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Nutrition and Health Benefit "Tulasi" (*Ocimum Sanctum* Linn.) in General and Oro-Dental Low Cost Medicine

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Abstract: *Ocimum sanctum* L. (OS) known as "Selasih Miik" or "Tulasi" in Bali, Indonesia, "Tulsi" in Hindi, and 'Holy Basil' in English is an very important for therapeutic potensials. The leaves, stem, flower, root, seeds and even whole plant of Tulasi it used in traditional nutritious food and medicine food. Tulasi is often enjoyed as a simple herbal tea and is frequently blended with other herbs and spices for various low cost nutritious food, medicinal food and culinary purposes.

Key words: tulasi; medicine; nutrition; low cost
JEL codes: I

1. Introduction

Ocimum sanctum L. (OS) known as "Selasih Miik" or "Tulasi" in Bali, Indonesia, "Tulsi" in Hindi, and "Holy Basil" in English is an very important for therapeutic potensials. Two types of Tulasi are met within cultivation: (i) Tulasi plants with green leaves known as "Sri Rama Tulasi" and (ii) Tulasi plant with purple leaves known as "Sri Krisna Tulasi". Tulasi in Sanskrit means "one that is incomparable or matchless". Tulasi was recognized thousands of years ago by ancient Rishis to be one of the India's greatest healing herbs. They saw this herb is so good for health and healing that it was declared as a God in itself. Tulasi is supposed beloved of Lord Krisna, a reincarnation of Lord Vishnu. Still today Tulasi can be found planted in most homes in Bali and is most respected and honored herb do to its continuing importance in healing, religion, spirituality, medicine and decorative aesthetics (Bhargava et al, 1981).

Tulasi tea culinary is one choice that has big potential to work out, because tourists will always have a need to fill the stomach, are all refreshing, healthy and soothing (Cohen, 2017). The nutrition and bioactive substances Tulasi as pharmacological properties of the whole herb in natural form, result from synergistic interaction of many different active phytochemical, consequently, the overall effects of Tulasi cannot be fully duplicated with isolated compound or extracts (Tewari et al., 2012).

Tulasi leaves are now regarded by most countries as adaptogens (antistress agents) and have been used widely to promote health throughout the entire body, which is able to control the balance of various metabolic processes of the body and prevent stress (Singh et al., 2005).

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Tulasi's unique pharmacological activity particularly helps address many issues faced by modern air travelers such as infection, fatigue, thrombosis, anxiety, and dealing with restraint, noise, hypoxia (from oxygen reduction), radiation, industrial chemicals and poor sleep. The beneficial effects of Tulasi have been demonstrated in numerous animal experiment and human trials have shown that Tulasi can decrease general anxiety and stress, relieve symptoms such as forgetfulness and feelings of exhaustion and assist with sexual and sleep problems (Cohen, 2017).

The leaves, stem, flower, root, seeds and even whole plant of Tulasi it used in traditional medicine. Tulasi is often enjoyed as a simple herbal tea and is frequently blended with other herbs and spices for various low cost medicinal and culinary purposes (Gupta et al., 2002).

2. Literature Review

2.1 Nutrition Benefits Tulasi, and Low Cost Medicine

Tulasi has a potential and good nutrition such as antioxidant, stearic acid, palmitic acid, oleic acid, linoleic acid, beta carotene, vitamin C and calcium, zinc, manganese and sodium. The nutritional and pharmacological/medicinal properties of the whole herb in natural form, result from synergistic interaction of many different active phytochemicals, consequently, the overall effects of Tulasi cannot be fully duplicated with isolated compounds or exatracts. Tulasi contains vitamin A, C, K, folate, mineral calsium, potassium, magnesium, manganese (Ari Agung, 2017; Cohen, 2017; Singh et al., 2005).

Tulasi has also shown significant antioxidant activity (Yanpallewar et al., 2004). Fresh leaves and stem of Tulasi extract yielded some phenolic compounds (antioxidants) such as cirsilineol, circimaritin, isothymusin, apigenin, androsameric acid, and appreciable oquantities of eugenol. Two flavonoids, viz., orientin, and vicenin from aqueous leaf of Tulasi have been isolated (Gupta et al., 2002). Ursolic acid, apigenin, luteolin, apigenin-7-O-glucuronide, luteolin-7-Oglucuronide, orientin and molludistin have also beenisolated from the leaf extract (Nair et al., 1982, in Tewari et al., 2012). Tulasi also contain a number of sesquiterpenes and monoterpenes viz., bornyl acetate, elemene, neral, and -pinenes, camphene, campesterol, cholesterol, stigmasterol and sitosterol (IDMA, 2002 in Tewari et al., 2012).

Tulasi is often enjoyed as a simple herbal tea and is frequently blended with other herbs and spices for various low cost nutritious food and culinary purposes. Because Tulasi traditional tea as potential nutritious substances has a "Holy Basil", unique, interesting, cool, refreshing, healthy and soothing sensation (Ari Agung, 2017; Gupta et al., 2002).

2.2 Health Benefits Tulasi in General Medicine and Low Cost

Ayurvedic texts categorise Tulasi as stimulant, aromatic and anti pyretic. It has a wide range of action on the human body mainly as a cough alleviator, a sweat-inducer and a mitigator of indigestion and anorexia. Tulasi has a medicinal properties activities such as hepatoprotective agent, antibacterial, antiviral, antifungal, antiprotozoal, antimalarial, anthelmentic, antidiarrhoeal, analgesic, antipyretic, antiinflammatory, antiallergic, antihypertensive, cardioprotective, central nervous system depressant, memory enhancer, antihypercholesterolaemic, hepatoprotective, antidiabetic, antihyperlipid, antiasthmatic, antithyroidic, antinoise/stress alleviating, anticancer, chemopreventive, radioprotective, immunomodulatory, antifertility, antiulcer, antiarthritic, adaptogenic/antistress, anticataract, antileucodermal and anticoagulant activities. Tulasi leaves are regarded as an "adaptogen" or

antistressagent. Adaptogens are agents that help the body cope with stress, enhance physical and mental health and promote longevity. Traditional uses: Tulasi is also known as "the elixir of life" since it promotes longevity (Chaurasia, 2015; Cohen, 2017; Sai Krisna et al., 2014; Tewari et al., 2012). Essential oils of Tulasi have antibacterial, antifungal and antiviral properties (Singh et al., 2005). Tulasi tea as potential bioactive substances has a unique, interesting, cool, refreshing, healthy and soothing sensation (Ari Agung, 2017; Pattanayak et al., 2010).

Tulasi is often enjoyed as a simple herbal tea and is frequently blended with other herbs and spices for various low cost traditional medicinal, because chewing of Tulasi leaves also known as "the elixir of life" since it promotes longevity. Different parts of plant are used in Ayurveda and Siddha Systems of Medicine for prevention and cuer of many illnesses and everyday ailments like common cold, headache, cough, flu, earache, fever, colic pain, sore throat, bronchitis, asthma, hepatic diseases, malaria fever, as antidote for snake bite and scorpion sting, flatulence, migraine headaches, fatigue, skin diseases, wound, insomnia, arthritis, digestive disorders, night blindness, diarrhea and influenza (Pandey & Madhuri, 2010).

Tulasi plant is regarded as the holiest of all plants by Hindus and within Ayurveda, Tulasi is known as "The Incomparable One", "The Queen of herbs" and considered an "elixir of life" and a potent adaptogen that longevity. I may see strange that Tulasi, which is considered the most potent medicinal herb in India, is relatively unknown outside India. The reason for this may be Tulasi's greatest use is in prevention as an "adaptogen", yet this is a concept not widely used in the west (Ari Agung, 2017; Cohen, 2017; Sumit & Geetika, 2012).

2.3 Health Benefits Tulasi in Oro-Dental Medicine and Low Cost

Tulasi can be promising herb in treatment of many oral disorders due to its antiinflamatory, antibacterial, antioxidant, and immunomodulatory properties however more research and studies are needed to establish this miraculous herb as treatment modality in dentistry (Chaurasia, 2015; Sumit, 2012).

Tulasi may be used effectively in tootpaste. This particular valuable herb has been utilized for hundreds of years in Ayurveda like a germ-fighting as well as healing supplement for teeth and also the mouth is considered to assist combat bad breath and cavities. Its anti-bacterial qualities turn it into a great option for dental health. Tulasi has the power to fight bacteria in your mouth that lead to dental issues, such as cavities, plaque, tartar and bad breath. Tulasi leaves serve as a mouth freshener because they kill the bacteria and germs hiding in your mouth. Tulasi can help diminish ulcers in the mouth, and it's generally thought to stop the growth of oral cancer cells caused by chewing tobacco. For this natural dental care, try adding a drop of tulasi essential oil to your toothpaste or drinking one cup of tulasi tea every day (Cohen, 2017).

Tulasi leaves are quate effective intreating common oral infections. Also few leaves chewed help in maintaining oral hygiene. Carracroland Terpene are the antibacterial agents present in this plant. The polyphenol rosmarnic acid is a strong antioxidant present in Tulasi. So it can be used in treatment of all other oral precancerous lesions and conditions (Agarwal et al., 2010).

Tulasi is often enjoyed as a simple herbal tea and is frequently blended with other herbs and spices for various low cost oro-dental medicinal, because Tulasi is also known as traditional uses. Chewing of Tulasi leaves also cures ulcers and infections of mouth (Pandey & Madhuri, 2010).

3. Conclusions

Tulasi is often enjoyed as a simple herbal tea and is frequently blended with other herbs and spices for

various low cost traditional medicinal, because chewing of Tulasi leaves also known as "the elixir of life" since it promotes longevity. It can prove beneficial in treating oral diseases also because of its antibacterial, anti-inflammatory, ulcer healing, antioxidant, immunomodulatory properties.

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