

DEPARTMENT OF BOTANY



STUDENT FILED PROJECT

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TITLE: Medicinal Value of selected plants of College Botanical Garden

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Tinospora cordifolia

Family: Menispermaceae

Common names: **Heart-leaved moonseed, guduchi, giloy, Tippa Teega**



1. It is used to cure all type of fevers, particularly the chronic fever.
2. When giloy decoction is taken with ghee on empty stomach, daily in the morning helps to cure all types of skin diseases.
3. Using giloy delays the time of ejaculation and thus it acts as aphrodisiacs. Giloy is one of the best remedies for the management of premature ejaculation.
4. It is given to lactating mothers, who is experiencing lack of milk.
5. It is used as rejuvenative, especially in the ayurvedic system of medicine.
6. It is quite effective for gastro-intestinal disorders like dyspepsia, acid dyspepsia, gastritis, etc.
7. It is known as Indian Quinine and widely used in Infective hepatitis, splenomegaly and in the last stage of syphilis.
8. The alcoholic people should take giloy on regular basis as it helps to vitalize the liver tissues thus safeguards the liver, kidney and heart.
9. Tinospora being a powerful medhya rasayana, helps to enhance grasping power as well as memory.

10. It stimulates the immunity and increases the antibody-producing cells and circulating antibody throughout the body.

1. **Full of immunogenic properties:** It is great for the immune system. It helps to cure infectious diseases of bones, lungs, intestines, blood disorders, intermittent fever and dysfunctions of the liver.
2. **Skin diseases:** When giloy is taken with ghee on empty stomach in the morning, helps to cure all types of skin diseases including, acute & chronic dermatitis, prickly heat, sunburn, pruritus associated with urticaria, all forms of cosmetic allergy, ringworm, psoriasis, leucoderma and leprosy.
3. **Cure gastro-intestinal disorders:** Giloy has a bacteriostatic effect on cornebacterium tuberculosis and E. coli thus helpful in gastro-intestinal disorders like dyspepsia, acid dyspepsia, gastritis, oesophagi flatulence, thirst, chronic diarrhoea, chronic dysentery, liver disorders, jaundice, biliary disorders, gastric and duodenal ulcer or in any gaster-intestinal colic.
4. **Panacea for liver diseases:** It helps to vitalize the liver and prevent any further damage to this vital organ. Its decoction is also good for kidney and heart.
5. **Prevent cancer:** It stimulates the proliferation of stem cells and increases in total white blood cells and bone-marrow cells thus enhance antibody-producing cells and phagocytic activities. Giloy extract proved useful in reducing the chemotoxicity induced by free radical forming chemicals. The oral administration of rasayanas along with other indigenous herbal drugs were found to protect from Cyclophosphamide.

6. **Stress management:** The aqueous, alcoholic, acetone and petroleum ether extracts of the stem of *Tinospora Cordifolia* have shown anti-stress activity and Pyrrolidine isolated from the ethylacetate extract of *T. Cordifolia* showed central nervous system .depressant and hypoglycemic activity.
7. **Diabetes control:** Giloy gives immediate and beneficial effect in glucose tolerance and adrenaline induced Hyperglycaemia. It helps in the production of insulin and enhances the capacity to burn glucose. It decreases the blood sugar level.
8. **Arthritis treatment:** The giloy extract and decoction is helpful in the treatment and management of gout, gouty arthritis, rheumatoid arthritis, clinical conditions or excess urate deposition.
9. **Heart disease:** Giloy along with piper nigrum has positive impact on cardiac conditions such as angina pectoris, myocardial infarction, ischemic heart diseases and certain arrhythmias. It will help clear the obstruction in the arteries as well as in the heart and act as cardioprotective agent.
10. **Giloy for urinary infections:** Giloy is used to cure all type urinary infections such as uricouria, ketonuria, glycouria, haematuria, albuminuria, dysuria, crystaluria, burning micturition in cystitis, urethritis and particularly in diabetes mellitus.

Ocimum sanctum

Family Lamiaceae.

Common Name: Holy basil, Tulasi



- Used for bronchial asthma; expectorant and bronchodilator effects.
- Used against respiratory ailments including bronchitis and tuberculosis.
- Used for rhinitis (inflammation of nasal mucus membrane).
- Can serve as a cure and prophylactic as well for the severe acute respiratory syndrome (SARS) – The root of the tulsi plant should be crushed and boiled with turmeric powder for a few minutes, after which it should be filtered. Consuming two spoonfuls of this potion twice daily will cure SARS and prevent contracting of the disease.
- Tulsi tea with honey is a good expectorant especially in cases where fever is involved.
- The juice of the leaves is given in catarrh and bronchitis in children.
- Chewing the leaves relieves cold and flu. A decoction of the leaves, cloves and common salt also gives immediate relief in case of influenza.
- **Anti Microbial Effects:** It inhibits the growth of E. coli. Tulsi is a remover of worms and parasites, when the fresh juice or strong tea is taken with honey; the sweetness excites the parasites drawing them out of their hiding places.

- **Digestive System** (Esophagus, stomach, intestines, liver, pancreas) Liver support generally contributes to healthy liver functions and counteracts liver diseases. Liver Protective Improves the metabolic breakdown and elimination of dangerous chemicals in the blood included as part of detoxification program Anti-diabetic-insulin and glucose normalizing blood sugar and blood-lipid levels.
- **Hypoglycemic** (low blood glucose) Balance blood sugar and insulin metabolism can reduce fasting blood glucose Inhibits Lipid peroxidation (the oxidative deterioration of Lipids) normalizes lipids Anti ulcer activity well as ulcer healing properties and could act as a potent therapeutic agent against peptic ulcer disease decreases incidence of gastric ulcer. Reduces the effect of irritating drugs on the stomach lining and increases the production of protective stomach mucous

Piper longum

Family Piperaceae,

Indian long pepper, Pipli, Pippallu



ETHNOMEDICINAL USES

- The root and stem part of the *P. longum*, has been used for various Ayurvedic and Unani system of medicine.
- The fruits of the *P. longum* are used as a stomachic, liver tonic, abortifacient, pungent, aphrodisiac, laxative, anti-diarrhoeal, anti-dysenteric, anti-asthmatic, antibronchitis, abdominal complaints, in urinary discharges, tumours, diseases of the spleen, pains, inflammation, leprosy, insomnia, jaundice, and hiccoughs.
- The roots of *P. longum* are used for the management of heart diseases. An infusion of the root is used for parturition (the action of giving birth to young), to assist in the expulsion of the placenta. It appears to part take, in a minor degree of the stimulant properties of the fruit and also used as an alternative tonic in paraplegia (paralysis of the legs and lower body), chronic cough, enlargement of the spleen and other abdominal viscera.
- *P. longum* has been used in a variety of compositions of drugs; boiled with ginger, mustard oil, butter milk and curds. It forms a liniment, used in case

of paralysis. The roasted fruits of *P. longum* are beaten up with honey and given to treat rheumatism.

- The decoction of dried young fruits and root are of *P. longum* used in the form of decoction in the treatment of acute and chronic bronchitis.
- Antifungal activity/ Antiamoebiotic activity/Adulticidal

Terminalia chebula

Family: Combretaceae

Common Name : Karaka, Myrobalan



- **Chest pain (angina).** Some research shows that taking Terminalia by mouth with conventional medications improves symptoms in people experiencing chest pain after a heart attack. Other research shows that taking Terminalia by mouth improves symptoms and reduces the need for chest pain medication in people with long-term chest pain.
- **Heart disease.** Early research shows that taking Terminalia by mouth might improve cholesterol levels in people with heart disease.
- **Diabetes.** Some research shows that taking Terminalia with other ingredients lowers pre-meal blood sugar levels in women with diabetes. But it does not seem to improve HbA1c, which is a measure of average blood sugar.
- **Heart failure.** The role of Terminalia in the treatment of heart failure is inconsistent and unclear. Early research in people with severe heart failure shows that taking Terminalia by mouth for 2 weeks along with heart failure drugs improves symptoms compared to taking heart failure drugs alone.

Dermatologic effects

- Myrobalan decreases greying of the hair, and is a hair tonic. It is also effective in the treatment of leprosy.
- Hepatic, splenic, and urinary effects

- **A liver tonic** (jam) of myrobalan moderates liver temperament and is used to treat generalized dropsy and spleen pain, as a diuretic, and for treatment of polypus.
- **Dental and oral cavity effect** Myrobalan strengthens the gums and teeth and is beneficial in treating mouth ulcers

Aloe vera

Family: Asphodelaceae

Common Name : Kalabanda



Aloe vera, sometimes described as a "wonder plant," is a short-stemmed shrub.

It is the oldest medicinal plant ever known to mankind, and most widely used medicinal plant worldwide today

The leaves of *Aloe vera* are succulent, erect, and form a dense rosette. Many uses are made of the gel obtained from the plant's leaves.

It is widely used in the cosmetic, pharmaceutical and food industries, and has an estimated annual market value of \$13 billion globally. The gel contains most of the bioactive compounds in the plant, including vitamins, minerals, amino acids and antioxidants.

- Aloe vera contains various powerful antioxidant compounds. Some of these compounds can help inhibit the growth of harmful bacteria.
- *Aloe latex* contains anthraquinones, compounds that actively heal and reduce pain through natural anti-inflammatory effects.
- Aloe Vera help to soothe skin injuries affected by burning, skin irritations, cuts and insect bites, and its bactericidal properties relieve itching and skin

swellings. It has also been commonly used to treat first and second degree burns, as well as sunburns and eczema.

- It is known to help slow down the appearance of wrinkles and actively repair the damaged skin cells that cause the visible signs of aging.
- Aloe is a immunity booster and powerful detoxifier, antiseptic and tonic for the nervous system. It also has immune-boosting and anti-viral properties.
- When used as a mouth rinse, pure Aloe vera juice is just as effective at reducing dental plaque buildup as regular mouthwash.
- Application of Aloe vera, either as a patch or gel, has been shown to aid in the recovery of mouth ulcers (canker sores).
- Aloe vera latex has strong laxative effects, making it useful to treat constipation. Drinking Aloe vera juice naturally allows the body to cleanse the digestive system
- Aloe vera may help with blood sugar management

Curcuma longa

Family: Zingiberaceae

Common Name : Haldi, Turmeric, Pasupu

The plant is a perennial, rhizomatous, herbaceous plant native to the Indian subcontinent and Southeast Asia,

Turmeric has been used in Asia for thousands of years and is a major part of Ayurveda, Siddha medicine, traditional Chinese medicine, Unani,

- **Hay fever:** Taking curcumin, a chemical found in turmeric, seems to reduce hayfever symptoms such as sneezing, itching, runny nose, and congestion.
- **Depression:** Most available research shows that taking curcumin, a chemical found in turmeric, reduces depression symptoms in people already using an antidepressant.
- Turmeric seems to lower levels of blood fats called triglycerides and control bad cholesterol.

- Turmeric extract reduces Fatty liver
- **Osteoarthritis.** Some research shows that taking turmeric extracts, alone or in combination with other herbal ingredients, can reduce pain and improve function in people with knee osteoarthritis.
- **Itching:** Research suggests that taking turmeric by mouth three times daily for 8 weeks reduces itching in people with long-term kidney disease.
- **Cancer :** Recent scientific research confirm that turmeric can cure host of diseases, also they found that turmeric restrain the growth of various types of cancer. Turmeric is used for the treatment of skin cancer or pre cancerous skin conditions. Both topical and internal uses are beneficial.
- **Bacterial Infection / Wounds :** Turmeric is useful as an external antibiotic in preventing bacterial infection in wounds.

Phyllanthus amarus

Family: Euphorbiaceae

Common Name : Nela Usiri,

Phyllanthus amarus is an annual herb



- *Phyllanthus amarus* is widely used as a medicinal plant and is considered to be a good tonic, diuretic and febrifuge
- In Unani medicine, the plant is used in jaundice as deobstruent, diuretic, cooling and astringent.
- an extract made from *phyllanthus niruri* leaves showed strong antioxidant activity. Antioxidants fight free radicals in the body that may cause cell damage and disease.
- *phyllanthus niruri* extract has antimicrobial abilities against *H. pylori* bacteria. *H. pylori* bacteria are common in the digestive tract and are usually harmless. But in some cases, they can lead to peptic ulcers, abdominal pain, and nausea.
- *Phyllanthus niruri* may also have antidiabetic properties. The plant's aerial parts may help prevent glucose absorption and improve glucose storage. This may help maintain blood sugar levels.

- Phyllanthus niruri may be best known as a [kidney stone](#) remedy. Many studies have shown that it's a powerful kidney stone deterrent.

It can help relax the ureter after [lithotripsy](#) to help stones pass. Lithotripsy is a procedure used to break up stones in the urinary tract. It may also prevent stones from forming in the first place by stopping the crystals that form them from clumping together.

Phyllanthus niruri may help treat [nonalcoholic fatty liver disease](#) and [atherosclerosis](#). Both conditions may cause insulin resistance. The study found phyllanthus niruri decreased insulin resistance and reduced the amount of fatty acids in the liver.

Phyllanthus niruri may help treat acute [hepatitis B](#) infections due to its anti-viral and liver-protecting abilities.