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# *Cissus quadrangularis* Linn: A useful Indian medicinal plant

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Ashish Kumar*
*CSIR-Central Institute of Medicinal and Aromatic Plants Research Centre, Boduppal, Hyderabad-92, India

*Cissus quadrangularis* Linn. is a important medicinal perennial plant of the grape family (Vitaceae) commonly known as Veldt Grape or Devil's Back bone. *C. quadrangularis* is an unusual and attractive plant which is both easy to grow, and fast growing. It is a fleshy, cactus-like liana widely used as a common food item in India. The plant is prescribed in the ancient Ayurvedic literature as a general tonic and analgesic, with specific bone fracture healing properties. The plant is commonly known as Vajravalli in Sanskrit, Hadjod in Hindi, Kandvel in Marathi, Haddjor in Punjabi, Hadbhanga in Oria, Vedhari in Gujrati, Perandi in Tamil, Nalleru in Telugu and Veldgrap, Edible Stemmed Vine in English. The plant Found throughout the hotter parts of India alongside hedges, neighbouring countries like Bangladesh, Pakistan, Shrilanka and Malaysia.

**Figure. A Plant of *Cissus quadrangularis***

## Cultivation

*Cissus quadrangularis* Linn is an important medicinal plant found in India and Africa, commonly known as “Hadjod and bone setter”. *C. quadrangularis* is a succulent shrubby climber with 4-winged internodes and a tendril at the nodes and reaches a height of 1.5 m approximately. Stem jointed at nodes, internodes are 8 to 10 cm long and 1.2 to 1.5 cm wide. Flowering is very rare and flowers are small, greenish white, bisexual, tetramerous and opposite to the leaves. Fruit globose/obovoid fleshy berries. *Cissus quadrangularis* is propagated by seeds and stem cuttings. It is vegetatively propagated mainly in the month of May to July. It requires warm tropical climate. Propagation through seeds is unreliable because seeds are rare and not viable. It can be cultivated in plains coastal areas, jungles and wastelands up to 500 m elevation. The plant is propagated using stem cuttings. Plant flowers in the month of June to December. Planting material occurs as pieces

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of varying lengths; stem quadrangular, 4-winged, internodes 4-15 cm long and 1-2 cm thick. The vines of established plants scramble on the ground and climb vegetation, and will eventually spread to at least several yards, and possibly to over 20 feet.

### Medicinal properties of *Cissus quadrangularis* L.

The plant contains calcium oxalate, β-carotene, ascorbic acid, β-sitosterol and 3-ketosteroids, also flavonoids such as quercetin, and kaempferol. The stem contains two unsymmetrical tetracyclic triterpenoids, onocer-7-ene-3α, 21β-diol and onocer- 7-ene-3β, 21 α – diol, two steroidal principles I and II, δ-amyrin, δ-amyrone. The roots and stems are most useful for healing of fracture of the bones. The C. *quadrangularis* has been documented in Ayurveda and Siddha systems of medicine for the treatment of various ailments like syphilis, gouts, piles, leucorrhoea, veneral diseases, diarrhoea and dysentery. The entire plants are of medicinal properties like bone healing, anti-inflammatory, analgesic, antimicrobial, antiulcer, antiosteoporosis, antioxidant and antiobestity properties. The stem juice of the plant is used to treat scurvy, menstrual disorders, otorrhoea, and epistaxis.

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