



A PHYTOMEDICINE – CATHARANTHUS ROSEUS

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ABSTRACT

The Catharanthus roseus is a phytomedicine it is great medicinal value which is belongs the family of Apocynaceae. The plant of catharanthus is also known as Vinca, Sodafuli, periwinkle and barmasi. It is a larger flowering plant which produce the very beautiful flowers of catharanthus it's colors is blue, purple, and white. These plant useful across the world-wide. The Catharanthus roseus is cultivated in dry and nutritional condition. The two chemical constituents of Catharanthus are mainly used in treatment of cancer which is vincristine and vinblastine. It is useful for other diseases such as Hodgkin lymphomas, childhood leukemia, anti-diabetic ,anti-microbial and anti-dysenteric. It is given targeted therapy and combination therapy and it is a class of cytotoxic drug and it's ability to inhibits the cancerous cell.

KEYWORDS

Introduction, Biological source, Geographical source, Botanical classification, Vascular name, Organoleptic property, Microscopic property, Cultivation, Chemical consituents, Pharmaceutical uses.

INTRODUCTION



White *Catharanthus roseus*

Catharanthus is also known as Vinca, Sodafuli, periwinkle and barmasi, it is a larger genus of flowering plant in the family of Apocynaceae. It is indigenous to Europe, Northwest Africa and Southwest Asia. [1][2][3][4] It consists of two terpene alkaloids that are vincristine and vinblastine, which are used in cancer treatment. Catharanthus grows in all India up to 500 meters. It is cultivated in tropical and subtropical regions in South India and North Eastern states of India. Catharanthus has red, pink, and white flowers; the center part is dark red, and it also has 5 petals. [5]

SYNONYMS

Vinca roseus, Sadabahar, Ratanjot, Sodafuli

FAMILY

Apocynaceae

BIOLOGICAL SOURCE

The biological source of catharanthus is dried leaflets of the whole plant.

GEOGRAPHICAL SOURCE

It is native of Madagascar. It is found in tropical and subtropical areas of Africa, Australia, Eastern Europe, South Florida, India, Taiwan, and Thailand. [6]

BOTANICAL CLASSIFICATION [7]

Botanical Name(s): *Vinca Rosea* (*Catharanthus Roseus*)

Family Name: Apocynaceae

Kingdom: Plantae

Division: Magnoliopsida (Flowering plants)

Class: Magnoliopsida (Dicotyledons)

Order: Gentianales

family: Apocynaceae

Genus: Catharanthus

Species: C. roseus

VASCULAR NAME [8]

English: Cayenne, jasmine, old maid

Hindi: Sada-bahar

Malayalam: Banappuva, Nityakalyani

Marathi: Sadaphool, Sadaphul

Sanskrit: Nityakalyani, Rasna,

Tamil: Cutkattu malli, Cutukattu malli

Telugu: Billaganneru

Gujarati: Barmasi

Bengali: Noyontara

ORGANOLEPTIC PROPERTIES



Catharanthus Roseus

Colour- Violet, pink and white

Odour – Characteristic

Taste- Bitter

Size- Height upto 40-80cm

- Catharanthus leaves is green in colour.
- It's root is pale gray in colour.
- It's Flower is violet, pink, white or carmine red in colour.
- Perennial it's plant.
- The odour of catharanthus is characteristic and it's tastes is bitter.

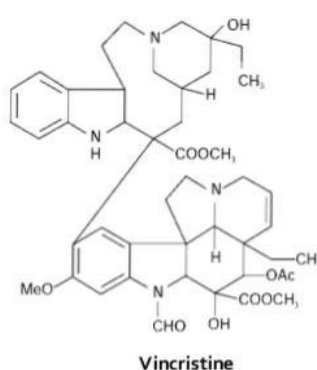
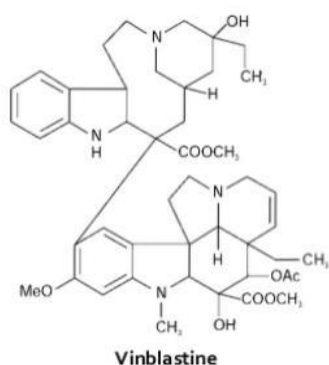
- It's male and female organs is present in hermaphrodite in flower.
- It's height upto 40-80 cm .
- It's fruits is divergent follicle.[9]

CULTIVATION AND COLLECTION

- Catharanthus is required to moist and dry soil and can tolerate drought.
- It is directly sowing the seed in the cultivation.
- Nursery sowing method is the fresh seeds is sowing in nursery in February and March month.
- The plant seedlings obtain a height up to 5to8cm after 2months and these are transplanted in soil at a distance 45cm ×30cm.
- In organization to collect the whole plant, the first cut above 10cm in stems above the grounds and the stems, seeds, leaves are separated and dried.
- By plugging collected the roots which are later washed and dried under shade and packed.[10]

CHEMICAL CONSITUENTS

- The Catharanthus leaves and roots are contains more alkaloids.
- About 90 alkaloids are isolated by the Catharanthus roseus such as Ajmalicine, Serpentine.
- Vincristine and vinblastine is most important chemical constituents of Catharanthus Roseus these are dimer indol indoline alkaloids which are mostly used in the treatment of cancer.
- These are consist of Monoterpenes, sesquiterpene, indole and indoline glycoside.[10]



PHARMACEUTICAL USES

- It is also used to treat cancer.
- It is also produce Hypolipidiemic and wound healing properties .
- It's leaves are contains 150 useful alkaloids which produce Hypertensive properties.
- It is also producing the memory enhancement property.
- It show the anti-diabetic, anti-microbial, antioxidant, anti-helmintic property.
- Vincamine and Vindoline alkaloids of these plant show antiulcer property.
- It also used to anti-diarrheal property. [7]

CONCLUSION

In this paper we are concerned about the *Catharanthus roseus*. It is most commonly used in pharmaceutical field because it produces various medicinal properties. These are consist various types of alkaloids. Vincristine and vinblastine mostly used in the treatment of cancer. If the *Catharanthus* alkaloids produces various pharmaceutical properties such as Hypolipidiemic , wound healing properties , Hypertensive properties, memory enhancement property, Anti-microbial, Antioxidant, Anti-helminthic property, Antiulcer property, Anti-diarrheal property.

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