

Plant Anti Cancer Studies on Vinca rosea Medicinal

Vaishnavi Jankiram Nagrik¹, Dr. Shivshankar D Mhaske², Shatruguna U Nagrik³

Students, Final Year, Satyajeet College of Pharmacy, Mehkar, Buldhana, Maharashtra¹

Principal, Satyajeet College of Pharmacy, Mehkar, Buldhana, Maharashtra²

Professor, Satyajeet College of Pharmacy, Mehkar, Buldhana, Maharashtra³

Vaishnavinagrik2601@gmail.com

Abstract: *Vinca rosea* (also known as *Catharanthus roseus* or *Madagascar periwinkle*) is a well-known medicinal plant recognized for its significant anticancer properties. Traditionally used in folk medicine, *Vinca rosea* has gained scientific attention due to its production of valuable alkaloids—vincristine and vinblastine—which have potent chemotherapeutic effects. These compounds function primarily by disrupting microtubule formation during cell division, thereby inhibiting the proliferation of cancer cells. Extensive *in vitro* and *in vivo* studies have demonstrated the efficacy of these alkaloids against various cancers including leukemia, lymphoma, breast cancer, lung cancer, and Hodgkin's disease. In addition to its cytotoxic effects, *Vinca rosea* also exhibits antioxidant, anti-inflammatory, and immunomodulatory activities, which may enhance its anticancer potential. While vincristine and vinblastine are already in clinical use, ongoing research explores the biosynthesis, modification, and combination therapies to improve their efficacy and reduce toxicity. This review highlights the phytochemical profile, mechanisms of action, and current advances in anticancer research on *Vinca rosea*, emphasizing its importance as a natural source in the development of cancer therapeutics.

Keywords: *Vinca rosea*

