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Review Article

Passiflora foetida L.: A review of its ethnomedicinal uses

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Abstract: *Passiflora foetida*, a species of passionflower, has been extensively used in traditional medicine across various cultures. This review aims to provide a comprehensive overview of the ethnomedicinal uses of the plant, highlighting its traditional applications and scientific evidence supporting its medicinal properties. A thorough examination of existing literature reveals that *P. foetida* is used to treat a range of health ailments, including anxiety, insomnia, digestive issues, and skin diseases. The leaves, fruits, stems, and roots of the plant are utilized in different ways, including decoctions, infusions, and poultices, to harness its medicinal properties. The review also highlights the potential of *P. foetida* as a source of novel medicines. However, further research is needed to fully explore the pharmacological properties and safety of the plant. The study provides a comprehensive understanding of the ethnomedicinal uses of *P. foetida*, underscoring its potential as a medicinal agent and identifying areas for further investigation.

Keywords: Climber, ethnomedicinal uses, *Passiflora foetida*, traditional

Introduction

The genus *Passiflora,* belonging to the family Passifloraceae, consists of about 500 species worldwide (Casierra-Posada and Jarma-Orozco, 2016). They are mostly climbers, with some species being shrubs, and a few species are herbs (Tiwari et al., 2015). However, *Passiflora foetida* is the only wild species found in Odisha (Saxena and Brahmam, 1995). It is commonly known as the wild passionflower or stinking passionflower, and is a species of passionflower native to tropical and subtropical regions worldwide (Ramesh et al., 2021). This plant has been used for centuries in traditional medicine,

particularly in Asian and Latin American cultures, to treat a variety of health ailments (Shinde and Lobo, 2025). The unique morphology of the plant, including its intricate flowers and distinctive fruit, has made it a subject of interest in both folk medicine and modern scientific research (Patil et al., 2015). The ethnomedicinal uses of *P. foetida* are diverse and widespread, with different parts of the plant being used to treat various health issues (Prudviraj et al., 2024). The plant parts are utilized in various ways, including as decoctions, infusions, and poultices, to address a range of ailments, such as anxiety, insomnia, and digestive issues (Patil et al., 2013). In many traditional medicine systems, it is valued for its calming and sedative properties, and is often used to treat nervous disorders and promote relaxation (da Fonseca, 2020). Despite its widespread use in traditional medicine, *P. foetida* has also been the subject of scientific research, which has validated some of its ethnomedicinal uses (Asadujjaman et al., 2014). Studies have shown that the plant contains a range of bioactive compounds, including flavonoids, alkaloids, and glycosides, which may contribute to its medicinal properties (Chiavaroli et al., 2020). By examining the existing literature on *P. foetida*, this review aims to illuminate the potential benefits and limitations of this plant as a medicinal agent, and to identify areas for further research and development.

Morphology

P. foetida is a slender, foul-smelling climber. Leaves palmately 3-lobed, lobes shortly acuminate, acute or obtuse, margins ciliate with gland-tipped setaceous hairs, base cordate. Petiole 3-5 cm long with gland-tipped hairs.



Figure 1: Flower of *Passiflora foetida* (Photo credit: Rajkumari Supriya Devi)

Flowers greenish-white, mostly solitary axillary, with an epicalyx of pinnatifid bracteoles cut up into capillary gland-tipped pectinate segments (Figure 1). Corona processes filiform, white, and purple. Fruit globose, orange when ripe, invested by the epicalyx. The flowering and fruiting season is from November to June (Saxena and Brahmam, 1995).

Methodology

Literature surveys were done using the Scopus, Crossref, Google Scholar, PubMed, NCBI, and Web of Science databases, which involved systematically searching and analysing published scholarly articles to gather information on the ethnomedicinal properties of *P. foetida*. The databases were searched using keywords like “ethnomedicinal uses”, “*Passiflora foetida*”, and “mode of use”. The data on parts used, mode of use, and ethnomedicinal uses were tabulated with details (Pradhan et al., 2025).

Results and discussion

Table 1 provides an analysis of the ethnomedicinal uses of *P. foetida*, highlighting the various parts of the plant used, modes of use, and corresponding ethnomedicinal applications. The fruits, leaves, and roots of the plant are utilized in different ways to treat a range of health issues. For instance, the fruits are made into a nutritional powder and used as a beverage, while unripe fruits are used to induce vomiting for detoxification purposes. The leaves of *P. foetida* are used in multiple ways, including as an herbal tea, paste, or vegetable. Additionally, the leaves and roots are used together as an emmenagogue and to treat hysteria. The whole plant is also used in various ways, including as a decoction for its diuretic effect and as a poultice or lotion to treat skin diseases with inflammation. The study highlights the versatility of *Passiflora foetida* in traditional medicine, with different parts and preparations being used to address a range of health issues.

Table 1: Ethnomedicinal uses of *Passiflora foetida*

Parts used	Mode of use(s)	Ethnomedicinal use(s)	Source
Fruits	Made into nutritional powder and used as a beverage. Unripe fruit used to cause vomiting.	For detoxification, removing heat from the lungs, warming of stomach, and reducing swelling.	Sripathi and Sruthi, (2023)
Leaves	Made into herbal tea with other herbs. Leaves ash mixed with vegetable oil to make a paste and applied externally. Paste As leafy vegetables	To treat cough and moistening of the lungs. To cure scabies. Paste is applied on the head for giddiness and headaches. Young leaves used as a vegetable.	Sripathi and Sruthi, (2023); Kumar et al., (2016); Prudviraj et al., (2024)

Leaves and fruits	Decoction of leaves and fruits.	To treat asthma and biliousness.	Kumar et al., (2016); Prudviraj et al., (2024)
Leaves and roots	Decoction of leaves and root.	Used as an emmenagogue and also in hysteria.	Kumar et al., (2016)
Root	Decoction	Used in hysteria and other mental disorders.	Kumar et al., (2016)
Whole plant	Decoction of the dried herb. As a poultice or lotion.	Use for diuretic effect. Used for treating skin diseases with inflammation.	Sripathi and Sruthi, (2023); Rashed, (2021)

Conclusion

Passiflora foetida is a plant with a rich history of ethnomedicinal use, with various parts of the plant being used to treat a range of health ailments. The review highlighted the diversity of traditional uses of the plant, including its use as a calming agent, digestive aid, and treatment for skin diseases. The scientific evidence supporting the medicinal properties of *P. foetida* is promising, with studies identifying bioactive compounds that may contribute to its anxiolytic, sedative, and anti-inflammatory effects. Further research is needed to fully explore the pharmacological properties of *P. foetida* and to validate its traditional uses. Additionally, studies on the safety and efficacy of the plant are necessary to ensure its safe use as a medicinal agent. By exploring the traditional uses and scientific evidence supporting the medicinal properties of *P. foetida*, the study aims to contribute to the development of new treatments and therapies that can benefit from the rich biodiversity of medicinal plants like *P. foetida*.

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