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## Review on memory enhancing activity of *Eclipta Alba*

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### Abstract

Medicinal plants are the blessings for any country which contribute a lot for traditional health management as well as providing lead compounds for modern drug discovery. The varieties of molecules contained in plants have been proved to combat complicated diseases. *Eclipta alba*, also known as *Eclipta prostrata*, is a weed of the family Asteraceae found in tropical and subtropical regions widely used in herbal medicine. It grows commonly in moist places as a weed all over the world. The important pharmacological activities are hepatoprotection, antibacterial, analgesic, hair growth, memory enhancing activity, antidiabetic. This review highlights that the ethanolic extract of plant have memory enhancing activity.

**Keywords:** *Eclipta alba*, Transfer latency, Bhringaraj, elevated plus maze

### Introduction

*Eclipta alba* (Linn.) Hassk, is commonly known as False Daisy or Bhringaraj. It is a creeping and moisture loving herb commonly found on roadsides and waste lands throughout India. The plant has been reported to contain phytosterol,  $\beta$ -amyrin, triterpenes such as ecalbatin, echinocystic acid, ursolic acid, flavones such as Luteolin and coumarin such as wedelolactone. The plant is known to have some important pharmacological activities such as hepatoprotective, antimicrobial, antinociceptive, analgesic, antiinflammatory, antiviral, immunomodulatory and nootropic activity. Phytochemically, *Eclipta alba* is rich in wedeloctone,  $\beta$ - amyrin, stigmasterol and luteolin-7- glucoside. Traditionally, it is being used as a memory modulator and we are scientifically validating this claim by measuring transfer latency and spatial habitual learning. Lack of neural plasticity can generate pertinent cognitive deficits which indeed can affect the quality of life. In order to circumvent this problem, memory elevators are being constantly explored, of which herbs play a vital role. However, fewer reports are available with respect to the pharmacological properties of the plant. Keeping this in view, the present study has been undertaken to investigate the memory enhancing activity of ethanolic extract of *Eclipta alba* in standard animal models.

### Scientific Classification



Kingdom	-	Plantae
Subkingdom	-	Tracheobionta
Superdivision	-	Spermatophyta
Class	-	Magnoliophyta
Subclass	-	Asteridae

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Order	-	Asterales
Family	-	Asteraceae
Genus	-	Eclipta
Species	-	Eclipta alba

### Chemical Constituents

A number of chemical compounds have been isolated from and reported to exist in the plant *Eclipta*. Some of these chemical compounds are resins, ecliptine, nicotine, glucosides, and alkaloides. The extract of the plant contains bio-active steroid alkaloides that have cytotoxicity against certain cells. A number of other chemicals that have so far identified to exist in the plant extract are Wedelolactone, demethylwedelolactone, Wedelic acid, apegenin, luteolin, b-amyrin etc. Wedelolactone and demethylwedelolactone have been reported to have trypsin inhibitory effects. Demethylwedelolactone, polypeptides, polyacetylenes, theophene- derivatives, steriodes, triterpenes and flavonoids have been reported to possess estrogenic activity. Wedelolactone has been reported to have the property useful for treating hepatitis and cirrhosis, as antibacterial, and antihemorrhagic.

### Memory Enhancing Activity Studies

The results obtained from the studies shows that oral administration of the aqueous extract of *Eclipta alba* have memory enhancing activity. The plant has been reported to contain phytosterol, β-amyrin, triterpenes such as ecalbatin, echinocystic acid, ursolic acid, flavones such as Luteolin and coumarin such as wedelolactone. Studies was conducted by. The studies concluded that the ethanolic leaf extact of *Eclipta alba* has memory enhancing activity. Luteolins may be responsible for minimizing cognitive deficits due to cholinergic dysfunctioning. Memory enhancing activity is evaluated by elevated plus maze.

Significant reduction in transfer latency indicates that the plant extract have memory enhancing activity.

### Conclusion

The usefulness of *Eclipta alba* in the treatment of memory enhancing activity has been scientifically validated by the results of the present study. Thus it indicates that the ethanolic extact of *Eclipta alba* have memory enhancing activity.

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