



Review Article

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A REVIEW ON PHARMACEUTICAL CONSIDERATION OF *OCIMUM SANCTUM*

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ABSTRACT

A deeper study revealed that *O. sanctum* has been attributed with actions that can increase pitta and body heat. It is mentioned to be a microbicidal agent. Because of its pungent taste and sharp and dry properties, it can increase pitta (one of the three doshas representing heat, transformation, digestion and metabolism) and should not be used in high doses or for a prolonged period in individuals with predominance of pitta or in diseases caused by derangement of pitta and rakta (blood), pungent substances with sharp and dry properties and hot potency are not generally considered to be good for fertility and should be used with care as *O. sanctum* has pungent taste. In the classical formulations the quantity of *O. sanctum* to be consumed per day varied from 0.74 mg to 86.14 mg. The plant Tulsi or Holy Basil (Botanical name *Ocimum sanctum*) belongs to family Lamiaceae. It is a tropical plant which grows as weed and also cultivated. Tulsi is worshipped by Hindus and is an important symbol of Hindu religion. It is a very common sight to find Tulsi Vrindavan (A special structure where Tulsi is grown) in houses of Hindus.

Keywords: Ayurveda, Cough, Fever, Fatigue, Phytochemical, Medicinal

INTRODUCTION

The name Tulsi is derived from Sanskrit, which means "matchless one"⁷. Ayurveda is a system of traditional Hindu medicine which is native to India and is renowned as one of the major systems of alternative and complementary medicine. According to Hindu mythology, Dhanvantari, the physician of the God's, is attributed with the origin of ayurvedic medicine. Ayurveda traces its origin to the Vedas particularly Atharvaveda and it stresses the use of indigenous plant-based medicines for the treatment of diseases⁶. Tulsi "Queen of herbs" is described as sacred and medicinal plant in ancient literature. Synonyms are *Geniosporum tenuiflorum* (L.) Merrill., *Lumnitzera tenuiflora* (L.) Spreng., *Moschosma tenuiflorum* (L.) Henham., *Ocimum anisodorum* F. Muell., *Ocimum caryophyllinum* F. Muell., *Ocimum hirsutum* Benth., *Ocimum inodorum* Burm., *Ocimum monachorum* L., *Ocimum sanctum* L., *Ocimum scutellarioides* Willd. ex Benth., *Ocimum subseratum* B. Heyne ex Hook., *Ocimum tomentosum* Lam., *Ocimum villosum* Roxb. nom. illegal., *Plectranthus monachorum* (L.) Spreng⁵.

Some of the phytochemical constituents of Tulsi are oleanolic acid, ursolic acid, rosmarinic acid, eugenol, carvacrol, linalool, β -caryophyllene (about 8%). Tulsi essential oil consists mostly of eugenol (~70%) β -elemene (~11.0%), β -caryophyllene (~8%) and germacrene (~2%), with the balance being made up of various trace compounds, mostly terpenes.

The Tulsi shrub is an erect plant which grows to a height of 50 to 60 cm tall. It has hairy stems, opposite ovate leaves and purple flowers. Leaves have strong scent. There are two types of Tulsi

1. Krishna Tulsi – Has purple leaves
2. Shri Tulsi – Has Green leaves

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an important symbol of Hindu religion. It is a very common sight to find Tulsi Vrindavan (A special structure where Tulsi is grown) in houses of Hindus.

Medicinal properties of Tulsi

Tulsi has anti-inflammatory properties as it reduces vata. Hence, its external application on swollen parts helps to diminish swelling and pain. Tulsi helps in many skin disorders. It is effective in skin rashes, insect bites and itching. Leaves of this plant are effectively used in ring worm infections and leukoderma. Fresh juice of Tulsi leaves is used in nasya karma. This method helps to relieve headache and diseases of head and neck. Tulsi leaves act as nerve tonic and help to sharpen memory. Paste and juice of Tulsi leaves help to reduce acne, pimples and scars. According to ayurveda, preparations of Tulsi are beneficial in indigestion, intestinal parasites and constipation. Crushed leaves of Tulsi are very effective in fever, cough, bronchitis and other diseases of lungs. It helps in expectoration of excess mucous secretion. Tulsi acts as a cardiac tonic and purifies blood. Seeds of Tulsi are effective in premature ejaculation. It also increases quantity of semen. Consuming 10–12 leaves of Tulsi per day helps to reduce stress.

Home remedies with Tulsi

Paste of Tulsi leaves when applied on inflamed areas help to reduce pain and inflammation. It is beneficial to smear crushed Tulsi leaves on skin rashes, ring worm affected areas and insect bites. Make a smooth paste of Tulsi leaves and apply it on acne and pimple to see effective results. Fresh Tulsi juice mixed with ginger and honey help to reduce cough and cold. Tulsi decoction is very beneficial in fevers like dengue and malaria. Gargling with Tulsi tea or decoction helps to reduce throat pain and mouth ulcers. Regular consumption of Tulsi leaves help to control diabetes and blood cholesterol.

Eugenol (1-hydroxy-2-methoxy-4-allylbenzene), the active constituent present in *Ocimum sanctum* L., has been found to be largely responsible for the therapeutic potentials of Tulsi. Although because of its great therapeutic potentials and wide occurrence in India the practitioners of traditional systems of medicine have been using *Ocimum sanctum* L. for curing various ailments, a rational approach to this traditional medical practice with modern system of medicine is, however, not much available. In order to establish the therapeutic uses of *Ocimum sanctum* L. in modern medicine, in last few decades several Indian scientists and researchers have studied the pharmacological effects of steam distilled, petroleum ether and benzene extracts of various parts of Tulsi plant and eugenol on immune system, reproductive system, central nervous system, cardiovascular system, gastric system, urinary system and blood biochemistry and have described the therapeutic significance of Tulsi in management of various ailments. These pharmacological studies have established a scientific basis for therapeutic uses of this plant^{2, 3}. These beneficial properties of this medicinal plant can mainly originate from its major biochemically active constituents like eugenol, carvacrol, ursolic acid, β -caryophyllene and rosmarinic acid. Here in, we reviewed current literature about anti-inflammatory, gastric and hepatoprotective properties of *Ocimum sanctum*⁴. Mosquitocidal activity of Tulsi was investigated using its eugenol and triglyceride (isolated from Tulsi's hexane extract) on fourth instars *Aedes aegypti* larvae⁷. When seeds of Tulsi was placed in water, it exudes within one hour, a mucilaginous substance (polysaccharides) and larvae which came in contact with seeds became firmly attached to it and died due to drowning of larvae^{8, 9}.

CONCLUSION

It is observed from various studies that the *Ocimum sanctum* have a number of pharmaceutical and medicinal property and according to this it is effective in the treatment of a number of

diseases. Future research on sacred basil should be emphasized for control of various diseases

REFERENCES

1. Savitha Suri et al. Ayurvedic Consultant Physician. www.ayurhelp.com.
2. Prakash P, et al. Therapeutic uses of *Ocimum sanctum* Linn (Tulsi) with a note on eugenol and its pharmacological actions: a short review. Indian J Physiol Pharmacol. 2005
3. Pattanayak P, et al. *Ocimum sanctum* Linn. A reservoir plant for therapeutic applications: An overview Pharmacogn Rev. 2010.
4. Kamyab AA, et al. Anti-Inflammatory, gastrointestinal and hepatoprotective effects of *Ocimum sanctum* Linn: an ancient remedy with new application Inflamm Allergy Drug Targets. 2013.
5. https://en.m.wikipedia.org/wiki/Ocimum_tenuiflorum
6. Sunita Verma et al. Chemical constituents and pharmacological action of *Ocimum sanctum* (Indian holy basil-Tulsi). The Journal of Phytopharmacology 2016; 5(5): 205-207
7. Ghosh, G.R. Tulsi et al. New Approaches to Medicine and Health (NAMAH). 1995;3: 23-29. 2.
8. Hasan, S.B. Deo PG et al. *Ocimum sanctum* seeds for mosquito control. Int Pest Control 1994;20-21.
9. Kelm MA, Nair et al. MG. Mosquitocidal compounds and triglyceride, 1,3-dilinolenol-2-palmitin from *Ocimum sanctum*. J Agri Food Chem. 1998;40: 3691-3693.

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