

## Pharmacognostical studies on *Cissus vitiginea* L. (Vitaceae)

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### SUMMARY

Nature has created plants in the world for every ailment and there is a cure for every disease and man has to find it. The plant *Cissus vitiginea* L. is a medicinally important and the fruits are edible. Systematic and detailed Pharmacognostical studies were performed on *Cissus vitiginea*. The studies include anatomical characters of leaf, stem and roots, fluorescence analysis of the leaf, stem and root powders and their extracts in petroleum ether (40-60<sup>o</sup>), benzene, chloroform and methanol in the selected species. Quantitative determination such as moisture content, total ash, water-soluble ash, acid insoluble ash, water extractive values and sulphated ash have also been made. Preliminary phytochemical analysis of the extracts was done and the results showed that tannins, protein and steroid were predominantly present in all the form extracts of leaf, stem and root.

**Key words :** *Cissus vitiginea*, Fluorescence analysis, Quantitative determination, Pharmacognosy.

Medicinal plants are part and parcel of human society to combat diseases, from the dawn of civilization. Herbal medicines are in great demand in the developed as well as developing countries for primary healthcare because of their wide biological and medicinal activities, higher safety and lesser costs. Proper uses of plants depend upon the correct identification of these plants and appropriate methods of extraction or processing of the plant products. In the field of Indian medicine certain synonyms are used for more than one or two plant drugs. To remove controversies, confusion and selection of genuine drugs we need physicians and pharmaceutical experts. Pharmacognosy deals with all these aspects.

The present investigation aims at the screening of *Cissus vitiginea* L. (Vitaceae) for pharmacognostic characteristics. *Cissus vitiginea* Linn. used for asthma (Four to five teaspoons of dry fruits are crushed with 2-3 inches of *Chloroxylon swietenia* DC. stem bark. A teaspoon of this powder is administered with a glass of goat milk once daily until cured (Reddy *et al.*, 2006)). The sap of the hollow stem is sucked for oral aphthous ulcers and rashes (Supriya Kumar, 1998). Fruits are edible and sold as wild grapes and the roots are also reported to be eaten as they are medicinally important (Chopra and Nayar 1976). It is called in Cempirantai and Mutainari in Tamil. The plant has natural distribution in deciduous forests in most forest districts of Deccan, Carnatic and

Tamil Nadu. In view of its medicinal importance and the fact that no Pharmacognostical work is available on the species, the present investigations were undertaken. This will help in evaluating or assuring the quality of raw drug.

### MATERIALS AND METHODS

The identified plant of *Cissus vitiginea* was collected from Sivanthipatti hills near Palayamkottai. It was confirmed with voucher specimen (No: 3006) deposited at the Survey of Medicinal Plants Unit, Govt. Siddha Medical College, Palayamkottai. The taxonomic features of the plant confirmed with the Flora of Presidency of Madras (Gamble, 1921) and The Flora Tamil Nadu Carnatic (Mathew, 1988). The plant parts were soaked in 70% alcohol, free hand sections of the leaf, stem and root were taken for detailed microscopic observations and figures were drawn by following Johansen (1946). Dry powder of the leaf, stem and root was used for chemical analysis. Physico chemical analysis was carried out as per standard procedure Anonymous (1996). The fluorescence analysis of the powder drug under ultra violet was done according to the methods described by Chase and Pratt (1949). The preliminary phytochemical analysis was done by the methods described by Brindha *et al.* (1981). Biochemical estimation for protein (Lowry *et al.*, 1993), Phenol (Farkes and Kiraly 1962), carbohydrate (Sadasivam and Manickam 1992), Amino acid (Jeyaraman, 1981) and tannin (Aparna Buzarbarua, 2000) were carried out.

### RESULTS AND DISCUSSION

#### Macroscopic studies:

Vine branchlets densely pubescent, Leaves simple, broadly cordate, 5- angular, or deeply lobed, thick-coriaceous, basally 3 nerved, pubescent 3-7cm, stipules ovate, 1.5mm, tendrils simple, stout. Cymes 3.5cm,

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