipient‟. The ideal drug cures a disease without creating any complication. General assessment or Survey of drug from the available literature is called as “Drug Review”.

Vedas are the oldest store house of wisdom and one can find many references indicating use of herbs, mineral and animal products to cure diseases. *Rigveda* is the oldest book in the

library of man, supplies curious information on the subject. From it we learn that the Indo Aryans used the *Soma* as a medicinal agent. Drug is said to be the most important part of treatment as:-

Means drug is an important for a physician as group of ministers or adviser for a king.[2] *Ayurveda* „Drug‟ is called as ***'Aushadhi"***, one of the four fold constituent of *"Chikitsa chatushpada"* & *"Trisutra" i.e. Hetu, Linga* and *Aushadha*, derived from the word *"Osh"* means *„rasa"*. The great effect of any drug is abide of its therapeutic value which can be marked out by inspecting the synonyms of *Bhesaja* given by *Charaka* as *Chikitsa* (which alleviates disorders), *Vyadhihara* (destroyer of diseases), *Pathya* (beneficial for the channels), *Sadhana* (which is instrument for performance), *Aushadha* (which is prepared from herbs), *Prayaschita* (expiation), *Prashamanam* (pacification), *Prakritisthapanam* (which helps recovery) and *Hita* (wholesome). *Acharya Charaka* also said that ***"Bheshaja"*** is the substance which helps to bring back the vitiated *Doshas* to their normal level or that which counteracts the diseased conditions & brings back the body to a healthy state. But these substances should be used as per variations in conditions of morbidity, drug, place, time, strength, body, diet, suitability, mind, constitution and age which are even quite hard to grasp by a physician when considered as given by *Charaka* in *Sutrasthana. Acharya Kashyapa* in "*Vishesha Nirdesheeya Adhyaya",* advises the importance of rational use of appropriate medicine in treatment of diseases.[3]

The consideration of drugs during line of treatment for particular ailment has great importance. Drugs and food, how so ever good in its own qualities, if used irrationally will not work. Over and above, it will create adverse results in the patients. Every herb can be used as medicine but the result depends upon their judicious use according to properties.

Which means there is no substance in the universe which cannot be used as a medicine.[4] The action of any drug in the human body has been explained on the basis of five factors i.e. *Rasadi Panchak* which are mentioned as under:-

Rasa - Taste
Guna - Physical qualities
Veerya - Power to perform
Vipaka - Specific kind of transformation.
Prabhava - Which can‟t be explained

***Panchakshiri vriksha*: Historical background**

Group of barks of five trees is known as "*Panchavalkala*" and these trees are called *Panchksheeri-vriksha*. There is no direct description of *Panchavalkala* in *Charka Samhita* but this group is used at various places like for the treatment of *Raktatisarjanya-gudapak* and T*rishna*.[5]

In *Sushruta samhita* also, term *Panchavalkal*a is not seen but p*anchakashya* is used in yonivyapad chikitsa and ***Dalhan*** interpreted *panchakashy*a as *Nyagrodha, Udumbara, Ashwatha, Plaksha & Gardbhand*.

The word "*Panchavalkala*" is used frequently in N*ighantus* like *Dhanvantri* nighantu[6] *Madanpal nighantu*[7], *Kaiyadev nighantu*[8], BhavPrakash[9] etc. In all these texts *Vata (Nyagrodha), Udumbara, Ashwatha,* Parish and *Plaksha* are accepted as "*Panchavalkala*" that is the bark of these five trees and same isused for the present study. These trees are called *Panchksheeri-vriksha*.

Table no. 1: Properties of *Panchavalkala* according to different *Ayurveda* texts.[6-9]

Nighantu	***Guna***	***Rasa***	***Virya***	***Vipaka***	***Dosha Karma***
Dhanvantari	-	*Kashaya*	*Sheeta*	-	*Kapha har*
Madan Pal	*Grahi*	-	*Sheeta*	-	-
Kaiyadev	*Ruksha*	-	*Sheeta*	-	*Kapha, Pitta nashak*
Bhav Prakash	*Grahi*	*Kashaya*	*Sheeta*	-	-

Table no: 2: Action of *Panchavalkala* according to different Ayurveda texts.[6-9]

Action	***Dhanvantri Nighantu (Mishrak varga 7/15)***	***Madanpal Nighantu (Vatadivarga 5/8-11)***	***Kaiyadev Nighantu (Aushadhi varga 438-439)***	***Bhavprakash Nighantu(Vatadi varga/17)***
Shothahara	+	+	+	+
Stanya Vishodhana	-	-	+	-
Dahahara	+	-	+	-
Trishnahara	+	-	-	-
Varnya	+	-	+	-
Yonidoshahara	+	-	-	-
Vrana nashaka	-	+	+	+
Visarpa nashaka	-	+	+	+

Table no. 3: Properties of *Panchakshiri vriksha.*

Sr.No.	Name	Guna	Rasa	Virya	Vipaka	Doshkarma
1.	*Vata*	*Ruksha, Guru, Grahi, Stambhana*	*Kashaya, Madhura*	*Sheeta*	*Katu*	*Kapha- Pitta nashaka*
2.	*Udumber*	*Ruksha,Laghu*	*Kashaya*	*Sheeta*	*Katu*	*Kapha- Pitta, Raktavikara nashaka*
3.	*Ashwatha*	*Ruksha, Guru, Stambhana*	*Kashaya*	*Sheeta*	*Katu*	*Raktapitta,Kapha nashaka*
4.	*Plaksha*	*Ruksha, Guru*	*Kashaya, Katu*	*Sheeta*	*Katu*	*Pitta, Rakta,Kapha doshahara*
5.	*Parish*	*Ruksha, Guru*	*Kashaya*	*Sheeta*	*Katu*	*Kapha- Pitta shamaka*
6.	*Panchvalkala*	*Ruksha, Grahi*	*Kashaya*	*Sheeta*	*Katu*	*Kapha-Pitta nashaka*

Vata

Latin Name **:** *Ficus bengalensis* Linn.

Family **:** Moraceae

Gana (group)

Charaka *:* *Mutrasangrahaniya,Kashayaskandha.*

Sushruta *:* *Nyagrodhadi*

Bhav Prakasha: *Kshirivriksa, Panchavalkala.*

Classical Name **:** *Vata (Nyagrodha)*

Vernacular name **:** English - Banyan tree; Hindi - Bargad, Barh; Bengali – Vata; Marathi – Vad; Kannad – Ala; Malyalam - Peral, Vaturksam; Tamil -Alamaran, Peral; Telugu – Peddamarri.

Distribution: Throughout India.

Parts used: Aerial root, bark, leaves, buds, latex.

Table no. 4: Properties of *Vata* according to different *Ayurvedic* texts.[10-14]

Text	Rasa	*Virya*	*Vipaka*	*Guna*	*Dosha Karma*
Dhanvantari Nighantu	-	*Sheeta*	-	*Ruksha, Stambhana*	-
Raj Nighantu	*Kashaya, Madhura*	*Sheeta*	-	-	*Kapha, Pitta Vikar hara*
Madan Pal	-	*Sheeta*	-	*Guru, Grahi*	*Kapha, Pitta*
Nighantu					*Nashak*

Kaiyadeva	*Kashaya*	*Sheeta*	-	*Ruksha, Grahi,*	*Kapha, Pitta*
Nighantu				*Guru*	*Doshahara*
Bhavpraksh	*Kashaya*	*Sheeta*	-	*Guru, Grahi*	*Kapha, Pitta*
Nighantu					*Doshahara*

Table no. 5: Action of Vata.[10-14]

Text	***Dhanvantari Nighantu (Amradi varga /69-70)***	***Raj Nighantu (Amradi Varga /116-118)***	***MadanPal Nighant U (Vatadi varga/5)***	***Kaiyadeva Nighantu (Ausadhi Varga /422-423)***	***Bhav Prakash (Vatadi varga/1-2)***
Varnya	-	-	-	+	+
Vrana doshahar	-	+	+	+	+
Visarpaghna	-	-	-	+	+
Yonidosha har	-	-	-	+	+
Jwar Nashak	-	+	-	-	+
Daha Nashak	-	+	-	-	+
Trishna Nashak	+	+	-	-	-
Shothahar	-	+	-	-	-
Chardi Nashak	+	-	-	-	-

- **Properties and action**[14]

Karma

Mutrasangrahaniya-pramehaghna Vedanasthapana, Vranaropana, Raktarodhaka, Shothahara, Stambhana-grahi, Raktashodhaka-raktapittahara, Garbhashayashothahara, Yonidosahara, Garbhasthapaniya, Pumsavanakara, Sukrastambhana, Dahaprasamana, Varnya.

IN MODERN LITERATURE (*Ficus bengalensis)*

Various parts including stem bark of F. bengalensis Linn. is also used as astringent, haemostatic, anti-inflammatory and antiseptics.[15]

Chemical constituents

Leucoanthocynin, two flavonoid compounds, viz., 5,7-dimethyl ether of leucopelargonidin-3-0-x-L-rhamnoside and 5,3-dimethyl ether of leucocynidin-3-0-x-D-galactosyl cellobiside; three methyl ethers of leucoanthocyanins-delphinidin-3-0-x-L-rhamnoside(I), pelargonidin-3-0-x-L-rhamnoside, B-sitosterol-X-D-glucoside and meso-inositol(stem bark); tiglic acid ester of taraxasterol; quercetin-3-galactoside, rutin, friedelin, surface hydrocarbons(leaves). Bark and shoots contain 10% tannin. Phytochemical investigation of various extracts of F. benghalensis Linn. Stem bark indicated the presence of alkaloids, flavonoids, steroids,

phenolic compounds and tannins.[16]

UDUMBARA

Latin Name : Ficus recimosa Roxb.

Family : Moraceae

Gana (Group) :

Charaka : Mutrasangrahaniya, Kashaya skandha

Sushruta : Nyagrodhadi gana, Kashayarasa predominent fruits

Bhavprakasha : Kshirivriksha, Panchavalkala

Classical Name : Udumbara

Vernacular Names

English - Cluster fig, Country fig; Hindi - Gular, Umaradi, Dimer; Bengali -Yagyadumbara, Dmur; Marathi – Umbar; Kannad – Ati; Malyalam – Ati; Tamil – Attimaram; Telugu - Attichettu, Raiga.

Table no. 6: Properties of *Udumbara* according to different *Ayurvedic texts.*[17-21]

Text	Rasa	*Virya*	*Vipaka*	*Guna*	*Dosha-karma*
Dhanvantari Nighantu	*Kashaya (Apakva phala), Madhura)*	*Sheeta*	-	-	*Pitta-Raktaghna*
Raj Nighantu	*Kashaya, (Apakva phala), Madhura)*	*Sheeta*	-	-	*Rakta,Pitta Nashak*
Madan Pal *Nighantu*	-	Sheeta	-	Guru	Kapha, Pitta, *RaktaVikar*
Kaiyadeva *Nighantu*	Kashaya, Madhura	Sheeta	-	Ruksha,	
Bhavprakash *Nighantu*	Kashaya, Madhura	Sheeta	-	Guru, ruksha	Kapha, Pitta, raktavikar

Table no. 7: Showing karmas according to different acharyas.

Text	Dhanvantari nighantu	Raj Nighantu (Amradi varga/ 126-129)	Madan Pal Nighantu (Vatadi varga/5)	Kaiyadeva Nighantu (Ausadhi Varga/424-430)	Bhav Prakash (Vatadi varga/ 8-9)
Varnya	-	-	-	+	+
Vrana Shodhaka	-	-	-	-	+
Ropana	-	+	+	+	+
Murcha nashak	+	-	+	-	-
Daha nashak	+	+	-	-	-

Trishna nashak	+	-	+	-	-
Krimi Krata	-	-	-	-	+

Properties and action[17]

Karma

Mutrasangrahaniya, Dahaprasamana, Garbhasaya shothahara, Shukrastambhana Raktapittashamaka, Garbhaposhaka Krmikaraka, Shothahara- vedanasthapana Varriya, Vranaropana.

Roghghnata

Vranashopha, Mukhapak, Galshopha, Raktapravahika, Raktatisar, Grahani, Bhasmak, Kamala, Shwetapradar, Pramaeha, Jwar.

- **IN MODERN LITERATURE *(Ficus racimosa)***[22]

Chemical Constituents

Bark:-Tetracyclic triterpene – glauanol acetate, two leucoanthocyanins – leuccynidin– 3-0-B-D glucopyranoside, leucopelargonidin, its acetate, stigmasterol, glycoside; gluanol, hetriaconate, taraxasterol, glcose, lupel acetate.

ASHWATHA

Latin Name : *Ficus religiosa* Linn.

Family : Moraceae

Gana (group) :

Charaka : *Mutrasangrahaniya,Kashaya skandha*

Sushruta : *Nyagrodhadi*

Bhav Prakasha : *Kshirivriksha, Panchavalkala*

Classical Name : *Ashwattha*

Vernacular Name

English: Peepal tree, Sacred fig, Bodhi tree; Hindi : Pipal, Pipar; Bengali : Aswat, Asud, Ashwattha; Marathi: Ashvatha, Pimpala; Kannad: Aswaththa; Malyalam : Arayal; Tamil : Asvattam, Arasu; Telgu: Asaddhamu

Distribution: Throughout India, Sub-himalayan forests.

Parts used: Bark, leaves, fruits, bud, seed, latex.

Table no. 8: Properties of *Ashwatha* according to different *ayurvedic texts.*[21-27]

Text	Rasa	*Virya*	*Vipaka*	*Guna*	*Dosha Karma*
Dhanvantari	*Kashaya*	*Sheeta*	-	*Ruksha,*	*Rakta- Pitta,*
Nighantu				*Stambhana*	*Kapha Nashak*
Raj	*Madhura*	*Sheeta*	-	-	*Kapha, Pitta*
Nighantu	*Kashaya*				*Nashak*
MadanPalNighantu	-	*Sheeta*	-	-	*Pitta, KaphaNashak*
KaiyadevaNighantu	*Kashaya*	*Sheeta*	-	*Ruksha, Guru*	*Pitta, Kapha Doshahara*
Bhavprakash Nighantu	*Kashaya*	*Sheeta*	-	*Ruksha, Guru*	*Pitta, Kapha Doshahara*

Table no. 9: Action of *Ashwatha* according to different *ayurvedic t*exts.[21-27]

Text	*Dhanvantari Nighantu (Amradi varga /71-73)*	*Raj Nighantu (Amradi varga /112-115)*	*Madan Pal Nighantu (Vatadi Varga 5/13)*	*Kaiyadeva Nighantu (Ausadhi Varga /431-432)*	*Bhav Prakash (Vatadi varga/ 3)*
Varnya	-	-	-	-	+
Trishna nashak	+	-	-	-	-
Chardi nashak	+	-	-	-	-
Murcha nashak	+	-	-	-	-
Daha nashak	-	+	-	-	-
Raktavikar nashak	-	+	+	+	+
Vrana doshahar	-	-	+	-	+
Yoni	-	+	-	+	+

Properties and Action[27]

Karma

Varnya, Vranaropana, Vedana sthapana, Shothahara, Raktashoadhak, Raktpittashamak, Mootrasangrahneeya, Stambhana, Kaphaghna (stem bark); Snehana, Anulomana, Mridurechana, Shwasahara (fruit), Garbhasthapana, Vajikarana (fruit, root, bark).

Roghghnata

Vranavikara (leafbud), Vedana, Shoph, Raktsrava (latex); Vrana, Vranashopha, Bhagandara, Mukhapaka, Kasa, Prameha (stem bark); UdarShoola, Vibandha, Shwasa, Prameha, Raktpitta (fruit).

Action on *Vrana*: *Vedana stapana, Shothahara, Raktpittashamak.*

IN MODERN LITERATURE (*F. religiosa)*

Chemical constituents

B-sitosteryl-D-glucoside(bark); Vitamin K, n-octacosanol, methyloleanolate, lanosterol, stigmasterol, lupen-3-one and phytosterolin, bergaoten bergaptol and 4% of tannin(stem bark); protein and amio acid(leaves). Preliminary phytochemical screening of F. religiosa barks, showed the presence tannins, saponins, flavonoids, steroids, terpenoids and cardiac glycosides The barks of F. religiosa showed the presence of bergapten, bergaptol, lanosterol, β-sitosterol, stigmasterol, lupen-3-one, β-sitosterol-d-glucoside (phytosterolin), vitamin k1. The bark also contains tannin, wax, saponin, β-sitosterol, leucocyanidin-3-0-β- D-glucopyrancoside, leucopelargonidin3-0-β-D-glucopyranoside, leucopelargonidin-3-0-α-L-rhamnopyranoside, lupeol, ceryl behenate, lupeol acetate, α- amyrin acetate, leucoanthocyanidin and leucoanthocyanin.[22]

PLAKSHA

Latin Name **:** *Ficus lacor Buch-Ham.*

Family **:** Moraceae

Gana (group) **:**

Charaka *:* *Mutrasangrahaniya, Kashayaskandha*

Sushruta *:* *Nyagrodhadi gana*

Bhav Prakasha *:* *Kshirivriksha, Panchavalkala.*

Classical Name *:* *Plaksha*

Vernacular names

Hindi : Pakhar, Pakri, Pilakhan; Bengali –Pakurh; Marathi : Vassari; Kannad : Vassari, Jubbi; Malayalam : Bela, Bakri, Chakkila, Chela, Itti; Tamil :Jovi, Kallal, Kurugatti, Suvi; Telgu: Badijuvi, Juvvi.

Parts used: Bark, leaves, latex.

Table no. 10: Properties *of Plaksha* according to *different ayurvedic* texts.[28-33]

Text	Rasa	*Guna*	*Virya*	*Vipaka*	*Dosha Karma*
Dhanvantari Nighantu	*Katu, Kashaya*	-	*Sheeta*	-	*Rakta Pitta nashak*
Raj Nighantu	*Katu, Kashaya*	-	*Sheeta*	-	*Rakta dosha har*
Madan Pal	-	-	*Sheeta*	-	*Kapha, Pitta nashak*
Nighantu					

Kaiyadeva Nighantu	*Kashaya*	-	*Sheeta*	-	*Kapha, Pittahar, Rakta, Pittahar*
Bhavprakash Nighantu	*Kashaya*	-	*Sheeta*	-	*Pitta, Rakta Kapha, doshahara*

Table no. 11: Action of Plaksha according to different ayurvedic texts.[28-33]

Text	*Dhanvantari Nighantu (Amradi varga*/69-70)	*Raj Nighantu (Amradi varga*/116-118)	*Madan Pal Nighantu (Vatadi varga*/5)	*Kaiyadeva Nighantu (Ausadhi Varga*/422-423)	*Bhav Prakash (Vatadi varga*/ 1-2)
Vrana har	-	-	+	+	+
Yoni roga Har	-	-	-	+	+
Shotha har	-	-	+	+	+
Dah har	-	-	-	+	+
Visarpa Nashak	-	-	+	+	+
Rakta vicar Har	-	+	-	+	-
Murcha Nashak	+	+	-	+	-
Bhrama har	+	+	-	-	-
Pralapa har	+	+	-	-	-

- **Properties and action[32]**

Karma*: Mutrasangrahaniya, Stambhana, Raktashothahara, Raktapittahara-raktashodhaka, Yonidosahara, Dahaprasamana, Shothahara, Vranaropana.*

Roghghnata: *Vranashopha, Visarpa, Vrana, Atisar, Raktapradar, Prameha, Yonidosha, Murcha, Pralap, Bhrama, Pravahika.*

- **In Modern Literature: (Ficus Lacor)[38]Chemical components**

Stem bark – Sterol, Sugar, Tannin, Alkaloid and Saponin, Stem bark yields acetates of long-chain alcohols, N-tetracosyl acetate, N-hexacosyl acetate, beta- sitosterol, lanosterol, caffeic acid, bergenin.

Biological uses: Bark antileucorrhoeic, also used in ulcer.

Properties and uses

Benzene extract of stem bark exhibited antibacterial property against S. aureus and E.coli. All parts are acrid, pungent, cooling and useful in diseases of the blood and vagina, ulcer, burning sensation, biliousness, inflammation, leprosy, hallucination, loss of consciousness. A decoction is employed as a gargle in salivation, as a wash for ulcers and leucorrhoea. The seeds are useful in bronchitis, scabies and boils.

PARISH

Latin Name : *Thespesia populenea Linn.*

Family : Malvaceae

***Guna* (group)** :

Charaka : *Mutrasaiigrahaniya, Kasayaskandha*

Sushruta : *Nyagrodhadi*

Bhav Prakasha : *Kshirivriksha, Panchavalkala.*

Classical Name : *Parish*

Vernacular name

English - Portia tree, Indian tulip tree, Umbrella tree; Hindi - Paras pipal, Parsipu; Bengali - Dumbla, Gajsundi; Marathi - Parasacha Jhad; Kannad - Arasi, Huvarase, Kandarola; Malyalam – Puvarasu; Tamil - Puvarasamkalla, Chilanti; Telgu - Gangarvi.

Parts used: Bark root, fruit, bark, leaves.

Table no. 12: Properties of *Parish* according to different *ayurvedic* texts.[34-38]

Text	*Rasa*	*Guna*	*Virya*	*Vipaka*	*Dosha* *Karma*
Dhanvantari Nighantu	-	-	-	-	-
Raj Nighantu	-	-	-	-	-
Madan Pal Nighantu	-	*Snigdha*	-	-	*Kapha-prada*
Kaiyadeva Nighantu	*Amla, Madhur(Phala) Kashaya(Mula) Madhur(majja)*	*Snigdha*	-	-	*Kapha-prada*
Bhavprakash Nighantu	*Kashaya, Amla(Phala) Madhur(Mula) Kashaya(Majja)*	*Snigdha*	-	-	*Kapha-prada*

Table no. 13: Action of Parish according to text.[34-38]

Text	*Dhanvantari Nighantu (Amaradi varga/86-88)*	*Raj Nighantu (Amaradi varga/ 140-141)*	*Madan Pal Nighantu (Vatadi varga/5/29-31)*	*Kaiyadeva Nighantu (Ausadhi Varga/427-428)*	*Bhav Prakash (Vatadi varga/ 6-7)*
Vrishya	-	-	+	-	-
Krimiprada	-	-	+	+	+
Shukraprada	-	-	-	+	+

Properties and action[38]

Karma: *Mutrasangrahaniya-pramehaghna.*

Therapeutic uses[38]

The drug Parish is *Mutrasangrahaniya* and used *in prameha* and other urinary disorders. The bark, leaves, flowers and fruits are reported to be useful in cutaneous affections such as scabies, psoriasis, ringworm, guineaworms and eczema, being kusthaghna and kandughna. It is topically applied over skin in condition of ulcer, scabies, itching, eczematous affections and swelling. The extracts of leaves are active against Micrococus pyogenes S.aureus and E. coli. The root is reported to be toxic. The seeds possess purgative properties. The plant has been shown to be effective in malaria. The pollen may cause allergy. The astringent bark, roots and fruits are reported to be useful in dysentery, haemorrhoids; and the mashed bark is employed as a poultice or hot fomentation for wounds.

- **in Modern Literature**:**(*T.populenea*)**[39]

Chemical Constituents

Flowers gave populnetin, herbacetin, populneol, quercetin and its glycosides, kaempferol and its glycosides, rutin, gossypol, P-sitosero and its glycosides, nonacosane, lupenone, myricyl-alcohol, lupeol and gossypetin. The sample of fully ripe seeds (Madias) yields 20% of a dark red-coloured fatty oil. The unsaponifiable matter is reported to contain ceryl alcohol and sitoslerol. Furthermore phytochemical studies indicated that the ethanolic extract of bark contains alkaloids, carbohydrates, protein, tannins, phenols, flavonoids, gums and mucilage, saponins and terpenes.

Biological Activity

Fruit antiviral, spasmolytic, anticancer, antifertility, antimalarial and antitumour, due to gossypol decreased sperm count in men.

Preparation & Uses: The plant is astringent, acrid, cooling, depurative, anti-inflammatory, haemostatic, vulnerary, alterant, antidiarrhoeal and antibacterial. It is useful in dermatopathy such as scabies, psoriasis, ringworm and guineaworm, leprosy, urethritis, gonorrhoea, haemorrhoids, haemorrhages, haemoptysis, inflammation, wounds, ulcers, diarrhoea, dysentety, cholera, diabetes, ascites, warts, cough and asthma. The bark and fruit possess more curative properties *(Indian med. Plant, vol. III).* The ethanolic extract of Thespesia populnea bark (TPE) was investigated for anti-inflammatory and analgesic activity at the

doses (p.o.) of 100, 200 and 400 mg/kg body weight. For evaluation of inflammation carrageenan-, histamine- and serotonin-induced paw edema served as acute models and formaldehyde induced arthritis served as a chronic model in rats. The higher doses of TPE (200 and 400 mg/ kg, p.o.) were inhibiting carrageenan, histamine and serotonin-induced paw edema as well as formaldehyde-induced arthritis successfully. From acute oral toxicity studies (OECD423 guidelines), no mortality was observed even at highest dose of TPE (2000 mg/kg, p.o.).

- *Panchavalkal* is routinely used plant in *Ayurvedic* medicine for local and systemic also. It is one of the most versatile plants having a wide spectrum of medicinal activities. The review shows the P*anchavalkal* has presence of tannins, alkaloids, flavonoids, saponin glycosides; steroids, reducing sugars, and volatile oil. On the basis of this it has antimicrobial activity so used in the gynaecological disorders like leucorrhoea, cervicitis, valvovaginitis and prophylaxis in gynaecological surgeries in the form douche, *Varti*, ointment and capsules. Hand wash gel of *Panchavalkal* can be used for antiseptic, *Kwath* for pre- operative skin preparation in *shalya* discipline. The *Kwatha* and ointment is used in cases of non-healing ulcers as P*anchavalka*l has anti-inflammatory and wound healing activity. All above ingredients of P*anchavalk*al tail shows Anti-inflammatory, anti-bacterial, anti-oxidant and free radical scavenging.

REFERENCES

1. Taber‟s Cyclopedic Medical Dictionary, Edited by: Donald Venes, 19th edition, Vol. 1, New Delhi; Jaypee Brothers, 638.
2. Rigveda, Rigveda Samhita, Edited by: Vedmurti Tponishth Pt. Shriram Sharma Acharya, 4th, Haridwar; Bhrahmavarchasa Shantikunj, Mandal 10, Sutra, 2000; 97/6: 182.
3. Agnivesha. Charaka Smahita. Hindi commentary by: Acharya Vidyadhar Shukla and Prof. Ravi Dutt Tripathi, Reprint:2002. Varanasi: Chaukhmba Publication, Sutra Sathan, 26/13: 358., 9/3,7: 149.
4. Agnivesha. Charaka Smahita, revised by Charaka and Dridhabala, with Ayurveda Dipika commentary of Chakrapanidatta, Edited by: Vaidya Jadavaji Trikamji Acharya. Reprint, Varanasi: Chaukhmba Subharti Prakashan; Sutra Sthan, 2009; 26/12: 138.
5. Bhavmishra. Bhavprakasha. Edited by: Pt.Brahmshankar mishra, 11th edition, 2004, Varanasi; Chaukhambha Sanskrit sansthan; Vatadivarga, Shloka no.8: 585. Agnivesha. Charaka Smahita, revised by Charaka and Dridhabala, with Ayurveda Dipika commentary of Chakrapanidatta, edited by: Vaidya Jadavaji Trikamji Acharya. Reprint:

2009 Varanasi: Chaukhmba Subharti Prakashan, Chikitsa Sthan, 22/44: 762.

6. Dhanwantri. Dhanwantri Nighantu, edited and elaborated by: Prof. Dr. Ojha Jharkhande and Dr. Mishr Umapati; Reprint, Varanasi: Chaukhmba Sanskrit Prakashan, Mishrak varga, 2004; 15-16: 362.
7. Nrupa Madanapala, Madanapal nighantu. Hindi commentary by: Pandit Hariharprasad Tripathak, Reprint. Varanasi: Chaukhmba Krishandas Academy, Vatadi varga, 2009; 8-11: 158.
8. Acharya Kaiyadeva, Kaiyadeva nighantu (Pathyapathya Vibhodhaka), edited by: Prof. Priya Vrat Sharma, Dr. Guru Prasada Sharma, First edition, Varanasi: Chaukhmba Orientalia, Aushadhi varga, 1979; 438-445: 167.
9. Bhavmishra, Bhavprakasha. Edited by: Pt. Brahm Shankar Mishra, 9thedition, Varanasi: Chaukhambha Sanskrit sansthan; Vatadi varga, 2005; 294.
10. Dhanwantri. Dhanwantri Nighantu, edited and elaborated by: Prof. Dr. Ojha Jharkhande and Dr. Mishr Umapati; Reprint, Varanasi: Chaukhmba Sanskrit Prakashan, Aamradi varga, 2004; 76-77: 378.
11. Rajanighantu, Pandit Narahari, written by: Dr. Indradev Tripathi, edited with Dravyagunaprakasha hindi commentary, Revised edition, Varanasi: Chaukhmba Krishandas Academy, Aamradi varga, 2010; 116-118: 176.
12. Nrupa Madanapala, Madanapal nighantu. Hindi commentary by: Pandit Hariharprasad Tripathak, Reprint. Varanasi: Chaukhmba Krishandas Academy, Vatadi varga, 2009; 2: 157.
13. Acharya Kaiyadeva, Kaiyadeva nighantu (Pathyapathya Vibhodhaka), edited by: Prof. Priya Vrat Sharma, Dr. Guru Prasada Sharma, First edition, Varanasi: Chaukhmba Orientalia, Aushadhi varga, 1979; 422-424: 166.
14. Bhavmishra, Bhavprakasha. Edited by: Pt. Brahm Shankar Mishra, 9th edition, Varanasi: Chaukhambha Sanskrit sansthan; Vatadi varga, 2005; 1-2: 295.
15. Sunita, Donga SB. A clinical study on upapluta yonivyapad w.s.r. to Valvovaginitis during pregnancy and it management with panchavalkaladi varti. PG dissertation, Gujarat Ayurved University, Jamnagar, 2011.
16. Dhanwantri. Dhanwantri Nighantu, edited and elaborated by: Prof. Dr. Ojha Jharkhande and Dr. Mishr Umapati; Reprint, Varanasi: Chaukhmba Sanskrit Prakashan, Aamradi varga, 2004; 86-87: 379.
17. Rajanighantu, Pandit Narahari, written by: Dr. Indradev Tripathi, edited with Dravyagunaprakasha hindi commentary, Revised edition, Varanasi: Chaukhmba

Krishandas Academy, Aamradi varga, 2010; 126-129: 179.

18. Nrupa Madanapala, Madanapal nighantu. Hindi commentary by: Pandit Hariharprasad Tripathak, Reprint. Varanasi: Chaukhmba Krishandas Academy, Vatadi varga, 2009; 5: 157.
19. Acharya Kaiyadeva, Kaiyadeva nighantu (Pathyapathya Vibhodhaka), edited by: Prof. Priya Vrat Sharma, Dr. Guru Prasada Sharma, First edition, Varanasi: Chaukhmba Orientalia, Aushadhi varga, 1979; 424-430: 167.
20. Bhavmishra, Bhavprakasha. Edited by: Pt. Brahm Shankar Mishra, 9thedition, Varanasi: Chaukhambha Sanskrit sansthan; Vatadi varga, 2005; 8-9: 295.
21. Malairajan P, Gopalkrishan G, Narasimhan S, Kavimani S. Antiulcer activity of Ficus glomerata. Pharmaceutical Biology, 2007; 45(9): 674-77.
22. Dhanwantri. Dhanwantri Nighantu, edited and elaborated by: Prof. Dr. Ojha Jharkhande and Dr. Mishr Umapati; Reprint, Varanasi: Chaukhmba Sanskrit Prakashan, Aamradi varga, 2004; 78-80: 378.
23. Rajanighantu, Pandit Narahari, written by: Dr. Indradev Tripathi, edited with Dravyagunaprakasha hindi commentary, Revised edition, Varanasi: Chaukhmba Krishandas Academy, Aamradi varga, 2010; 112-115: 179.
24. Nrupa Madanapala, Madanapal nighantu. Hindi commentary by: Pandit Hariharprasad Tripathak, Reprint. Varanasi: Chaukhmba Krishandas Academy, Vatadi varga, 2009; 6: 157.
25. Acharya Kaiyadeva, Kaiyadeva nighantu (Pathyapathya Vibhodhaka), edited by: Prof. Priya Vrat Sharma, Dr. Guru Prasada Sharma, First edition, Varanasi: Chaukhmba Orientalia, Aushadhi varga, 1979; 431-433: 167.
26. Bhavmishra, Bhavprakasha. Edited by: Pt. Brahm Shankar Mishra, 9thedition, Varanasi: Chaukhambha Sanskrit sansthan; Vatadi varga, 2005; 3-5: 295.
27. http://www.ncbi.nlm.nih.gov. [cited date: December 2018] Available from: www.ncbi.nlm.nih.com.
28. Dhanwantri. Dhanwantri Nighantu, edited and elaborated by: Prof. Dr. Ojha Jharkhande and Dr. Mishr Umapati; Reprint, Varanasi: Chaukhmba Sanskrit Prakashan, Aamradi varga, 2004; 83-89: 378.
29. Rajanighantu, Pandit Narahari, written by: Dr. Indradev Tripathi, edited with Dravyagunaprakasha hindi commentary, Revised edition, Varanasi: Chaukhmba Krishandas Academy, Aamradi varga, 2010; 123-124: 179.
30. Nrupa Madanapala, Madanapal nighantu. Hindi commentary by: Pandit Hariharprasad

Tripathak, Reprint: Varanasi: Chaukhmba Krishandas Academy, Vatadi varga, 2009; 7: 157.

31. Acharya Kaiyadeva, Kaiyadeva nighantu (Pathyapathya Vibhodhaka), edited by: Prof. Priya Vrat Sharma, Dr. Guru Prasada Sharma, First edition, Varanasi: Chaukhmba Orientalia, Aushadhi varga, 1979; 433-434: 167.
32. Bhavmishra, Bhavprakasha. Edited by: Pt. Brahm Shankar Mishra, 9th edition, Varanasi: Chaukhambha Sanskrit sansthan; Vatadivarga, 2005; 10: 295.
33. Roy K, Shivkumar H, Sarkar S. Wound healing potential of leaf extracts of Ficus religiosa on Wistaralbino strain rats. Int J Pharm TechReasearch, 2009; 1(3): 506-08.
34. Dhanwantri. Dhanwantri Nighantu, edited and elaborated by: Prof. Dr. Ojha Jharkhande and Dr. Mishr Umapati; Reprint, Varanasi: Chaukhmba Sanskrit Prakashan, Aamradi varga, 2004; 81-82: 378.
35. Rajanighantu, Pandit Narahari, written by: Dr. Indradev Tripathi, edited with Dravyagunaprakasha hindi commentary, Revised edition, Varanasi: Chaukhmba Krishandas Academy, Aamradi varga, 2010; 140-141: 180.
36. Nrupa Madanapala, Madanapal nighantu. Hindi commentary by: Pandit Hariharprasad Tripathak, Reprint: Varanasi: Chaukhmba Krishandas Academy, Vatadi varga, 2009; 4: 157.
37. Acharya Kaiyadeva, Kaiyadeva nighantu (Pathyapathya Vibhodhaka), edited by: Prof. Priya Vrat Sharma, Dr. Guru Prasada Sharma, First edition, Varanasi: Chaukhmba Orientalia, Aushadhi varga, 1979; 435-437: 167.
38. Bhavmishra, Bhavprakasha. Edited by: Pt. Brahm Shankar Mishra, 9th edition, 2005, Varanasi: Chaukhambha Sanskrit sansthan; Vatadivarga, 6-7, 295.
39. C. P. Khare, Ayurvedic Pharmacopoeial Plant Drugs: Expanded Therapeutics, CRC press Taylor and francis group, U.K., 2016; 269.