

Catharanthus roseus: A Symbol of Hope for Cancer Patients

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Short Communication

Cancer is one of the most life-threatening diseases and serious public health problems in both developed and developing countries [1]. The major events include transformation, dysregulation of apoptosis, proliferation, invasion, angiogenesis, and metastasis [2-4].

Patients suffering from cancers of various organs are increasingly exploring the benefits of alternative medicine, primarily because they experience side effects due to usage of modern anticancer drugs or wish to try new therapies in the hope of getting better [5-8].

The plant has been used in traditional medicine since ages in various parts of the world. A number of alkaloids isolated from this plant are already in clinical use, e.g. ajmalacine-an antihypertensive alkaloid, and vincristine and vinblastine-the antineoplastic bisindole alkaloids. Drugs used in the treatment of most cancers are those that can interfere with cell signaling, like growth factor signaling, prostaglandin production, inflammation, drug resistant gene products, cell cycle proteins, angiogenesis, invasion, anti-apoptosis, cellular proliferation and many others [2-4].

Medicinal plants are playing an important role as a source of effective anticancer agents and it is significant that 60% of currently used anticancer agents are derived from natural sources including plants [9]. Many plant-derived products have been reported to exhibit potent antitumor activity against several rodent and human cancer cell lines [6].

Pharmacological studies have revealed that *Catharanthus roseus* contains more than 70 different types of alkaloids and chemotherapeutic agents that are effective in treating various types of cancers-breast cancer, lung cancer, uterine cancer, melanomas, and Hodgkin's and non-Hodgkin's lymphoma [10].

As modern chemistry developed, chemicals and various constituents were isolated from medicinal herbs [10-12]. These phyto-constituents have served either as drugs that are being used widely today or as starting materials for their synthesis. Modern medicines derived from herbs are gaining attention throughout the world today. Potential of modern pharmacology that has played a supportive role in making drugs safer and more effective.

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