



Short Summary About *Caesalpinia Crista* Linn. (**SagarGoti**)

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Abstract -

Caesalpinia crista L. (*Caesalpiniaceae*) is a medicinally use plant . It is mainly grows on river banks in tidal forest . *Caesalpinia crista* contains Alkaloids, Saponins, Flavonoids, Triterpenoids, etc. These constituents mainly presents in roots, stem, leaves and seeds of the plant . Their various pharmacological activities are Anthelmintic, Anti – tumour, Anti – oxidant, Analgesic activity, Anti – inflammation . There active Biological constituents are bonducin and natin . The oil from seeds is used to soften the skin and remove pimples .

The present review is gives survey of literature of this *Caesalpinia crista* L. which contains various medicinal properties and traditional uses .

Keywords – Phytochemical , *Caesalpinia crista* , nootropic , Analgesic .

Introduction –

In ancient time, medicinal plants are used for treating various diseases such as Diabetes, Arthritis, Cancer, Tuberculosis . The use of herb is ancient thing . The medicinal remedies are prepared as ointment, churnas, decoctions, tea, powder, etc. Herbal preparation (essential oil, fatty oil, tinctures and other extracts) are products obtained from plant raw materials by specific technological process such as distillation, pressing extraction and others. World Health Organisation (WHO) defined the medicinal plants contain properties or compounds that can be used for therapeutic purposes or those that synthesize metabolites to produce useful drugs .

Caesalpinia crista L. is a shrub , belonging to family *Caesalpiniaceae* . It is generally present in tropical region of India and Pakistan . The *C. crista* shows various pharmacological activities such as Anti-inflammation, Anti – oxidant, Anthelmintic, Analgesic . There seeds oil is useful for the relieve severe joint

pain. The seeds are round, hot and dry. The seeds are protected by hard coat which is in green or gray colour . The seed coat contains polyphenolics compounds.

Synonyms – *Caesalpinia* , *Caesalpinia paniculata* , *Caesalpinia nuga* L. , *Caesalpinia bonducella*.

Description -

The plant is shorn, scandent and itchy . The leaves are bipinnate, long, stipulated. Their size is 30-60 cm. The main axis of compound structure is long petiole, pinnae is six to eight pairs , each 5.0- 7.5 cm long. The leaflets in pairs , ranges from 6 to 9 – 2.0 to 3.8 cm . Ovate are elliptic to lanceolate . Flowers are yellow, fragrant . Sepals are oblong . Petals are yellow . Stamens are ten and Filaments woolly . Anthers are orange in colour . Calyx are 6.8 mm long, fulvous and hairy . Pods are stalked, oblong from 5.0 to 7.5 by about 4.5 cm . The seeds are oblong, dark gray and size upto 13 cm long .

Vernacular names –

English - fever nut, teri pods

Bangali - Lata Karancha

Hindi - Katuk ranja, karanjava

Gujarati - Kanchaki , Kankachia

Marathi - Sagargota , Gajra , kanchak

Kannad - Gujugu, Gaduggu



Taxonomical classification –

Kingdom : Plantae

Phylum : magnoliophyta

Class : Angiospermae

Order : Fabales

Family : Caesalpinaceae

Genus : Caesalpinia

Species : crista

Division : spermatophyta

Traditional uses –

These *C. crista* plant is also known as fever nut. Their various parts like roots, leaves, bark, flowers, seeds and oil are used in traditional system of medicine to treat fever, malaria, skin diseases, and inflammation.

These also possess some properties like anti-pyretic, hepatoprotective, anti-tumour, anti-ulcer, anti-convulsant, anti-diarrheal.

Roots has diuretic properties and also useful in bladder stone. Decoction of root prescribed in fever. Bark is used as anthelmintic and also used as febrifuge and in inflammation. Wood contains natural food colouring agent known as brazilin. According to Ayurvedic heartwood is bitter, sweet. It is used in conditions of burning sensation. Stem and fruits are used in eye diseases. Fruits contains flavonoids and tannins. They also cures the urinary discharge, piles. Leaves are used as tonic for uterine after childbirth. Juice of leaves is anthelmintic. When leaves are fried with ghee and consumed, it is very helpful for vatta and also relieves constipation. It is used as bitter tonic. Oil prepared from leaves is used as nervine tonic. Also best remedy for fever and asthma. Seeds are most beneficial for liver disorder, when it is take with goats milk and sugar. Kernels are useful as a tonic for fever, asthma and colic. Extracted oils from seeds contains anti-microbial property. But, fresh seeds does not shows this activity. Useful in the treatment of tumours. Also prevents contagious diseases. Cures inflammation, useful in colic, malaria, skin disorders: Leprosy. When seeds powder given with milk will controls diarrhoea. The seeds are stimulant to uterus, improves menstrual discharges. Kernels of dried seeds are potential as learning and memory enhancers. Flowers are bitter and cures kapha, vatta. The ash of flowers used in ascites.

Major constituents - Major constituents isolated are Diterpenoids of cassane and nor-cassane. Extracts shows the presence of flavonoids, tannins, alkaloids, saponins, coumarins, proteins, carbohydrates, reducing sugars, triterpenoids and fatty acids.

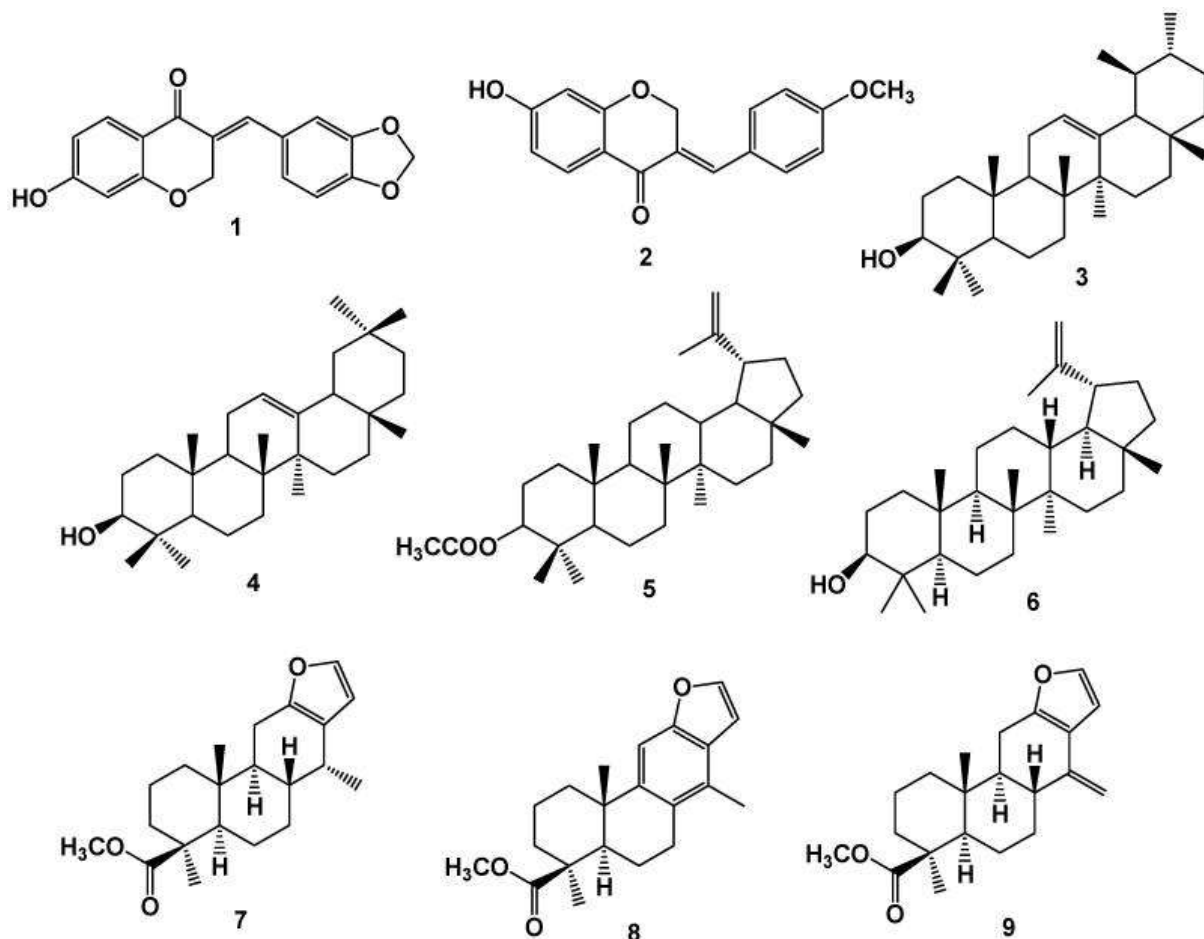


Figure : Phenolic compounds and triterpenoids isolated from the species *Caesalpinia* with antibacterial activities.

Ameliorative properties of *C. crista* –

The extraction of parts of *C. crista* plant gives various medicinal uses such found as anti- malarial, anthelmintic, adaptogenic, anti- inflammation, anti- pyretic, analgesic, anti- amyloidogenic, anxiolytic, anti- diabetic, anti- convulsant, anti- oxidant, hepatoprotective, anti- ulcer, anti- bacterial, nootropic, anti- viral, anti- tumour, insecticidal, cardioprotective.

Anti- ulcer activity –

Histopathological evaluation is done in rat. The extraction of *Caesalpinia crista* is shows its activity on pyloric portion in rat stomach and it was done for 45 min. Then shows, ulcer protection, aqueous extract of *C. crista* seeds reduces the volume of gastric fluid or acid, free acidity, ulcer index.

Anti – inflammatory activity and analgesic activity –

Amna Parveen et.al. (2014) found that the aqueous methanolic extract of *C. decapetala* has stronger analgesic, anti- inflammatory and anti- pyretic effects than n- hexane extract. These activities are analysed by hot plate method.

Anti – malarial activity –

Kalauni S et.al. (2006) isolates 44 cassane and nor cassane type diterpenes from crista and detects anti – malarial activity against malaria parasite i.e. Plasmodium falciparum. Nor – caesalpinin E shows potent activity. More potent than standard chloroquine drug (IC₅₀ , 0.29 mM).

Wound healing activity –

K.S. Patil (2005) states that extract of seed kernels of *C. crista* Linn. Shows wound healing effect in albino rats. The result obtained it can be conducted that ethyl acetate fraction of seed kernels of *Caesalpinia crista* Linn. Shows wound healing activity.

Anti – bacterial activity –

Govindaram et.al. (2023) founds result, the extracts of *Carica papaya*, *Trachyspermum ammi* and *Caesalpinia crista* Linn. Mixture of this three inhibits the growth of bacteria and shows anti – inflammatory effects.

Anti – oxidant activity –

Kumar R et.al. (2005) reported oxidant activity of *Caesalpinia crista* Linn. with leaf extract. All extract was evaluated for their anti- oxidant potential. Anti- oxidant was studied by DPPH and free radical scavenging methods. Done the leaf extraction with methanol shows potent oxidant and reactive oxygen species scavengers.

Anthelmintic activity –

Abdul J et.al. (2007) studied the anthelmintic activity of bark extract of *Caesalpinia crista*. The adult earthworms are used for evaluation of anthelmintic activity. Bark extract of *Caesalpinia crista* Linn. exhibits a spontaneous motility with 50 mg/ml of aqueous extract the effects compared with 3% piperazine citrate. There was no improvement in the case of worms treated with aqueous extract in contact to piperazine citrate. The worms recovered completely within 5 hrs *Caesalpinia crista* Linn. contains anthelmintic activity in vitro and in vivo against trichostrongylid nematodes of sheep.

Conclusion –

The healing properties of this plant is various types like anti- inflammatory , anthelmintic , anti- oxidant , anti- bacterial , Hepatoprotective , anti -ulcer , anti- pyretic , anti- amyloidogenic , axiolytic , anti- tumour , nootropic. *C. crista* also helpful in Neutraceutical industry. The seed kernel, leaves, flowers, seeds oil extraction are used as traditionally, for the various activity containing phytoconstituents are isolated from this plants such as flavonoids, tannins, glycosides, alkaloids, carbohydrates. This type of information is helpful for new researchers. This review of *C. crista* covers the introduction, description, taxonomy, traditional uses, pharmacology of plant.

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