

Holy Basil

THE STORY OF *OCIMUM SANCTUM*



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Ocimum sanctum (Holy Basil or Tulsi) is an aromatic herb belonging to the family *Lamiaceae*.¹ It is native to India and south-east Asia where it has been used medicinally for centuries and is now cultivated all over the world, including in Australia.² *Ocimum sanctum* has warming and astringent properties,¹ and is slightly bitter. In Ayurvedic medicine, *Ocimum sanctum* is believed to normalise an imbalance of both the kapha and vata doshas.³ While the whole plant (flowers, leaves, and seeds) has medicinal properties, it is mostly the leaves, rich in volatile oils, that are used.

There are two main varieties of Tulsi: a green-leaved variety known as Rama Tulsi and a purple-leaved variety known as Krishna-Tulsi. Both Rama and Krishna Tulsi appear to have similar biochemical and therapeutic properties.² To date there has been only a small number of published clinical trials examining the effects of *Ocimum sanctum* in humans, however, those conducted show great promise, confirming the valuable insights of its traditional use.



KEY HIGHLIGHTS:

- *Ocimum sanctum* or Holy Basil is a herb renowned for its medicinal value.
- *Ocimum sanctum* has a strong history of use in Ayurvedic medicine.
- Clinical trials using *Ocimum sanctum* have demonstrated its adaptogenic ability to support resilience in periods of high physical and mental stress.
- A literature review on the benefits of *Ocimum sanctum* found it enhanced immunity.

Adaptogen and mood enhancing

In Ayurvedic medicine, *Ocimum sanctum* was traditionally renowned for being a 'rasayna', a concept that describes the rejuvenating and tonic effects a specific herbal medicine may have on the body.

It can be hypothesised that prophylactic use of an herbal medicine like *Ocimum sanctum* may be helpful to assist with the increased psychological and immunological stress many individuals face in modern day life.⁷

Like many of the other rasayna herbs, *Ocimum sanctum* is considered an adaptogen⁴ and may be used to assist with increasing resilience in times of perceived physical and mental stress.



RESEARCH HIGHLIGHT:

Intake of OciBest®, an extract of *Ocimum tenuiflorum* (1200 mg/day) for 6 weeks in individuals with perceived high stress resulted in reduced symptoms of overall fatigue and less daytime sleepiness compared to those in the placebo group.⁴ These findings highlight the adaptive and tonic properties of Holy Basil.

Similarly, in a small randomised controlled trial involving 35 participants with generalised anxiety disorder, 500 mg of *Ocimum sanctum* consumed twice a day over 60 days improved mood and assisted with stress adaptation. Individuals were assessed clinically as well as via a self-reported questionnaire at three points over 60 days. As well as less depression and anxiety, participants reported better attention to detail, highlighting the cognitive enhancing properties of *Ocimum sanctum*, with researchers hypothesising that *Ocimum sanctum* may exert these effects via the regulation of the hypothalamus-pituitary-adrenal (HPA) axis.

A later study by Sampath et al.⁵ examining the effects of *Ocimum sanctum* on cognitive parameters in healthy volunteers over 30 days, noted that while there was a significant reduction in salivary cortisol concentrations, the results, while clinically significant, were not statistically significant when compared to the placebo group, suggesting a more complex mechanism of action at play.

Immune enhancing

A literature review examining the safety and efficacy of *Ocimum sanctum* in humans observed the ability of *Ocimum sanctum* to enhance immunity in five of the studies reviewed.⁶ One paper included in the review demonstrated that *Ocimum sanctum* reduced viral load in the saliva of individuals with herpes virus,⁶ highlighting its immune-enhancing properties.

Similar immune-enhancing effects were observed in a small randomised controlled trial in healthy adult participants after four weeks of consuming 300 mg/day of *Ocimum sanctum* leaf extract.⁷ Increased Natural Killer (NK) and T-helper cells were observed, reflecting an enhanced immune response. Chronic stress reduces the activity of NK cells, subsequently increasing vulnerability to infection.⁷



Table 1. Holy Basil RCT data^{4,5,7}

CLINICAL IMPACT	INGREDIENT	DOSE
Adaptogen and mood enhancing	<i>Ocimum tenuiflorum</i> (OciBest®)	1200 mg/day for 6 weeks
	<i>Ocimum sanctum</i>	500 mg/BD for 60 days
Cognitive enhancement	<i>Ocimum sanctum</i>	500 mg/BD for 60 days
Immune enhancing	<i>Ocimum tenuiflorum</i>	300 mg/day after 4 weeks
Reduced salivary cortisol	<i>Ocimum sanctum</i>	300 mg for 30 days

SUMMARY

While more rigorous studies with larger sample sizes and longer durations are required, *Ocimum sanctum* appears to be a safe herbal medicine with a long history of traditional use. Its multifaceted properties as tonic, adaptogenic, and immune enhancement make it an ideal choice for the modern-day dispensary to support clients needing assistance with immunity and resilience.

References

- Pattanayak P, Behera P, Das D, Panda SK. *Ocimum sanctum* Linn. A reservoir plant for therapeutic applications: An overview. *Pharmacogn Rev*. 2010;4(7):95-105. doi:10.4103/0973-7847.65323
- Pandey V, Swami RK, Narula A. Harnessing the Potential of Roots of Traditional Power Plant: *Ocimum*. *Front Plant Sci*. 2021;12:765024. Published 2021 Nov 1. doi:10.3389/fpls.2021.765024
- Cohen MM. Tulsi - *Ocimum sanctum*: A herb for all reasons. *J Ayurveda Integr Med*. 2014;5(4):251-259. doi:10.4103/0975-9476.146554
- Saxena R, C, Singh R, Kumar P, et al. Efficacy of an extract of *ocimum tenuiflorum* (OciBest) in the management of general stress: A Double-blind, Placebo-controlled Study. *Evidence-based Complementary and Alternative Medicine*. 2012;2012:7. doi:10.1155/2012/894509.894509

- Sampath S, Mahapatra SC, Padhi MM, Sharma R, Talwar A. Holy basil (*Ocimum sanctum* Linn.) leaf extract enhances specific cognitive parameters in healthy adult volunteers: A placebo controlled study. *Indian J Physiol Pharmacol*. 2015 Jan-Mar;59(1):69-77. PMID: 26571987.
- Jamshidi N, Cohen MM. The Clinical Efficacy and Safety of Tulsi in Humans: A Systematic Review of the Literature. *Evid Based Complement Alternat Med*. 2017;2017:9217567. doi:10.1155/2017/9217567
- Mondal S, Varma S, Bamola V, D, et al. Double-blinded randomized controlled trial for immunomodulatory effects of Tulsi (*Ocimum sanctum* Linn.) leaf extract on healthy volunteers. *Journal of Ethnopharmacology*. 2011;136(3):452-456. doi: 10.1016/j.jep.2011.05.012.

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