

# Review of *Acalypha indica*, Linn in Traditional Siddha Medicine

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## ***ACALYPHA INDICA, Linn.***

Or *A. Spicata* or *A. Ciliata* or *A. Canescana*, (N. O.—Euphorbiaceae)

**Sans.** —Arittamanjarie.

**Eng.** —Indian acalypha.

**Hind.** — Kuppu; Khokali.

**Ben.** —Muktajhuri; Sveta-basanta.

**Guj.**-- Vanchi Kanto.

**Mab.**—Khokli ; Khajoti.

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**Tel.** – Kuppichettu; Harita-manjiri; Kuppinta or Muripindi.

**Tam.** – Kuppivaeni; Kuppaimeni.

**Can.**—Kuppigida.

**Mal.** – Kuppamani.

**Kon.**—Kunkmiphala.

**Uriya.**—Indramaris.

**Sinb .**—Kupa-menya.

**Habitat** - Common annual shrub in Indian gardens, backyards of houses and waste place throughout the plains of India.

**Parts Used** - Leaves, root, stalks (young shoots) and flowers.

**Constituents** — Alkaloids “acalypus” and “acalyphine.”

**Action** – Cathartic, Anthelmintic, expectorant, emetic, anodyne and hypnotic<sup>1</sup>

**Other Uses:**

1. *Post-coital antifertility activity of Acalypha indica L.*<sup>2</sup>

Four successive solvent extracts of the whole plant *Acalypha indica* L. (Euphorbiaceae) were tested for post-coital antifertility activity in female albino rats. Of these, the petroleum ether and ethanol extracts were found to be most effective in causing significant anti-implantation activity. The antifertility activity was reversible on withdrawal of the treatment of the extracts. Both the extracts at 600 mg/kg body weight showed estrogenic activity. Histological studies of the uterus were carried out to confirm this estrogenic activity.

2. *Council of the Pharmaceutical Society of Great Britain*<sup>3</sup>

*Acalypha* is an irritant to the gastro-intestinal mucous membrane. It is used as a substitute for ipecacuanha. The drug acts reflexly through the stomach in small doses; it also acts as an expectorant and, in larger doses, as an emetic. This drug has also been used as a laxative and anthelmintic.

### **3. *Antimicrobial activity of extracts of Acalypha indica Linn.***<sup>4</sup>

Dilution method was employed to determine the effect of petroleum ether extract (40-60 Degree) chloroform and methanolic extract of dried leaves of *Acalypha indica* Linn (Euphorbiaceae) against fungi (*Candida albicans*) and bacteria (*Escherichia coli*, *Staphylococcus aureus*, *Pseudomonas aeruginosa*, *Salmonella typhosa*, *Bacillus subtilis*, *Klebsiella pneumoniae*). Except the petroleum ether extract, all the extract exhibited a prominent antimicrobial activity. The methanolic extract was further fractionated into acetone soluble and insoluble parts. Both the parts exhibited prominent antimicrobial activity. The acetone insoluble part exhibited MIC of 0.0040 mg/ml against *Staphylococcus aureus* and both acetone soluble and insoluble parts exhibited MIC of 0.05 mg/ml against *Salmonella typhosa*.

### **4. *Wound healing effect of Acalypha indica in rats.***<sup>5</sup>

The ethanolic extracts of *Heliotropium indicum*, *Plumbago zeylanicum* and *Acalypha indica* were evaluated for their wound healing activity in rats. Wound healing activity was studied using excision and incision wound models in rats following topical application. Animals were divided into four groups with six in each group. Ten percent w/v extract of each plant was prepared in saline for topical application. *H. indicum* possesses better wound healing activity than *P. zeylanicum* and *A. indica*. Tensile strength results indicate better activity of *H. indicum* on remodeling phase of wound healing.

### **5. *Acalypha indica in Homeopathy.***<sup>6</sup>

A drug having a marked action on the alimentary canal and respiratory organs. It is indicated in incipient phthisis, with hard, racking cough, bloody expectoration, arterial hemorrhage, but no febrile disturbance. Very weak in the morning, gains strength during day. Progressive emaciation. All pathological hemorrhages having notably a morning worse.

## 6. *Acalypha indica* in Ayurveda.<sup>7</sup>

**Preparations** - Infusion of root, powder, decoction, cataplasm, succus (juice expressed), tincture and liquid extract.

### Uses –

- ✚ Leaves possess laxative properties; “are used as a substitute for senega”; are used in the form of powder or decoction;
- ✚ Mixed with garlic they are used as Anthelmintic in worms. Mixed with garlic they are applied to scabies; and their juice mixed with oil forms an application in rheumatic arthritis.
- ✚ Expressed juice of the leaves is a safe, certain and speedy emetic for children in one teaspoonful (I drachm) doses, in cases of croup; in smaller doses it is expectorant, and is useful in chronic bronchitis, asthma and consumption. The decoction is employed in ear-ache as instillation and also as fomentation round the aching ear; and a cataplasm of the bruised leaves is applied to syphilitic ulcers, to maggot-eaten sores and also to relieve the pain of snake-bites. “juice from fresh leaves may be employed in scabies and other skin diseases, and with lime and onion it is a good stimulating application in rheumatism.
- ✚ Powder of dry leaves is used in bed sores.
- ✚ In congestive headache a piece of cotton saturated with the expressed juice of the plant or leaves and inserted into each nostril is said to relieve it by ‘causing hemorrhage from the nose.
- ✚ In cases of obstinate constipation of children the leaves ground into a paste and made into a ball and introduced into the rectum, relax the sphincter ani

and produces free motions. An infusion of the root or the root bruised in water, acts as a cathartic.

***Uses in Siddha Medicine:***

***Properties:***

Taste (Suvai)	→	Bitter, Kaarpu.
Effect during digestion (Veeriyam)	→	Kaarpu.
Post digestive taste (Pirivu)	→	Kaarpu

***Actions:***

- ✚ Anodyne
- ✚ Anthelmintic
- ✚ Cathartic
- ✚ Diuretic
- ✚ Emetic
- ✚ Expectorant
- ✚ Emmenagogue

***Therapeutic properties:***

According to the Siddha text, 'Pathartha Guna Chinthamani' (Page no:179), Acalypha cures diseases of the teeth and gums, burns, toxins of Plant and mixed origin, stomach pain, diseases due to Pitha, bleeding piles, irritations, stabbing pain, wheezing, sinusitis and neutralizes predominance of the Kabha factor.

According to Siddha Materia Medica<sup>8</sup> the leaf powder when given in the dose of 950 mg to 1300 mgs, cures respiratory diseases. The leaf juice when mixed with neem oil

and applied to the inner part of children's tongue with the help of quill, induces vomiting and acts as expectorant.

When the Acalypha leaves in moderate, prescribed quantity is taken along with diet, it removes Thimir Vaatham from the body. When the leaves are fried up with castor oil and given in the prescribed quantity and method for 45 days (mandalam), it removes disastrous Kapha diseases, combined with Vayu (gas) and produces good health.

For removing the toxin arising out of Rat bite, the leaves of Acalypha in the size of areca nut is mixed with water and given for 3 days (with salt restricted diet). But it produces vomiting and diarrhoea also.

### **References:**

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<sup>1</sup> [www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=10617059](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10617059)

<sup>2</sup> PMID: 10617059 [PubMed - indexed for MEDLINE]

<sup>3</sup> Council of the Pharmaceutical Society of Great Britain, 1911.

<sup>4</sup> Indian Journal of Pharmaceutical Sciences. 2000 Sep-Oct.; 62(5): 347-50

<sup>5</sup> PMID: 11801388 [PubMed - indexed for MEDLINE]

<sup>6</sup> <http://www.abchomeopathy.com/r.php/Acal>

<sup>7</sup> Indian Materia Medica by Dr. K.M. Nadkarni, Volume I, pages: 17-19,

Publisher: Bombay Popular Prakashan, reprinted: 2000.

<sup>8</sup> Materia Medica (Vegetable section), Volume I, by Dr. Murugesu Muthaliar, pages: 359, publisher, Tamilnadu Siddha Medical Council, Chennai. Fourth edition 1988.