

Botanic name: *Leonurus sibiricus* L.-- Sp. Pl. 2: 584. 1753 [1 May 1753] (IK)

Common name: Siberian Motherwort, Rubim, Raktodrone (Bengali)

Family: Lamiaceae (Labiatae)

Habitat: Terrestrial

Distribution: Indian sub-continent, The Philippines, and SE Asia. The plant has the potential to become invasive as leaves cause significant reduction in the germination of *Lactuca sativa*. And leaf flavonoids is reportedly responsible for the inhibition of the germination and radical elongation of the crop (Rolim de Almeida et al. 2008). More read: Journal of Plant Interactions Vol. 3, No. 1, March 2008, 39-48

Description: An annual erect herb; stems 4-angled, solid, and covered in appressed hairs; leaves are deeply divided into 3 lobes, which may be further divided with short, narrow lobes or a few small teeth around the edge, lower leaves are long, long-stalked, and more broadly lobed than upper leaves, up to 6 inches but wither away early. Leaves become progressively smaller with narrower lobes and shorter stalks as they ascend the stem; upper leaves are about 2 inches long and 1½ inches wide; surfaces are sparsely short-hairy, the underside glandular; flowers whitish-pink to pink, sometimes white, bracteate, clusters of stalkless flowers surround the stem at the leaf nodes in the upper part of the plant, tubular, arranged in verticillaster inflorescence; sepals five connate below, irregular, persistent; corolla 2-lipped; upper lip extends out, its outer surface densely covered in short, white hairs, the lower lip is a notched at the tip; stamens 4, epipetalous, didynamous (2+2), Purple-tipped; carpels 2, style gynobasic, white, ovary superior in axile placentation, stigma unequally bifid; fruits a 4-seeded nutlets (cercerule) with persistent calyx

Phytochemicals: Polyphenolic compounds such as catechin, verbascoside, two flavonoids (quercetin, hyperin, and isoquercetrin and rutin), five phenolic acids (4-hydroxybenzoic acid, chlorogenic acid, caffeic acid, *p*-coumaric acid, and ferulic acid), iridoid and phenylpropanoid glycosides (e.g., leonoside A, leonoside E, verbascoside), alkaloids (e.g., cycloleonurinine, leoheterin, leonurine, leonurinine, leuronurine, prehispanolone, preleoheterin, and stachydrine), and labdane diterpenoids (e.g., leosibirone A and leosibirone B), seven new diterpenes, sibiricinones A-E and 15-*epi*-sibiricinones D and E, and the flavone genkwanin (aerial parts), essential oil (trans-cariophyllene, alpha-humulene and germacrene-D)

Medicinal/ Economic uses: Antioxidant, Protect and repair oxidative damage of DNA, antibacterial, anti-inflammatory, antispasmodic, astringent, depurative, diaphoretic, diuretic, nervine, hypnotic, vulnerary and emmenagogue, and aphrodisiac (seeds). Dried plants are used as tonic, alternative, vulnerary, and a good remedy for menstrual disease, uterine contraction, and earache (Bangladesh). Aerial parts of plants have been used for the treatment of menstrual irregularities, amenorrhea, malaria, hypertension, and myocardial ischemia. In India, roots, leaves, and juice are bitter; an infusion used as febrifuge.