



# A LITERARY STUDY ON BHALLATAKA (*Semecarpus anacardium* Linn). AN IMPORTANT MEDICINAL PLANT ACTIVITY ON DISEASES

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## ABSTRACT

A member of the Anacardiaceae plant family is *Semecarpus anacardium* Linn. Additionally known as the marking nut tree. Despite being a poisonous plant, its fruits and other helpful parts have been advised for the treatment of haemorrhoids, worms, irritable bowel syndrome, constipation, ascites, bronchitis, skin conditions, acute rheumatism, and other conditions in the Ayurvedic medical system. Additionally, the *Semecarpus anacardium* Linn. may have antibacterial, anti-inflammatory, anti-oxidant, analgesic, anti-cancer, anti-helminthic, and anti-atherogenic properties. The active ingredients identified in *Semecarpus anacardium* Linn, *Semecarpol* (monohydroxy phenol) and *Bhilawanol* (o-dihydroxy compound), have been determined to be substantially responsible for the therapeutic potentials. The primary goal of this page is to highlight the most recent analysis of *Bhallataka's* (*Semecarpus anacardium*) therapeutic effectiveness against a variety of ailments. The primary goal of this article is to highlight the most recent analysis of *Bhallataka's* (*Semecarpus anacardium*) medicinal activity against a variety of diseases.

**KEYWORDS** - *Bhallataka*, *Semecarpus anacardium*, Diseases, etc.

## INTRODUCTION

The plant *Bhallataka* (*Semecarpus anacardium* Linn.), also known as marking nut, dhobi nut, *bhilawa*, and *biba*, is a member of the Anacardiaceae family. One of the greatest, most useful, most popular herbs for

home remedies. It has been utilized for millennia all throughout India. Ancient ayurvedic phases held it in great regard. It is a plant that is well recognized for having significant medicinal significance in Ayurveda and being useful for treating a variety of illnesses. The sharp quality of the plant is described by the term "bhallataka". Faster alleviation is provided by Bhallataka's hot potency, light, and sharpness properties, which also impart a wide range of positive benefits.<sup>1</sup>

Both internally and externally, bhallataka is employed (before consuming or applying useful part of Bhallataka i.e. fruit should be purified first). They must undergo a procedure known as shodhansankara before using Bhallataka as a therapeutic agent since it is one of the irritating organic vegetable poisons. This procedure increases bhallataka's medicinal potential while lowering its toxicity. The Charak Samhita lists many bhallataka recipes. In Sushrut Samhita the characteristics of containers, fruits, and medicinal oil from Bhallataka are noted. In bhaishajyaratnawali, several bhallataka formulations are described. One of the key drugs used in Ayurvedic medicine is bhallataka.<sup>2</sup>

### **DESCRIPTION OF BHALLATAK PLANT**

This tree is abundant in India's drier regions and may be found in the outer Himalaya from the Sutlej to Sikkim. A medium-sized deciduous tree, *Semecarpus anacardium* may grow to a height of 12 to 15 meters with a girth of 1.25 meters. The fruits, also known as marking nuts, are used therapeutically. The tree's fruit, which usually resembles hearts and has a rough base protrusion and an edible kernel within, is a nut. The pericarp of the nut produces blackberry oil, also known as bhilawan oil, which has been used in India or Malaya as writing ink when combined with lime water or alum. It has big, densely clustered leaves that are ovate-oblong in shape and rounded at the tip. It has tiny, greenish-white blooms. Between February and April, the tree loses all of its leaves; in May, the leaves and blooms reappear.<sup>3</sup>

### **AYURVEDIC PROPERTIES**

Bhallataka has a hot potency, a sweet and astringent flavor (rasa), a sweet aftertaste (vipaka), and a sweet post-digestive impact (veerya). It is completely free of the kapha and vatadoshas and has the qualities of light (laghu), unctuous (snigdha), sharp (teekshna), and hot (ushna). It is a powerful heat-producing, digestive, rejuvenating, aphrodisiac, and skin and rheumatic disorder-alleviating plant.<sup>4</sup>

### **ANCIENT APPLICATION**

According to the Ramayana in particular, bhallataka is used for hair maintenance in ancient systems of medicine. It is also used in folk medicine to colour hair and encourage hair growth. Additionally used for cauterizing joint discomfort and swelling (rheumatoid arthritis)<sup>5</sup>

### **CHEMICAL COMPOSITION**

Little delicious oil is present in the nut's kernel. The fruit's pericarp contains a potent astringent principle that is bitter (which is universally used in India as a substitute for marking ink). The pericarp's dark, acidic juice contains a tarry oil that is composed of 90% anacardiac acid, a higher, non-volatile alcohol, and 10% cardol. From the nut's kernel, Naidu (1925) recovered catechol, a monohydroxyphenol he named anacardol, two

acids, and a fixed oil. Additionally, the pericarp contains vesicating oil, which is 32% soluble in ether and becomes black when exposed to air. Ash output from fruit is 2.14 percent. by progressively extracting crushed fruit (pericarp and kernel) with light oil, alcohol, and water. It has been discovered that the following products can be isolated<sup>6</sup>

Pillay and Siddiqui (1931) have recently studied the drug's composition. They were able to separate the following constituents from the pericarp juice. Its nut has been chemically and photochemically analyzed, and it contains flavonoids, tannins, carbohydrates, proteins, and steroids. The black, oily, bitter, and extremely vesicant fluid that is abundant in the semecarpusanacardium fruit's pericarp has historically been used to label linen. Phenols are abundant in the vesicant juice known commercially as Bhilawan Shell Liquid.<sup>7</sup>

## **MEDICINAL USES**

Bhallataka has a variety of health benefits, including those that are carminative, diuretic, antihelminthic, liver stimulating, cardiac stimulating, diuretic, nervinetonic, aphrodisiac, and rasayana. Both internally and externally, bhallataka is employed. A wide range of ailments are treated using the fruit, their oil, and their seeds since they have considerable medicinal potential. The bitter, fiery, antihelminthic fruit of *S. anacardium* is said to be effective for ascites, tumours, warts, acute rheumatism, asthma, neuralgia, epilepsy, and psoriasis. It is occasionally used externally as a vesicant in rheumatism, sprains, eczema, leprosy, and other skin illnesses, but only in very tiny doses and with extreme caution. The kernel is a healthy meal that is also a wonderful appetizer, digestive aid, and carminative.<sup>8</sup>

## **PHARMACOLOGICAL ACTIVITY**

### **ANTI- ONCOGENIC ACTIVITY**

According to biological experiments, the fruit's extracts are efficient in tissue culture against human epidermoid carcinoma of the nasopharynx. Oral administration to cancer patients, particularly those with oesophageal and mouth cancer, is advantageous in terms of giving clinical improvement, symptom alleviation, and lengthening life periods, according to experimental investigations on the anti-cancer action of nut juice.<sup>9</sup>

### **ANTI –INFLAMMATORY ACTIVITY**

The SA nut extract's anti-inflammatory effects on newly diagnosed and established adjuvant arthritis. *Semecarpusanacardium* considerably reduced the cotton pellet granuloma and carrageenan-induced paw edema. These findings demonstrate *Semecarpus anacardium*'s significant anti-inflammatory properties and therapeutic efficacy. Nut extract is equivalent to indomethacin in its ability to combat all stages of inflammation.<sup>10</sup>

## ANTI –BACTERIAL ACTIVITY

The pericarp's juice has antimicrobial qualities. Bhi-lawanol sulphonates and arsenic derivatives do not vesiculate. In concentrations of 1 in 5000–15000, some of them exhibit noticeable bactericidal activity against *Bacillus pyogenes*, *B. coli*, *Staphylococcus*, and *Streptococcus pneumaticus*.<sup>11</sup>

## DISCUSSION

Since the dawn of civilization, *Semecarpus anacardium* have been used to cure ailments all over the world. The extensive review of the literature revealed *Semecarpus anacardium* to have a wide range of pharmacological actions. It is highly regarded among herbs with a variety of biological potentials and offers a lot of room for new areas of research. The fruit extract demonstrates a wide range of actions, including anti-bacterial, anti-cancer, anti-inflammatory, anti-atherogenic, anti-oxidant, hair growth stimulator, and many other qualities. *Semecarpus anacardium* needs further study and work to understand its traditional usage and validate its activity and mechanism of action for the welfare and survival of humans.<sup>12</sup>

## TOXICITY

Bhallataka should only be used sparingly because of how spicy and spiky it is. People who are reacting allergic should cease using Bhallataka immediately. Small children, extremely elderly people, pregnant women, and those with a mostly pitta constitution shouldn't use it. The same should only be used sparingly throughout the summer. The antidotes used externally for its adverse responses including rash, itching, and swelling are coconut oil, rala ointment, ghee, coriander leaves pulp, or butter combined with *musta* (*Cyperus rotundus*). While receiving treatment for Bhallataka, it is advised to avoid exposure to the sun, heat, and excessive sex. Salt and spices should also be strictly limited.<sup>13</sup>

## CONCLUSION

*Semecarpus anacardium* has a number of medicinal uses. The fruit and nut extract has a range of properties, including those that are antiatherogenic, anti-inflammatory, antioxidant, antimicrobial, anti-reproductive, CNS stimulant, hypoglycemic, anticarcinogenic, and hair growth promoter. The traditional usage of the plant, as well as the subsequent validation of activity and the mechanism of action, require further investigation.

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