

# Pharmacognosy of a South Indian market sample of parpataka *Rungia repens* (L.) Nees

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## SUMMARY

*Rungia repens* is used in Ayurvedic drugs for the treatment of fevers, cough and fungal skin diseases. The botanical, macro, microscopic characters, macerate, histochemical studies and physico-chemical studies are presented.

**Key words :** Macro, Microscopic characters, Nacerate, Histochemical, Physico chemical studies

In Ayurveda parpataka is one of the important drug used in fevers particularly. The drug is diuretic, antehelminthic and bitter (Nadkarni, 1996). It is used in the treatment of haemorrhagea, thirst and burning sensation (Lakshmpati, 1973). In spite of its manifold uses the drug remains controversial because several plants are used and sold under the name parpataka in different parts of the country and in local markets. The accepted source of the drug is *Fumaria indica* (Hassk.) Pug. (Anonymous, 1978). Whole plant possess medicinal properties (Sharma, 1983 and Nesamony, 1985). Some of the plants used as parpataka are *Polycarphaea corymbosa* (L) Lam. *Glinus oppositifolius* (L) A.DC., *Mollugo nudicaulis* Lam. and its allied species, *Hedyotis corymbosa* (L) Lam and its allied species, *Glossocardia bosvallea* (L.f) DC. and *Rungia repens* (L.). Nees. (Chunekar, 1999; and Vaidya, 1982).

The genus *Rungia repens* distributed in India and Srilanka. It belongs to family Acanthaceae. It is used as a substitute for parpataka in Ayurveda (Yoganarasimhan, 2000). In Gujarat and Maharashtra it is used as parpataka. Whole plant dried and pulverized is given in fevers and cough by the local tribes. Leaf paste also used to cure fungal skin diseases (Vedavathy, 1992). Hence, there is an urgent need to identify the market sample of parpataka macro-and microscopically.

A perusal of the literature revealed that no pharmacognostical work has been carried out on this taxon (Gurudeva and Yoganarasimhan, 2009). During critical

studies on the South Indian market samples of crude drugs, it was found by the authors that a totally different drug is sold in the markets of South India and used by the physicians in the name of parpataka. It is entirely different from the accepted source. Hence, the present study was initiated to identify the South Indian market sample and analyse its botanical macro-, microscopic and physico-chemical details which helps to differentiate this drug from the accepted source.

## MATERIALS AND METHODS

The plant material was collected in Tirupati from Chittoor District. The herbarium specimen was processed and followed by standard methods (Jain and Rao, 1977) and deposited in the Herbarium of the Department of Botany, S.V. University, Tirupati.

Macro and microscopical studies were carried out (Johansen, 1940 and Wallis, 1985) during the year 2005. Physical constants were carried out by standard methods (Kokoski *et al.*, 1958; Chase and Pratt, 1949; Krebs *et al.*, 1969) and fluorescence studies followed by standard procedures (Khandelwal *et al.*, 1996).

## Taxonomy :

*Rungia repens* (L.) Nees in Wallich, Pl. As Rar. 3: 110. 1832; Wight, Icon. Pl. Ind. orient. t. 465. 1841; Hook. f. Brit. India 4: 549. 1885; Gamble, Fl. Madras 2: 1070 (750). 1924; Matthew, Mat. Fl. Tamil Nadu Carnatic 297. 1981 and III Fl. Tamil Nadu Carnatic t. 541. 1982. *Justicia repens* L. sp. pl. 15. 1753.

A decumbent or erect herb, upto 30 cm tall. Leaves elliptic lanceolate puberulous, acute at both ends. Flowers in terminal spikes. Calyx-lobes 5, linear, sub-equal, shortly connate and valvate. Corolla pinkish, bilipped, 2+3 imbricate. Stamens 2, at the juncture of 2 lips. Ovary globose, style, hairy, stigma minutely 2-fid, capsule elliptic to oblong, pubescent. Seeds 4 concentrically ridged.

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