

## A review on medicinal uses of *Acalypha indica* linn

Dr. S. SENTHILKUMAR <sup>1,\*</sup> and Dr. C. KIRUBA RANI <sup>2</sup>

<sup>1</sup> Post Doctoral - Research Scholar, Manipur International University, Imphal, Manipur, India.

<sup>2</sup> Department of Biochemistry, Vellalar College for Women, Erode, Tamil Nadu, India.

World Journal of Advanced Research and Reviews, 2024, 22(03), 320–323

Publication history: Received on 25 April 2024; revised on 31 May 2024; accepted on 03 June 2024

Article DOI: <https://doi.org/10.30574/wjarr.2024.22.3.1694>

### Abstract

The medicinal uses of *Acalypha indica* possesses diuretic, purgative, anti-bacterial, anti- fungal, and anthelmintic properties. This medicinal plants traditionally used for treating intestinal worms, gun problems, stomach aches, hernia, rheumatism, bronchitis, asthma, pneumonia, scabies and skin diseases. It can be used externally and internally for medicinal purpose. It contains a number of medically active ingredients including essential oil, resin, tannins and alkaloids. Decoction is used to treat asthma, intestinal worms and stomach-ache. Leaf powder is used for maggot-infested wounds. It helps in proper functioning of digestive system and respiratory organs.

**Keywords:** Tannins; Alkaloids; Medicinal plant; Flavonoid; *Acalypha indica*

### 1. Introduction

The *Acalypha indica* plant that has benefits in traditional medicine. The leaves can treat nose bleeds, coughs, dysentery, diarrhea, vomiting of blood, bleeding, and external wounds[1]. This is corroborated by the phytochemical test of earring plants which shows the presence of flavonoid, triterpenoid, steroid and saponin compounds[2,3].

The use of *Acalypha indica* as a traditional medicinal plant has been carried out. *Acalypha indica* boiled water can treat toothaches and ear infections, the pulp can be used to treat burns and rheumatism. *Acalypha indica* plant extract can also play a role as a natural contraceptive, analgesic, and anti- inflammatory, the effects of neurotherapy and neuroprotectants, reduce blood glucose, reduce uric acid. Some studies report that the extract of *Acalypha indica* can inhibit the growth of some pathogenic bacteria[4,5,6].

Based on the flavonoid compounds owned by the leaves of *Acalypha indica* as an anti- inflammatory, it needs to be developed into a pharmaceutical preparation to increase its use. One of the ointment preparations was chosen because it is the most suitable pharmaceutical preparation for medicinal purposes for skin because of the longer contact between the drug and the skin[7].

### 2. Medicinal uses of *Acalypha indica*

#### 2.1. Constipation and respiratory problems

Phlegm soak few leaves in water for a few hours. Filter and take this water in a dose of 2 teaspoon full. Do not take in excess as this can cause vomiting.

\* Corresponding author: S. SENTHILKUMAR

## **2.2. Intestinal parasite**

Take fresh leaves of the plant. Wash well and dry completely. Pulverize to prepare powder. Take this powder (1/4 to ½ teaspoon) with Luke warm water.

## **2.3. Stomach infections**

Take clean leaves and grind with few garlic pods. Take this with rice.

## **2.4. Piles**

Prepare fine powder of *Acalypha* and Tulsa leaves (*Osmium Sanctum*) in equal amounts. Take this powder (2-3 pinches) with little amount of ghee thrice a day.

## **2.5. External use**

Insect bite, boils, inflammation. Take fresh leaves of *Acalypha indica* and prepare a paste. Apply this paste on the affected areas.

## **2.6. Headaches**

Apply leaves juice on the affected areas.

## **2.7. Muscular pain**

Prepare *Acalypha indica* medicated oil. for this purpose extract leaves juices of this medicinal herb. add this juice in equal amount of sesame oil. cook this oil, till all water evaporate and only oil remains. apply thus prepared medicated oil in lukewarm condition.

## **2.8. Bed sores**

Dry leaves of *Acalypha indica* in sun and prepare a powder. apply this powder on the affected areas to get relief from bed sores.

## **2.9. Skin rashes**

Prepare a poultice of its leaves and apply at affected areas.

## **2.10. Venereal sore**

Prepare fine paste of its leaves and apply on the affected areas.

## **2.11. Skin wound, itching**

Mix it leaves paste with turmeric and apply at affected area.

---

## **3. Phytochemical compounds uses of *Acalypha indica***

### **3.1. Flavonoids**

Anti-oxidant, anti- inflammatory, anti- cancer, anti-diabetic activities.

### **3.2. Alkaloids**

Anti-nociceptive, anti- inflammatory activity and anti- bacterial activities.

### **3.3. Tannins**

Astringent and anti-oxidant properties, used to treat diarrhea and dysentery.

### **3.4. Essential oils**

Anti- bacterial, anti-fungal and insecticidal activities.

### **3.5. Saponins**

Anti-inflammatory, anti-cancer and anti-diabetic properties.

### **3.6. Phenolic acids**

Anti-oxidant, anti-inflammatory and anti-cancer properties[8]

---

## **4. Ethnomedicinal uses of *Acalypha indica***

### **4.1. Vomiting**

Fresh leaf extract 3 ml is taken 1-2 times daily to get rid from vomiting.

### **4.2. Diarrhoea**

Leaf extract 5 ml is taken 2 times daily[9].

### **4.3. Earache**

Warm leaf extract 2-3 drops is poured in to the ear.

### **4.4. Arthritis**

Root extract 3-5 ml is taken twice daily[10].

### **4.5. Dental problem**

Stem is used as tooth brush.

### **4.6. Epilepsy**

Leaf extract is applied over the eye lid to get rid from epilepsy. Leaf extract 5-6 drops is poured in to the nostrils.

### **4.7. Paralysis**

Root paste 5 gm is taken twice daily.

### **4.8. Itch, scabies and ringworm**

Leaf paste and lime or salt are mixed together and applied over the affected part[11].

### **4.9. Urticaria**

Whole plant decoction and *Ricinus communis* seed oil are mixed together and massaged over the affected part[12].

### **4.10. Toothache**

Leaf extract is applied on the affected area for some time.

### **4.11. Anthelmintic**

The punching root, stem, leaf, flower and fruit extract 3-5 is taken 1-2 times daily in empty stomach[13].

### **4.12. Headache**

Punching extract is soaked with a cotton wick and inserted into the nostrils for some time.

### **4.13. Asthma and cough**

Leaf extract 5 ml is taken 2 times daily[14].

## 5. Conclusion

The pharmacological studies conducted on *Acalypha indica* indicate the immense potential of this plant in the treatment of conditions such as wounds, malaria, coughs, inflammatory, diabetes etc.. *Acalypha indica* also exhibits anti-oxidant, anti-microbial, anti-inflammatory, anti-diabetic, wound healing effect, anti-venom and anti-fertility activities. However, the diverse pharmacological activities of *Acalypha indica* extracts and isolated phytochemical have been investigated in laboratory animals and the results obtained may not necessarily be portable to the situation in humans. While there are gaps in the studies conducted so far, which needed to be bridged in order to exploit the full medicinal potential of *Acalypha indica*. It is still clear that this plant with tremendous widespread use now and also with extraordinary potential for the future. Further research in Phytochemicals development from *Acalypha indica* will help to analyses therapeutic efficacy of products. Efforts are now being made to investigate various therapeutic actions of *Acalypha indica* plant and their products using model systems.

## Compliance with ethical standards

### Disclosure of conflict of interest

No conflict of interest to be disclosed.

## References

- [1] Rahman M.A, Bachar S. C. and Rahmatullah M.(2010). Analgesic and anti-inflammatory activity of metanolic extract of *Acalypha indica* Linn. *Pak. J. Pharm. Sci.* 23(3): 256-258.
- [2] Zahidin N. S. (2017). A Review of *Acalypha indica* Linn. (Euphorbiaceae) as traditional medicine plant and its therapeutic potential. *Jornal of Ethnopharmacology.* 207: 146-173.
- [3] Venkatachalam P.(2017). Accumulation of efficiency, genotoxicity and anti-oxidant defense mechanisms in medicinal plant *Acalypha indica* Linn. under lead stress. *Chemoapher.* 171: 544-553.
- [4] Nahrstedt A, Hungeling M. and Petereit F. (2006). Flavonoids from *Acalypha indica*. *Fitoterapia.* 77: 484-486.
- [5] Rajsekhar S. and Azhar A. (2011). Phytochemical constituents and pharmacological activities of *Acalypha indica* Linn. A Review *International Journal of Pharmaceutical Sciences and Research.* 2(8): 1900-1904.
- [6] Dineshkumar B, Vigneshkumar P, Bhuvaneshwaran S. P. and Analava M. (2010). Phyto Pharmacology of *Acalypha indica*: A Review *UJBSAHM.* 1(2): 27-32.
- [7] Higuchi T. (1961). Rate of Release of medicaments from ointment bases containing drugs in suspension. *Journal of Pharmaceutical Sciences.* 50(10): 874-875.
- [8] Ramyadevi D, Sathishkumar S. and Sankar P.(2012). *In vitro* and *in vivo* anti-diabetic potential of *Acalypha indica*. *J Ethano Pharmacol.* 143(1): 515-523.
- [9] Gupta R. K.(2010). Medicinal and Aromatic plants, CBS Publishers and Distributors, Delhi, P. 116-117.
- [10] Khare C. P.(2007). Indian medicinal plants. *Springer.* 9:12-14.
- [11] Nadkarni K. M.(2009). Indian materia medica. Popular Prakashan, Bombay. 1: 285-286.
- [12] Joshi S. G.(2006). Medicinal plants, Oxford and IBH Co. PVT. Ltd. New Delhi P. 1-491.
- [13] Haines H. H.(1921). The Botany of Bihar and Orissa. Arnold and Son and West Nirman Ltd. London.IV-V. 25:113-114.
- [14] Kirtikar K. R. and BASU B> D. (1991). Indian Medicinal plants. Reprn. Edition. Jayyed Press Delhi. III: 2260-2264.