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UNIVERSITY

Periwinkle



Synonym

- Gujarati: સદાબાહાર
- Hindi: सदाबाहार (Sadabahar)
परिविंकल (Perivinkal)
- English: Lavender, Lilac, Roseperiwinkle

Botanical name

- *Catharanthus roseus*.

Family

- Apocynaceae

Chemical Constituents

- The chemical constituents of periwinkle (*Catharanthus roseus*) include a rich variety of secondary metabolites, predominantly alkaloids, which are the most pharmacologically active components
- Over 400 alkaloids have been identified in this plant, such as vincristine, vinblastine, ajmalicine, reserpine, serpentine, catharanthine, and vindoline

- Besides alkaloids, periwinkle also contains flavonoids, saponins, sterols, polyphenols, anthocyanins, carbohydrates, and essential oils

Therapeutic Uses

- **Cancer Treatment:** It contains potent anticancer alkaloids like vinblastine and vincristine, which are used in chemotherapy against cancers such as Hodgkin's disease, choriocarcinoma, and various neoplasms by inhibiting cancer cell growth
- **Other Uses:** It also exhibits anti-diarrheal, anthelmintic, hypotensive, and lipid-lowering effects, and is used in traditional remedies for various infections and chronic ailments
- Periwinkle's bioactive compounds afford significant medicinal potential, particularly in cancer therapy, diabetes management, antimicrobial treatments, antioxidant activity, and neurocardiovascular health

Marketed Preparations

- **Vincristine Sulfate and Vinblastine Sulfate:** These are purified alkaloid drugs extracted from periwinkle used in chemotherapy for

cancers such as Hodgkin's disease, lymphocytic lymphoma, and testicular cancer.

- Vinculin: A herbal preparation made from periwinkle leaves, historically marketed for diabetes management, particularly noted in the 1930s in the UK
- Various standardized extracts and herbal formulations containing *Catharanthus roseus* alkaloids are used commercially for their antidiabetic, antimicrobial, and antioxidant properties in alternative medicine markets