

Botanic name : *Catharanthus roseus* (L.) G. Don Gen. Hist. 4(1): 95. 1837 (IK)

Common name : Madagascar periwinkle, Rose periwinkle

Family : Apocynaceae

Habitat : Terrestrial; tolerant to water deficit

Distribution : Indigenous to Madagascar; cultivated and naturalized throughout the tropics and parts of the subtropics, including India

Description : Perennial herb or a subshrub with milky latex, sprawling along the ground or standing erect up to a metre in height; leaves leathery, dark green, arranged in opposite pairs; flowers with attractive white or pink comprise five petals spreading from a long, tubular throat; Each fruit is formed of two narrow, cylindrical follicles .

Phytochemicals: Alkaloids such as vinblastine, vincristine (roots), reserpine and tannins, ajmalicine (dried roots), strictosidine, essential oils (linolenic acid ethyl ester, stearic acid, phytol and hexadecanoic acid, limonene, linolenic acid ethyl ester, geraniol, citral) Milky sap is the source of over 70 different indole alkaloids. The *Vinca* alkaloid bind to tubulin dimers and inhibiting microtubule structures of the cells, thus inhibiting the metaphase of cellular mitosis

Medicinal/Economic uses : In Ayurveda, the plant root and shoot are poisonous, yet used as medicine against several diseases. Antioxidant (flower petals and seeds), antidiabetic, diuretic, antibacterial and antiviral , anti-inflammatory. Preparations of ajmalicine increase blood flow in the brain and are used to treat the psychological and behavioural problems of senility, sensory problems (dizziness, tinnitus), cranial traumas and their neurological complications. Also Used in the treatment of cancerous childhood leukemia and lung cancer, Hodgkin's lymphoma in children, dysentery and diarrhea, nose bleeding, eye infection and irritation of the eyes, irregular bleeding of women, headache, nausea, insect bites, mouth ulcer, malaria, asthma, gum bleeding as well as treatment of bleeding hemorrhoids, to wasp stings, various skin diseases such as acne, eczema and dermatitis, and to heal wounds and in relieving muscle pain, depression of the central nervous system. Its application ranges widely from the prevention of diabetes to treatment of stomach ache. A decoction of the roots is taken to treat dysmenorrhoea. The plant is a popular ornamental plant found in gardens and homes across the world but becomes invasive in some parts of tropics. However, it can cause kidney and nervous problem as a side effect and harmful to pregnant women.