

Ethno-medicinal uses of *Nelumbo nucifera*

Daravath Divyabharathi., Yellapu Rammohan., Ramadugu Subash and Kottam Sushma

Introduction:

Nelumbo nucifera Gaertn. is an aquatic flowering plant and it is widely recognized by the beauty of its flowers, and has been considered a spiritual symbol for Buddhists, Hindus and Egyptians since ancient times. The flowers are very large and showy and considered sacred by Hindus, whereas the whole plant is holy according to Buddhists. Because of the beauty of its flower, it is also the national flower of India and Vietnam. Besides these considerations, there are also many advantages provided by this plant species which has been used as a food for about 7,000 years in Asia, and it is cultivated for its edible rhizomes/stems, seeds and leaves. Various lotus plant parts like buds, flowers, anthers, stamens, fruits, leaves, stalks, rhizomes and roots can play a significant role due to their edibility and medicinal properties. It has been used as herbal medicines for treatment of many diseases including cancer, depression, diarrhea, heart problems, hypertension and insomnia. Lotus produces a number of important secondary metabolites, like alkaloids, flavonoids, steroids, triterpenoids, glycosides and polyphenols.

Botanical Description

Nelumbo nucifera belongs to the family of Nelumbonaceae, which has several common names (e.g. Indian lotus, Chinese water Lilly and sacred lotus). Lotus is a perennial, large and rhizomatous aquatic herb with slender, elongated, branched, creeping stem consisting of nodal roots; leaves are membranous, peltate (60-90 cm and above), orbicular and concave to cup shaped; petioles are long, rough with small distinct prickles; flowers are white to rosy, sweet-scented, solitary, hermaphrodite, 10-25 cm diameter; ripe carpels are 12 mm long, ovoid and globous; fruits are ovoid having nut like achenes; seeds are black, hard and ovoid.

Traditional Medicine and Pharmacological Activities

Lotus is used in traditional medicine by people for its tremendous health benefits in many parts of the world. It is used to treat sunstroke, diarrhea, dysentery, haemorrhoids, dizziness, vomiting of blood, uterine bleeding disorders, promoting conception, improving the skin condition, controlling burning sensation, against infections, cough, hypertension, fever, urinary problems,

Daravath Divyabharathi., Yellapu Rammohan., Ramadugu Subash and Kottam Sushma

Dr. YSRHU- College of Horticulture, Anantharajupeta

hematemesis, epistaxis, haemoptysis, haematuria, and metrorrhagia etc. Many pharmacological studies on lotus have proven by its antidiarrheal, anti-inflammatory, antipyretic, hypoglycemic, immunomodulatory, psychopharmacological, antioxidant, aphrodisiac, lipolytic, antiviral, anticancer and hepatoprotective activities

1. Leaves in traditional medicine

Lotus leaves are used against diarrhea, high fever, haemorrhoids, leprosy, weakness, skin inflammation, and body heat imbalance, hematemesis, epistaxis, haemoptysis, haematuria, and metrorrhagia. Lotus leaves have been reported to have lipolytic, anti-obesity, cardiovascular and hypcholesterolaemic activity. The leaf extract has been reported to have analgesic, anthelmintic, antiobesity and hypolipidemic activity. Lotus liquor made of blossoms and leaves has been reported to possess antioxidant activities and is effective for reducing oxidative stress.



Leaf

2. Rhizome

Lotus rhizome and its extracts have shown diuretic, psychopharmacological, anti-

diabetic, anti-obesity, hypoglycemic, antipyretic and antioxidant activities. The antioxidant property of rhizome knot extracts has been reported to be higher than those from the whole rhizome.



Rhizome

3. Flowers

Floral parts of lotus or their extracts have also been used against many diseases like hypertension, cancer, weakness, body heat imbalance, consolidation of kidney function, male sexual disorders, syphilis, stopping bleeding and to eliminate the stagnated blood. Flowers, with their parts or extracts have shown to possess antimicrobial activities, vasodilating effects, antihypertensive and antiarrhythmic abilities, aphrodisiac activity, antioxidant and free radical scavenging capacity.



Flower

4. Seeds

In traditional medicine lotus seeds are used as spleen tonic and seed powder is used against cough. Plumule from the ripe seed is used for the treatment of many diseases, including nervous disorders, insomnia, high fevers with restlessness and hypertension. The seeds or their extracts have been reported to possess anti-proliferative, anti-fibrosis, antidepressant, anti-inflammation, astringent, hepatoprotective and free radical scavenging, anti-obesity and hypolipidemic effects, anti-inflammatory, immunomodulatory and antiviral activities.



Seeds with epicarp

