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Turmeric: *Curcuma longa*

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Abstract :-

Turmeric (*curcuma longa*) is a spice which has been widely used for its medicinal properties in traditional medicine system of South Asia including china and India (ayurvedic system), the main component of turmeric; curcuma includes the three curcumin, which are responsible for its different physical and medicinal properties. Present study deals with systematic review . literature on anti-inflammatory

activity curcumin in treatment of cancer. Researches have shown curcumin to be highly pleiotropic molecule capable of interacting the numerous molecular targets. A careful literature survey reveals that curcumin, the most active component of turmeric contributes significantly in certain types of cancer. The anticancer potential of curcumin is mainly due to its ability to inhibit and or activate various intercellular transcription factors which regulates the expression of proteins and development. The mechanism of action and effects are discussed briefly in present review. [1]

Keywords: Curcumin, Anti-Inflammatory properties, Pharmacology .

Introduction :- Turmeric (*curcuma longa*) belonging to family is a perennial rhizomatous herb native to South Asia . The rhizome is the part of the plant which is actually the source of bright yellow colour spic essential in kitchen and used as colouring agent and food preserving agent . In traditional system of medicine mainly in India and China turmeric is used to treat inflammatory conditions. Not only in inflammation it is also used in wound healing and blood purification . Other pharmacological activities include antioxidant, and antimicrobial properties. This article focuses on Anti-inflammatory effects of curcumin in cancer treatment. Curcumin is one of the most studied compounds and it is generally believed that curcumin is the compound responsible for the therapeutic success of turmeric in a wide range of disorders like ulcerative colitis, Inflammation and edema8 Rheumatoid arthritis,pancreatitis, osteoarthritis, osclur conditions, Despesia and Gastric ulcer, Irritable bowel syndrome. Not only this various in vivo studies provide supporting evidence and highlighted the therapeutic potential of turmeric in Alzheimer disease . [2]

TURMERIC:-

Synonyms of Curcuma Longa:-

Sanskrit : Ameshta

English : Indian

saffron

Hindi : Haldi

Marathi : Halad [3]

BIOLOGICAL SOURCE :-

Turmeric consists of dried, as well as, fresh rhizomes of the plant known as *Curcuma longa* Linn (*C. domestica*), belonging to **family Zingiberaceae**, It contains not less than 1.5 per cent of curcumin. [4]

MICROSCOPIC

CHARACTERSTICS

:-

colour : yellowish-brown

odour:- characteristic

taste:- slightly bitter [5]

Chemical

Constituents:

Turmeric contains about 5% of volatile oil, resin,

abundant zingiberaceous starch grains and yellow colouring substances known as curcuminoids. The chief component of curcuminoids is known as curcumin. Turmerone, zingiberene, borneol, caprylic acid are the other constituents of turmeric oil. Curcumin is reported to possess anti-microbial and anti-inflammatory actions (6)

Taxonomical Classification of Curcuma Longa

Scientific Name: *Curcuma longa*

Kingdom: Plantae

Subkingdom: Tracheobionta -Vascular plants

Superdivision: Spermatophyta

Division: Magnoliophyta – Flowering plants

Class: Lillioopsida- monocotyledons

Subclass: Zingiberidae

Order: Zingiberales

Family: Zingiberaceae– Ginger family

Genus: *Curcuma* L.- curcumaSpecies: *Curcuma longa* L. –common [3]

History:-

The use of turmeric dates back nearly 4000 years to the

Vedic culture in India, where it was used as a culinary spice and had some religious significance. It probably reached China by 700 A.D, East Africa by 800 A.D, West Africa by 1200 A.D, and Jamaica in the eighteenth century. In 1280, Marco Polo described this spice, marvelling at a vegetable that exhibited qualities so similar to that of saffron. According to Sanskrit medical treatises and Ayurvedic and Unani systems, turmeric has a long history of medicinal use in South Asia. Sushruta's Ayurvedic Compendium, dating back to 250 B.C, recommends an ointment containing turmeric to relieve the effects of poisoned food. [7,8]

Cultivation :- [9 10]

Climate:

The turmeric plant

needs temperatures between 20°C and 30°C and a considerable amount of annual rainfall to thrive. Individual plants grow to a height of 1 m, and have long, oblong leaves. Turmeric is a tropical herb and is grown in both tropics and subtropics. It will grow luxuriantly in shade if not too dense, but it produces larger and better rhizomes in the open ground to the sun. Turmeric require humid climate.

Soil:

soil for turmeric

cultivation should be rich and friable. Soils with a little higher sand content are well suited. It is grown in different type of soils from light black, sandy loam and red soils to clay loams. It grows on light black, ashy

loam and red soils to stiff loams in irrigated and rain fed areas
Harvesting: usually harvested extends

from January to March-April. Early varieties mature in 7-8 months and medium varieties in 8-9 months. The crop is ready for harvesting when the leaves turn yellow and start drying up. At the time of maturity, leaves are cut close to the ground, the land is ploughed and rhizomes are gathered by hand picking or the clumps are carefully lifted with a spade.

Irrigation: For turmeric number of irrigations will depends upon the soil and climatic conditions. Depending upon the soils are rainfall 15 to 25 irrigations are given in medium heavy soils an in case of light texture red soils 35-40 irrigations are needed.

Storage: Rhizomes for seed are generally heaped under the shade of trees or in well ventilated sheds and covered with turmeric leaves. The seed rhizomes can also be stored in pits with sawdust.

Uses:- [11,12]

General health benefits:-

- 1) Turmeric promotes balanced mood.
- 2) Turmeric helps wounds healing.
- 3) Turmeric group seemed to enjoy more relief from joint pain.
- 4) Turmeric helps in balanced blood sugar
- 5) Turmeric also helps in cholesterol optimization.
- 6) It can treat tonic and acute allergies and offers health benefits for asthma and eczema.
- 7) It has been found to be effective in treating acne and psoriasis.
- 8) It acts as powerful immunomodulator.

uses:-

Traditionally Turmeric is used as home remedy for wound healing. Turmeric also helps to cure digestive disorder, Liver disease, cancer, and atherosclerosis, and osteoarthritis, menstrual problem of women, bacterial infection, and eye disorder. Turmeric is anti-inflammatory to the mucous membrane which coat the throat, lungs, stomach and intestine.

Side Effects, Contraindications and Precautions:- [12,13]

- 1) The patient facing gall bladder is recommended not to eat turmeric.
- 2) If any patient had bleeding problems, it is re commended to steer clear of turmeric. High doses of turmeric cause uterine contraction in pregnant women.
- 3) Turmeric might lower testosterone levels and decrease sperm movement when taken by mouth by men.
- 4) Turmeric might slow blood clotting so stop using it at least two weeks before a scheduled surgery.
- 5) Taking high amounts of turmeric might prevent the absorption of iron. So it should be used with caution in people with iron deficiency.

Medicinal

1) Turmeric seeds



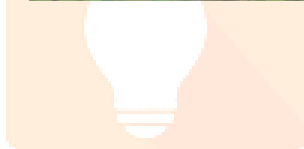
2) Turmeric leaves



3) Turmeric flowers



4) Turmeric fruit



5)Turmeric powder



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