

## *Eclipta alba* (L.) An Ethnomedicinal Herb Plant, Traditionally Use in Ayurveda

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### Introduction

*Eclipta alba* (L.) commonly known as **False Daisy**, and **Bhringraj**, is a medicinal plant belonging to the family Asteraceae. The greyish cylindrical roots are well developed. It popularly called 'Kehraj' in Assamese and 'Kayanthakarra' and/or 'Kaikeshi' in Tamil. *Eclipta alba* sprouts in moist places as a weed in warm temperate to tropical areas worldwide. It is widely distributed throughout India, China, Thailand, and Brazil. In ayurvedic medicine, the leaf extract is used as a powerful liver tonic, and especially good for the hair and skin.

*Eclipta* is a small annual herb whose stem is usually erect, flat or round, blackish green, profusely branched and pubescent. Leaves are opposite, 3 to 5 cm long and blackish green in colour. The inflorescence is a head with 6 to 8 mm diameter. The flower is solitary, white, achene, compressed, and narrowly winged. Many blackish seeds are present in fruit. The appearance of the Flower starts during August- September months and fruiting occur up to November.

*Eclipta alba* being as a cosmopolitan in distribution, it is lavishly found in India, China, Brazil and the United States. It has been declared that plant as endangered by The United State's Department of Agriculture. Habitat destruction, reclamation of wetlands and changes in climate seem to cause pressure on the survival and distribution of this plant as a result of which it has become rare and endangered in many parts of the world including India.

### Significant of Plant

Many chemical compounds have been isolated from *Eclipta alba*. These include chemical compounds are resins, ecliptine, nicotine and glucosides. The plant extract accommodates plenty of bio-active steroidal alkaloids that have cytotoxicity property against certain cells. The Ethanol extract of *Eclipta alba* has been reported to have a neutralizing effect on the venom of rattle snakes. A number of other chemicals that have so far identified to exist in the plant extract is Wedelolactone, Demethylwedelolactone, Wedelic acid, apigenin, luteolin, b-amyrin etc. The compounds Wedelolactone, apigenin, and luteolin extracted from *A. alba* have been phytochemically analyzed a dose dependent Hepatitis C virus inhibition and Anti-HCV replication activity in cell culture system [1]. Wedelolactone has been reported to have the property used for treating hepatitis and cirrhosis [2], as antibacterial, and antihemorrhagic [3]. Petroleum ether and ethanol extract of *Eclipta alba* have reduced hair growth time by about 50% tested in albino rats (Table 1) [4].

### Other known activities

- Hepatoprotective/Anti-Hepatotoxic Activities
- Hair Color and Growth Promoting Activity
- Antimicrobial Properties
- Anti-inflammatory Activity
- Anti-diabetic Activity/ Anti-hyperglycemic activity
- Anti- Cancer

S. No.	Compound	Nature of Compound	Major source	Pharmacological activity
1	Wedelolactone	Coumestan	Leaves, stem,	Antihepatotoxi <sup>6</sup> , Antibacterial <sup>5</sup> , Trypsin Inhibitor, Antivenom <sup>7</sup>
2	Ecliptalbine	Alkaloid	seed	Analgesic, Lipid lowering <sup>9</sup>
3	Demethylwedelolactone	Coumestan	Leaves	Antivenom <sup>3</sup>
4	Eclalbatin	Saponin	All plant parts	Antioxidant <sup>10</sup>
5	Dasyscyphin C	Saponin	Whole plant	Anticancer, Antiviral <sup>8</sup>
6	Ecliptine	Aldehyde	All plant part	Antioxidant

**Table 1:** Most commonly used compounds and their nature, source and pharmacological activity.

Anti-malarial activity

Antioxidant activity

### Classification

Kingdom: Plantae (Figure 1)

Division: Tracheophyta

Class: Magnoliopsida

Order: Asterales

Family: Asteraceae

Genus: *Eclipta*

Species: *alba*

### Traditional uses

It is one of the ten promising and said to be best herb in Ayurveda for liver cirrhosis and infectitioushepatitis. *Eclipta alba* is used in Ayurvedic classical as well as the patent medications. The plant has revitalizing property and has reputed as an anti-ageing agent in Ayurvedic medicine [5-10]. Also known to have hair promoting compound. In Uttar Pradesh state of India leaf extract is practiced to hair to remove dandruff and also make hair silky and shiny [11]. Tribal of Odisha state of India in some areas use whole plant to make paste with black pepper and make small pills to use as anti-fever and anti-jaundice [12]. Tribes of Tripura state of India administer 5-10 ml

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Figure 1: *Eclipta alba*.

of leaf juice daily against hepatic disorder [13]. Some local people of Mount Abu in the Rajasthan state of India use the leaves and flower for the treatment of Asthma, cough, jaundice and urinary problem [14]. Other people from Hanumangarh in the Rajasthan state of India use oil extract as hair tonic, leaf juice with honey as anti-jaundice. Leaf extract with water is given to control the diarrhea [15]. People of the remote area in Kanpur District of the U.P. state in India apply 2-5 g of the paste on wounds and cuts [16]. In Nizamabad district of Maharashtra, India Plant paste is used to blacken hair and also dry powder is given to elder people as an energy tonic [17].

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