



# INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

## Compressive review on:-Night Blooming Jessamine

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### ABSTRACT:

*Cestrum nocturnum* Linn is a medicinal plant, found as weed throughout India. The plant is native to tropical regions such as the West Indies, India and other South Asian Countries. It has been extensively used in Indian traditional medicine for wound healing, such as antioxidant, antibacterial, anticancer, antifungal, analgesic, anti-inflammatory.

*Cestrum nocturnum* is the most valuable drug which is used in compound preparation included in Ayurveda literature.

From leaves to the roots, the whole Parijat plant is very useful for various healing properties. It is known to improve the function of insulin and reduce the symptoms of diabetes.

### KEYWORDS:

*Cestrum nocturnum* Linn , Wound healing, Anti-cancer, Antioxidant, Analgesic.

### INTRODUCTION:

*Cestrum nocturnum* Linn. Belongs to family Solanaceae. It is commonly known as Raat Rani, lady of night or night Jessamine.<sup>[1]</sup> it contain simple glossy leaves, vine-like stems, greenish-creamy white tubular flowers. The species name 'nocturnum' refers to the species which have the habit of opening its small, heavily-scented flowers at night.<sup>[2,3]</sup> World health organization (WHO) reported that the more than 80% of the world population used the remedies based on the plants for their primary health care need.<sup>[4]</sup>

Recent studies demonstrated the presence of important bioactive phytoconstituents in *Cestrum nocturnum* like alkaloids, flavonoids, glycosides, steroids, phenols, and essential oils.<sup>[5]</sup> it was also found to possess anti-inflammatory, antimicrobial, local anesthetic, and antioxidant properties that rationalized its more supportive and significant role as ideal wound healing drug.<sup>[6,7]</sup>

*Cestrum nocturnum* (L.) is an ever-green woody shrub growing to 4m in height. Leaves are dark green, oblong-ovate to oblong-lanceolate in shape with a pointed tip and 6-20cm long with an entire margin. The nocturnal flowers are greenish white, having powerful sweet intoxicating fragrance.<sup>[8]</sup>

**PLANT PROFILE :**

*Cestrum nocturnum* is a type of blooming plant having a place with family Solanaceae. The plant produces tubular, white flowers that are intensely fragrant, especially at night, attracting moths for pollination. Thrives in warm climates and can be found growing in a variety of habitats, including forests, thickets, and disturbed areas.

**BIOLOGICAL SOURCE :**

**Fig 1 :** *Cestrum nocturnum* Linn leaves and flower



**Fig 2:** *Cestrum nocturnum* fruits

**TAXONOMICAL CLASSIFICATION:**

**Table 1. Classification of *Cestrum nocturnum* Linn.**

Sr.no	Divisions	Classing
1	Kingdom	Plantae
2	Phylum	Spermatophyte
3	Subphylum	Angiospermae
4	Class	Dicotyledonae
5	Order	Solanales
6	Family	Solanaceae
7	Genus	<i>Cestrum</i>
8	Species	<i>Cestrum nocturnum</i>

**SYNONYMS : Table 2 : Synonyms of *Cestrum nocturnum* Linn.**

Name	Language
Raat Ki Rani	Hindi
Hasnahana	Bengali
Theibal lei	Manipuri
Galan de noche	Spanish

**Table 3 : Botanical Description of *Cestrum nocturnum* Linn.**

Plant Type	Evergreen woody shrub
Leaves	Glossy green leaves
Flowers	White or pale yellow
Calyx	Campanulate
Corolla	Vespertine
Berries	White
Seeds	Prismatic

**CHEMICAL CONSTITUENTS :**

The *cestrum nocturnum* contain a variety of chemical constituents, includes:

**Alkaloids:** Alkaloids are nitrogen-containing compounds that can have various effects on the body. *Cestrum nocturnum* leaves contain alkaloids such as nicotine and solanine.

**Flavonoids:** Flavonoids are a class of polyphenolic compounds with antioxidant properties. They are found in many plants, including *Cestrum nocturnum* leaves.

**Phenolic acids:** Phenolic acids are another class of phenolic compound with antioxidant properties. They are present in *cestrum nocturnum* leaves and contribute to their overall antioxidant activity.

**Tannins:** Tannins are polyphenolic compounds that can have astringent properties. They are found in *cestrum nocturnum* leaves and may contribute to their medicinal properties.

**Essential oils:** The leaves of *cestrum nocturnum* contain essential oils that contribute to their fragrance. These oils can contain compounds such as linalool, benzyl acetate, and phenethyl alcohol.

**Glycosides:** Glycosides are compound compounds composed of a sugar molecule bonded to a non-sugar moiety. They are found in *cestrum nocturnum* leaves and can have various biological activities.

These chemical constituents contributes to the overall composition of *cestrum nocturnum* leaves and may contribute to their medicinal properties. However, it's important to note that the plant also contains toxic alkaloids, so caution should be exercised when using it for medicinal purposes.

**Table 04:- USE OF *CESTRUM NOCTURNUM* LINN :**

Sr no.	Parts of plant	Chemical constituents	Uses
1.	Leaves	Alkaloids, flavonoids, steroids, phenolic compounds,	Wound healing activity, fever, cough, warm infestation, constipation.
2.	Steam	Carbohydrates, phenolics, flavonoids, tannins. Glycosides	Joint pain, malaria.
3.	Flower	Carbohydrates, saponins, alkaloids, tannins, flavonoids.	Spasmolytic, hypotensive, diuretic, Fragrant.
4.	Seed	Arbortistoside A&B, linoleic acid, oleic acid, stearic acid	Antibacterial, antifungal, immunomodulatory

#### **MEDICINAL USES:-**

*Cestrum nocturnum*, also known as night-blooming jasmine or raatrani, is a plant with various medicinal uses in traditional medicine.

**1.Antioxidant properties:** Some studies suggest that extracts from *Cestrum nocturnum* possess antioxidant properties, which can help in reducing oxidative stress in the body.

**2.Anti-inflammatory effects:** It is believed to anti-inflammatory properties, which may help in reducing inflammation and related symptoms.

**3.Analgesic properties:** *Cestrum nocturnum* is used in traditional medicine as a pain reliever.

**4.Anti-diabetic:** Some research indicates that it may have a role in managing diabetes, possible by improving insulin sensitivity.

**5.Sedative effects:** *Cestrum nocturnum* is known for its claming properties and is used traditionally as a sedative and to promote sleep.

**6.Anti-asthmatic:** In traditional medicine, it is used to treat respiratory condition like asthma.

**7.Antimicrobial properties:** Studies have shown that it has antimicrobial properties, which may help in fighting infection caused by bacteria and fungi.

#### MARKETED PREPARATIONS:-

**Scortchnil ointment :** It also softens the inner tissues for the quick relief to the patients from pain in a few days .this is also considered to be an effective scar removal cream as it reduces lesions and does not leave behind any scratch mark on the healed area. “scortchnil” is an excellent scar removal therapy.



**Fig 3: Scortchnil Ointment**

**Night blooming jasmine oil:** This traditional perfume oil is obtained from the flower of *Cestrum nocturnum* through the Hydro-Distillation. The strong scent helps it be a really desirable selection in neuron-scientific fragrance. Night jasmine is quite efficient in treating Malaria fever.



## **SIDE EFFECTS OF CESTRUM NOCTURNUM:-**

*Cestrum nocturnum*, like many herbal remedies, can have side effects, especially if consumed in large quantities or inappropriately. Some potential side effects includes.

**1.Toxicity:** the plant contains toxic alkaloids, particularly in its berries and leaves. Ingesting these parts of the plant can lead to symptoms such as nausea, vomiting, abdominal pain, and in severe cases, may be toxic to liver and kidneys.

**2.Skin irritation;** contact with the plants sap or leaves can causes skin irritation or allergic reactions in some individuals.

**3.Photosensitivity:** Some individuals may experience increased sensitivity to sunlight (photosensitivity) after consuming or coming into contact with *Cestrum nocturnum*.

**4.Pregnancy and breastfeeding:** pregnant and breastfeeding women should avoids using *Cestrum nocturnum* due to the lack of safety data for these populations.

**5.Drug interactions:** *Cestrum nocturnum* may interact with certain medications. Its important to consult with a healthcare provider before using this plant, especially if you are taking any medication.

## **CONCLUSION:**

Night blooming jasmine is a fragrant plant with multifaceted medicinal properties like antioxidant, antibacterial, antifungal, anticancer, hypoglycemic, antimalarial, antiepileptic, cytotoxic, analgesic, anti-inflammatory, anti-HIV, hepatoprotective, antipyretic and wound healing effect. In addition night blooming jasmine is also used as an ornamental plant due to its showy and fragrant white flowers. The leaves of *C. nocturnum* are used in Chinese folk medicine for the treatment of burns and swellings, being applied externally. Further research work and clinical trials need to be done to establish the above mentioned effects in human beings.

## **REFERENCE:**

- 1.GAURAV, M.,. Doshi, Aaditi, S., Mukadam., Pharmacognostic quantification of flavonoids by high performance thin layer chromatography and in vitro cell line study on developed herbal formulation from *Cestrum nocturnum* plant extract, *Int. J. Green Pharm.*, 2016, 10(3), 183.
- 2.Shaista, A., Amrita, P., Delicate, fragrant, lady of the night- A medicinal gift, *J. Med. Plants studies*, 4(6), 13.

3. AL-Reza, S. M., Rahman, A., Ahmad, Y., Kang, S. C., Inhibition of plant pathogens in vitro and in vivo with essential oil and organic extracts of *Cestrum nocturnum* L, *Pesticide Biochem. Physiol.*, 2010, 96, 86-92.
4. G. Bouchbaver, L. Jirovetz, and V. K. Koul, "Volatiles of the absolute of *Cestrum nocturnum* L.," *Journal of essential oil Research*, vol.7, no. 1, pp. 5-9, 1995.
5. A. Mazumder, A. Bhatt, V. A. BOonde, A. Shaikh, and R. Mazumder, "Evaluation of *Cestrum nocturnum* for its anti-inflammatory and analgesic potentiality," *Journal of Herbal Medicine and Toxicology*, vol. 4, no. 1, pp. 113-117, 2010.
6. Vascular Plants of Antioquia. Catalogue of the Vascular Plants of the Department of Antioquia (Colombia), Tropicos website. St. Louis, Missouri and Cambridge, Massachusetts, USA: Missouri Botanical Garden and Harvard University Herbaria, 2014. Available from <http://tropicos.org/Project/CV>
7. Madagascar Catalogue. Catalogue of the Vascular Plants of Madagascar. St. Louis, Missouri, USA and Antananarivo, Madagascar: Missouri Botanical Garden, 2014. Available from <http://tropicos.org/project/mada>
8. Flora of Panama. Flora of Panama (WFO), Tropicos website. St. Louis, MO and Cambridge, MA, USA: Missouri Botanical Garden and Harvard University Herbaria, 2014. Available from <http://tropicos.org/project/FOPWFO>
9. Wagner WL, Herbst DR, Lorence DH. Flora of the Hawaiian Islands website. Washington DC, USA: Smithsonian Institution, 2014. Available from <http://botany.si.edu/pacificislandbiodiversity/hawaiiflora/index.htm>
10. Floridata. FLORIDATA base website. Tallahassee, Florida, USA: Floridata.com, 2014. Available from <http://www.floridata.com/>