The Therapeutic Action of Queen of Herb (Ocimum Tenuiflorum)

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ABSTRACT

This review paper purpose is the ‘Queen of herb’ means holy basil/Tulsi is how to showing it Antimicrobial activity by using different type of method. This paper also study the pharmaceutical used of Tulsi & its Pharmacological activity of Tulsi like. Antimicrobial activity, Antifungal activity, Anti-inflammatory& Analgesic activity. It is main symbol of the Hindu region tradition this is plant having unique odor found in the semitropical and tropical country. In the world. This is plant mainly used for reducing the cough. Holy basil is ancient Hindu scriptures, Tulsi occupies the supreme position among the herb so that it referred to as “MOTHER”. It has been used Ayurveda and siddha practices for it’s supposed treatment of diseases. It having medicinal her that belong to the mint family and is found in 150 different worldwide. Tulsi has been used in thousands of years in Ayurveda for its diverse healing properties special about this plant is apart from being considered holy Tulsi is also reserved as great healer

Keyword: Tulsi, Holy basil, Ocium tenuiflorum, Ocimum sanctum, Eugenol

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Received 01 September 2021, Accepted 30 November 2021
INTRODUCTION

Ocimum tenuiflorum is also known as holy basil or its Hindi/Sanskrit name is Tulsi. It is an aromatic never ending plant in the family belonging on lamiaceae. It is domestic to the Asia subcontinent and well spread as a cultivated plant throughout the southeast Asian Tropics. Tulsi is a unique Odour found in the semitropical and tropical country of the world. This plant is grow all over India for its medicinal and also for religious purposes in houses, temples and park. It is also grown a commercial basis in cosmetic & pharmaceutical Industries. Tulsi is plant cultivated not only in India it is also cultivated by different countries like, Sri Lanka Nepal, Malaysia, Indonesia and Burma. It is used in Ayurveda, Unani, Siddha and is extensively used in the India. Tulsi has been used for thousands of years for its diverse medicinal properties and it consider in Ayurveda as the “Elixir of life” that promote survival.

Biological Source:

*Ocimum tenuiflorum*, also going by the name of Tulsi or holy basil. It is also called “Queen of Herbs”.

Scientific name: Oium tenuiflorum
Kingdom: plantae
Sub-kingdom: Tracheobionta
Super division: spermatophyte
Division: magnoliphyta
Class: Magnoliopsida
Subclass: Asteriidae
Order: lamiaes
Family: Lamiaceae
Genus: Ocimum
Species: O.tenuiflorum
Species:- O. sanctum.

The extract of Tulsi is mainly called used for treatment of cold, headache, stomach disorder etc.

Chemical constituent:

Active component of Tulsi. Eugenol is identified as one of main active constituent and is reported to process Myriad benefits. Tulsi is also reported to possess caryophyllene, 3-carene, alpha – humulene, citral, (-) –trans caryophyllene, eugenol ,6-allyl-3;8 dimethoxyflavone -3;4-diam,6-allyl-3-(4-allyl-2-mehoxyphenoxy)-3, 8-dime thoxyflaron-4,1,5-allyl-3(4-allyl-Methoxyphenoxy/Methyl)-2-(4-hydroxy-3 Methoxyphenyl)-7-Methoxy-2,3-dihydro benzofuran
,1,2-bisc (4-allyl-2-Methoxy phenoxy)-3-(4-hydroxy 3-Methoxypheryl) 3-methoxypropane,1-(4-hydroxy-3-Methoxyphenyl) 3-Methoxypropane,1-(4-hydroxy-3-Methoxypheryl) propane. 1-allyl-4-(5-allyl 1-2-hydroxy-3-ethoxyphenoxy)-3(4-allyl-1-2-Methoxy phenoxy)-5-Methoxy benzene, 3(allyl-2-methoxyphenoxy)-5-methoxybenzene,3-(5-allyl-2-hydroxy-3-methoxyphenyl)-1-(4-hydroxy-3-methoxyphenoxy)-prop-1-ene,(alpha)-pinene,(beta)-pinene,(alpha)
campher,carvacoral,luteolin,limetrol,methylchavicol,caryophylline,cirsilineol,decyladehyde,cirsi maritin,isothymusin,isothymonin,apigenin,rosmarinic acid and carvacrol. Other phytoconstituents isolated from various parts of the plant include palmitric acid, Vallinin, galic acid, Vitamin A, Vitamin C, ursolic and carvacrol. Other phytoconstituents isolated from various parts of the plant include palmitric acid, Vallinin, galic acid, Vitamin A, Vitamin C, ursolic and carvacrol. Other phytoconstituents isolated from various parts of the plant include palmitric acid, Vallinin, galic acid, Vitamin A, Vitamin C, ursolic and carvacrol. Other phytoconstituents isolated from various parts of the plant include palmitric acid, Vallinin, galic acid, Vitamin A, Vitamin C, ursolic and carvacrol. Other phytoconstituents isolated from various parts of the plant include palmitric acid, Vallinin, galic acid, Vitamin A, Vitamin C, ursolic and carvacrol.  

Uses:
- Holy basil is great antimicrobial agent.
- Holy basil is great antioxidant & protect the skin almost all the damage caused by free radicals.
- Tulsi act mild diuretic & detoxifying agent which the helps in lowering the uric acid level in the body.
- Holy basil contains vitamin c & antioxidant such as eugenol, which protect the heat from the harmful effect free radicals.

Pharmacological Activity:

1 Antimicrobial Activity:
Holy basil is showing the antimicrobial activity against the different bacteria the most common being candida albicans staphylococcus aureus, Escherichia coli by it phytoconstituent isolate from various parts. Comparably genteel reported that on comparing alcoholic and aqueous extract of O. sanctum L. (60mg/kg) showed wide Zones of inhibition against klebsiella.

Action of the chemical component:
Holy basil it having different chemical component like. Ursolic acid, Eugenol and carvacrol are known to passes antimicrobial activity against streptococcusmutants. It having maximum antimicrobial potential at the 4% concentration level. It also increase immunity and better metabolic function. In addition, it also decreases stress and possesses antioxidant property.  

Eugenol, palmiticacid, galic acid, Vallin in, vitamin A and Vitamin C are responsible for preventing dental caries, bad breath, tartar etc. thus keep safe the teeth. It having astringent properties aid & protect gum from periodontitis.

2 Antifungal activity: -
Antifungal activity has been shown by Ocimum sanctum in a study where the minimum fungicidal concentration (MFC) of different extracts and fraction were tested against clinically isolated five dissimilar dermatophytid fungi which be seen antifungal activity at a concentration of 200µg/Kg. It is fungicidal activity is said to be due to the action of secondary metabolites Those are present in holy basil including alkaloid glycosides, saponins, tannins, ascorbic acid, eugenol and different other metabolites or mentored previously.14

3 Anti-inflammatory: -
It having anti-inflammatory response of 500Mg/Kg of the Tulsi paste was found to be 88.15% as that of the response observed with 100Mg/Kg of indomethacin.15

4 Analgesic activity: -
The holy basil oil was found to devoid of analgesic activity in experimental pain model. (Tail flick, tail clip and tail immersion method).16

Extraction Method: -
Preparation of raw material: -
The holy basil leaves were dried in order to decrease the initial moisture content (90% of humidity), in an oven with a renewal and circulation. The drying temperature was 5°C and was kept constant for five hours until constant moisture. After drying, the sheets were ground in order to increase the contract surface, reducing the resistance to oil extraction the dried leaves were placed in sealed plastic bags, protected from light and moisture it stored in a refrigerator with low humidity.

1 Soxhlet extraction: -
The extraction process using Soxhlet was conducted to calculated the percentage of oil in the raw material used. The extraction was done in a triplicate way it was used approximately 5 gms of basil with 200 ml of hexane. The extraction time was fixed in hour, after reaching the boiling temperature around 69°C.

2 Supercritical carbon dioxide (CO2) extraction: -
It was used as a supercritical extraction until to calculating total yield and the kinetics of extraction. The unit consists of a stainless steel 3165 extracted with 42ml of capacity and 2 canvas of 260 mesh to prevent the entrainment of material a high-pressure pump (palm model G100) used for pumping Co2 was used to feeding the solvent into extractor the thermostatic was coupled in the extractor to control the temperature and manometer was installed online for pressure measurement. Extraction was carried out with approximately 4.5 grams of material. The CO2 pumped into the extractor remained in contact with the herbaceous matrix about 20
minutes before starting from test tube by opening the micrometric value located at the outlet of the extractor.

3 Hydro-distillation Extraction: -
The extraction by using Clevenger apparatus coupled to a bottom flask of 500 ml. It was added 30g of crushed leaves of holy basil and 300ml water into the flask. The extracted time having fixed for the four hours. The extracted oil was diluted in hexane & filtered after separation then, it was dried using Na₂SO₄ to remain the water & than the solution were separated by a Roto evaporator.

Measurement of the yield of essential oils of holy basil: -
The essential oil of the ocimum sanctum L. were calculated by using micropipettes and silicon cooted micro tips. The yield is denoted by the percentage of w/v (weight/Volume).

CONCLUSION:
“Queen of herbs” is known as ocimum sanctum lienor (Tulsi). This plant mainly used for reducing cough. It also used for antimicrobial activity again the actinomycete comitans similar inhibition zone. It is main symbol of the Hindu religious tradition.

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