

Sacred Tulsi: From Tradition to Therapeutic Uses

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ABSTRACT

Tulsi (*Ocimum tenuiflorum*), commonly known as Holy Basil, is a highly valued medicinal and aromatic plant with significant cultural, therapeutic and ecological importance. Widely used in Ayurveda, it is recognized for its diverse pharmacological properties, including antioxidant, antimicrobial, anti-inflammatory and adaptogenic effects, mainly due to bioactive compounds such as eugenol and ursolic acid. Tulsi plays an important role in managing respiratory disorders, stress, metabolic diseases and enhancing immunity. Modern scientific studies have validated many of its traditional medicinal uses, increasing its application in pharmaceuticals and nutraceuticals. Besides its therapeutic value, Tulsi is easy to cultivate, environmentally beneficial and economically important, making it a valuable plant for promoting sustainable healthcare and agricultural development.

INTRODUCTION

The Significance of Tulsi

Tulsi, scientifically known as *Ocimum tenuiflorum*, holds a unique place among medicinal plants due to its deep cultural roots and remarkable therapeutic value. Commonly referred to as “Holy Basil,” Tulsi has been an integral part of Indian households and traditional healthcare systems for centuries. It is often grown in courtyards and worshipped daily, symbolizing purity, health and harmony. Beyond its spiritual importance, Tulsi is widely recognized as a natural remedy for a broad spectrum of ailments, ranging from respiratory disorders to digestive and stress-related conditions. Its consistent presence in daily life reflects a long-standing tradition of integrating health, culture and nature.



In recent years, there has been a global resurgence of interest in plant-based medicines and natural health products, driven by the need for safer and more sustainable healthcare alternatives. Among these, Tulsi has attracted considerable scientific and commercial attention for its immunomodulatory, anti-stress, antioxidant and disease-preventing properties. Modern research has increasingly validated many of its traditional uses, demonstrating its effectiveness in enhancing immunity, reducing inflammation and supporting overall well-being. As highlighted by Bast *et al.* (2014), Tulsi is not only a valuable medicinal herb but also a plant of

significant ecological and health importance, contributing to both human wellness and environmental sustainability.

1. Cultural and Spiritual Importance

Tulsi, or *Ocimum tenuiflorum*, has been revered in Indian culture since ancient times and is widely regarded as a sacred plant in Hindu tradition. It is commonly grown in courtyards, temples and household gardens, where it is worshipped daily as a symbol of spiritual purity and divine protection. The plant is believed to safeguard households from diseases and negative influences and its presence is often associated with peace, prosperity and well-being.



Fig.2: Tulsi : Sacred plant in Hindu tradition

The leaves of Tulsi are frequently used in religious rituals, offerings and traditional ceremonies, highlighting their cultural and spiritual importance. This deep-rooted reverence has played a crucial role in ensuring the conservation and widespread cultivation of the plant across generations. According to Sahu (2025), Tulsi occupies a prominent place in ethnobotanical traditions and continues to be an essential component of indigenous healthcare systems in India. The integration of

spirituality with health practices in the use of Tulsi reflects a holistic approach to well-being, where physical, mental and environmental health are interconnected. In the context of modern lifestyles, this traditional perspective is gaining renewed importance, encouraging a return to natural and sustainable ways of living.

2. Botanical Features and Distribution

Tulsi, scientifically known as *Ocimum tenuiflorum*, belongs to the family Lamiaceae and is a perennial, aromatic herb widely recognized for its medicinal and ecological importance. The plant typically grows to a height of 30–60 cm, featuring branched stems, ovate leaves with serrated margins and small purplish or white flowers arranged in terminal spikes. The characteristic strong and pleasant aroma of Tulsi is attributed to the presence of essential oils, which are rich in biologically active compounds. Several distinct varieties of Tulsi are commonly cultivated, including Rama Tulsi with green leaves, Krishna Tulsi with purple leaves and Vana Tulsi, a wild type known for its robust growth. Although these varieties differ slightly in appearance and chemical composition, they share similar therapeutic properties and are widely used in traditional and modern medicine.



Fig. 1: Distinctive varieties of Tulsi: Rama Tulsi, Krishna Tulsi and Vana Tulsi

Tulsi is well adapted to tropical and subtropical climates and thrives under warm conditions with adequate sunlight. It can grow

in a variety of soil types, provided there is good drainage. Its high adaptability, resilience and minimal input requirements make it an ideal plant for both household gardening and large-scale cultivation. These characteristics, combined with its economic and medicinal value, have contributed to its widespread cultivation across different regions.

3. Phytochemical Composition

The medicinal properties of Tulsi are largely attributed to its rich phytochemical composition. It contains essential oils, alkaloids, flavonoids, tannins and phenolic compounds that contribute to its therapeutic potential.

Key bioactive compounds include eugenol, ursolic acid, rosmarinic acid and linalool. These compounds exhibit strong antioxidant, anti-inflammatory and antimicrobial properties. Antioxidants present in Tulsi help neutralize free radicals and protect the body from oxidative stress and chronic diseases. A comprehensive review by Bhattarai *et al.* (2024) highlighted the presence of diverse phytochemicals in *Ocimum tenuiflorum*, emphasizing their role in various pharmacological activities. This rich chemical profile makes Tulsi a multifunctional medicinal plant with wide-ranging applications.

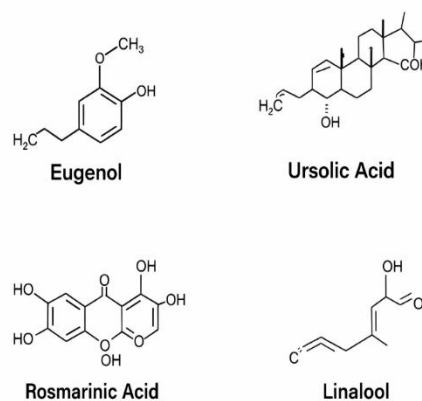


Fig. 4: Bioactive compounds of Tulsi

4. Therapeutic Properties and Health Benefits

Tulsi, or *Ocimum tenuiflorum*, is widely recognized for its extensive health benefits and is commonly used as a natural remedy for a variety of ailments. It plays a vital role in strengthening the immune system and enhancing the body's resistance to infections, making it an important component of preventive healthcare. Regular consumption of Tulsi in forms such as fresh leaves, herbal infusions, or extracts is believed to promote overall health and vitality.

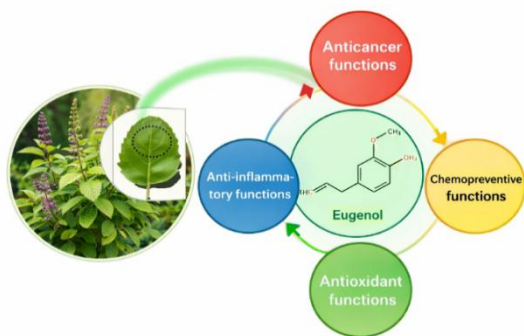


Fig. 5: Therapeutic Properties of Tulsi

Tulsi is particularly effective in managing respiratory disorders, including cough, cold, bronchitis and asthma. Its antimicrobial and anti-inflammatory properties help alleviate symptoms and support faster recovery.

Therapeutic Benefits of Tulsi

- Acts as a natural immunity booster
- Helps relieve respiratory problems (cough, cold, asthma, bronchitis)
- Possesses strong antimicrobial and anti-inflammatory properties
- Functions as an adaptogen, reducing stress and improving mental well-being
- Exhibits antioxidant activity, protecting against oxidative stress (Sharma *et al.*, 2022)
- Aids in digestion and metabolism

- Helps in regulating blood sugar levels
- Supports cardiovascular health
- Contributes to overall well-being and disease prevention

5. Role in Traditional and Modern Medicine

In Ayurveda, Tulsi, or *Ocimum tenuiflorum*, is considered a “rasayana” herb, known for promoting longevity, vitality and overall health. It is widely used in traditional formulations to manage respiratory, digestive and skin-related disorders and is valued for its rejuvenating and disease-preventing properties. Tulsi is commonly consumed in various forms, including herbal tea, fresh leaves, juices and extracts, making it an easily accessible remedy in daily life. Its regular use is believed to help maintain internal balance and enhance the body's natural defense mechanisms.

Modern scientific research has increasingly validated many of these traditional claims. Tulsi has been reported to exhibit a wide range of pharmacological activities, including antimicrobial, antiviral, antidiabetic, anti-inflammatory and anticancer properties. According to Yamani *et al.* (2016), Tulsi essential oil demonstrates strong antibacterial activity against a variety of pathogenic microorganisms, thereby supporting its traditional role in infection control and disease prevention. Additionally, several studies have highlighted its potential in reducing oxidative stress and improving metabolic health. The growing body of scientific evidence supporting Tulsi's medicinal properties has led to its widespread incorporation into pharmaceutical formulations, nutraceutical products and functional foods across the globe. As interest in natural and plant-based remedies continues to rise, Tulsi stands out as a valuable bridge between traditional healing systems and modern therapeutic applications.



Fig.5: Pharmacological activities of Tulsi in modern scientific era

6. Cultivation and Uses in Daily Life

Tulsi, or *Ocimum tenuiflorum*, is easy to cultivate and requires minimal care, making it an ideal plant for both household and commercial cultivation. It grows well in well-drained soils under warm climatic conditions with adequate sunlight. Regular watering, along with occasional pruning, helps maintain vigorous growth and enhances leaf production. The plant can be easily propagated through seeds or stem cuttings, ensuring rapid multiplication and widespread adaptability across different regions.

In daily life, Tulsi is widely utilized in a variety of forms. Fresh leaves are often consumed directly or used to prepare herbal teas and infusions known for their health-promoting properties. Tulsi extracts and essential oils are incorporated into medicines, cosmetics and wellness products due to their antimicrobial and therapeutic effects (Cohen, 2014). Additionally, the plant serves as a natural insect repellent and contributes to improving air quality, thereby enhancing the living environment. The increasing demand for medicinal and aromatic plants has made Tulsi cultivation economically viable for farmers. Its low input requirements and high market demand offer promising opportunities for income generation. Furthermore, its integration into sustainable and organic farming systems supports environmental conservation by reducing dependence on

synthetic chemicals, while promoting biodiversity and ecological balance.

CONCLUSION: From Tradition to Therapeutic Value

Tulsi represents a perfect blend of tradition and modern science. From its sacred status in cultural practices to its scientifically proven health benefits, it continues to play a vital role in promoting human well-being.

As highlighted by Bast *et al.* (2014) and other researchers, Tulsi not only contributes to human health but also supports ecological balance and sustainable living. In the face of rising health challenges and environmental concerns, the importance of such medicinal plants is more significant than ever. Incorporating Tulsi into daily life offers a simple yet effective way to enhance health and embrace sustainable practices. Its journey from tradition to therapeutic use underscores its enduring relevance and immense potential in the modern world.

REFERENCE

- Bast, F., Rani, P., & Meena, D. (2014). Tulsi – A herb for all reasons. *Journal of Ayurveda and Integrative Medicine*.
- Bhattacharai, K., Bhattacharai, R., Pandey, R. D., Paudel, B., & Bhattacharai, H. D. (2024). Phytochemical constituents and bioactivities of *Ocimum tenuiflorum*. *ScientificWorldJournal*.
- Cohen, M. M. (2014). Tulsi—*Ocimum sanctum*: A herb for all reasons. *Journal of Ayurveda and Integrative Medicine*, 5(4), 251–259.
- Sahu, O. (2025). A comprehensive review on *Ocimum tenuiflorum*. *Journal of Ayurveda and Integrated Medical Sciences*.

Sharma, A. D., Kaur, I., Angish, S., Thakur, A., & Singh, A. (2022). Comparative phytochemistry and biological activities of *Ocimum* species. *BioTechnologia*.

Yamani, H. A., Pang, E. C., Mantri, N., & Deighton, M. A. (2016). Antimicrobial

activity of Tulsi (*Ocimum tenuiflorum*) essential oil and their major constituents against three species of bacteria. *Frontiers in Microbiology*, 7, 681. <https://doi.org/10.3389/fmicb.2016.00681>.