

Tinospora cordifolia

Tinospora cordifolia (common names gurjo, heart-leaved moonseed, guduchi or giloy) is a herbaceous vine of the family Menispermaceae indigenous to tropical regions of the Indian subcontinent.[1] It has been used in Ayurveda to treat various disorders, but in spite of clinical investigation,[1] the effectiveness of such treatments remains uncertain.

It is a large, deciduous, extensively-spreading, climbing vine with several elongated twining branches. Leaves are simple, alternate, and exstipulate with long petioles up to 15 cm (6 in) long which are roundish and pulvinate, both at the base and apex with the basal one longer and twisted partially and half way around. It gets its name heart-leaved moonseed by its heart-shaped leaves and its reddish fruit. Lamina are broadly ovate or ovate cordate, 10–20 cm (4–8 in) long or 8–15 cm (3–6 in) broad, seven nerved and deeply cordate at base, membranous, pubescent above, whitish tomentose with a prominent reticulum beneath. Flowers are unisexual, small on separate plants and appearing when the plant is leafless, greenish-yellow on axillary and terminal racemes. Male flowers are clustered, but female flowers are usually solitary. It has six sepals in two series of three each. The outer ones are smaller than the inner. It has six petals which are smaller than sepals, obovate, and membranous. Fruits aggregate in clusters of one to three. They are ovoid smooth drupelets on thick stalks with sub terminal style scars, scarlet or orange colored.[2]

Endophytic fungi colonize the living, internal tissues of their host without causing any harmful effects. A recent study has shown that 29 endophytes belonging to different taxa were present in the samples collected from *Tinospora cordifolia*. [3]

Extracts of the endophytic fungus *Nigrospora sphaerica* obtained from *T. cordifolia* were found to have insecticidal properties against the Oriental leafworm moth (*Spodoptera litura*), a polyphagous pest.[4]

Tinospora cordifolia contains diverse phytochemicals, including alkaloids, phytosterols, glycosides, tinosporide,[5] and other mixed chemical compounds.[1]

Although used in Ayurveda over centuries in the belief that *Tinospora* has medicinal properties.[6]

During the 2020-22 COVID-19 outbreak in India, the Ministry of AYUSH recommended use of *T. cordifolia* ("giloy") as a home remedy for immune support,[7] but such a practice appeared to be associated with hepatitis cases among six people in Mumbai who used boiled or capsule preparations of the plant.[7][8][9][10]

