IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 1, September 2022
Impact Factor: 6.252

Pharmacological Review on Zingiberofficinale

Kashid Sejal[1], Raskar Vaishnavi[2], Wavhal Sonali[3],Sanap Sumedha[4], Gadge Shubham[5], Datkhile Sachin[6]

Students, Samarth Institute of Pharmacy, Belhe, Maharashtra, India[1,2,3,4]

Department of Pharmacology, Samarth Institute of Pharmacy Belhe, Maharashtra, India[5]

Department of Pharmaceutics, Samarth Institute of Pharmacy, Belhe, Maharashtra, India[6]

Abstract: *Zingiberofficinale is a spice which is having a strong historical medicinal background and used by different systems of medicine for various ailments. The medicinal properties of ginger are due to the presence of gingerol and paradol, shogaols . The aim of these review is to provide an overview about the main aspects related with pharmacology, phytochemistry and pharmacological activities of Z. officinale.*

Keywords: Ginger ,Zingiberofficinale, shogaols, paradol, phytochemistry, pharmacological activities.

I. INTRODUCTION

Ginger is not a simple spice, it is miraculous drug having a lot of medicinal benefits. It is a rhizomatous herbs belonging to family zingeberaceae. It is an aromatic herbs which is branched and lumpy. Ginger scientifically known as Zingiber*officinale* Roscoe , belonging to family zingeberaceae. Is one of the most important plant with several medicinal, nutritional ethnomedical values therefore, used extensively world wide as a spice, flavouring agents and herbal remedy. Traditionally, Z .officinale is used in Ayurveda , Siddha ,Chinese, Arabian, Africans , Caribbean and many other medicinal system to cure a variety of diseases viz, nausea, vomiting, cough,asthma , palpitations, inflammation, dyspepsia, loss of appetite, constipation, indigestion and pain.[15]

II. DESCRIPTION

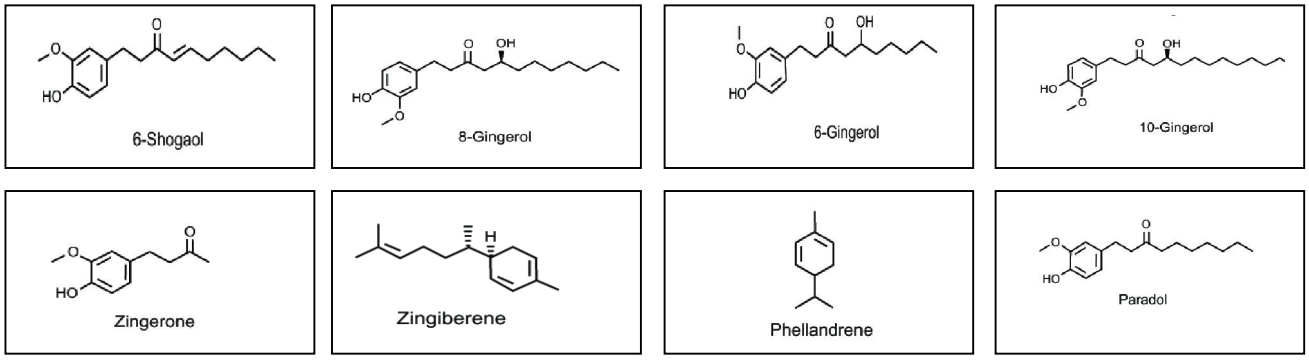
It is a perennial herb. Rhizome is thick lobed , pale yellowish with narrow and linear lanceolate, bistichous, subsessile , dark green leaves with slender tip . A yellow or white flowers grows directly from the root and termonate in long spike. It is creeping type thick rhizome , which extends underground. It's fruits are not observed. The plant has narrowed lanceolate 15 -30 cm long leaves which die of each year and produces cluster of white and pink flower buds that bloom into yellow flowers. Ginger is originated in South – East – Aasia and is the most common spice commonly used all over world.[14]



III. CHEMICAL CONSTITUENTS

It contains major constituents is carbohydrates, protein, alkaloids , glycoside, saponine , steroids , terpenoides,tannin , flavonoids, phenolic compound .Minor constituents sesquiterpene are relatively minor constituents but it has main significant in flavour properties.[13]

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 1, September 2022
Impact Factor: 6.252



IV. CLASSIFICATION

4.1 Classification

Kingdom	Plantae
Division	Angiospermae
Class	Monocotyledoneae
Order	Zingiberales
Family	Zingeberaceae
Genus	Zingiber
Species	*Z.officinale*

4.2 Therapeutic Effect

A. Antioxidant Effect

Antioxidant are the chemical substances that decrease oxidation stress and have the capacity to stabilize damaging effects on free radicals in tissues . They are thought to defend against cancer arteriosclerosis heart diseases and some other diseases.[1]

B. Lipid Effects

Oral eating of ginger extract has been arevealed to have hypocholesterolemic ,hypolipidemic and antiatherosclerosis effect in cholesterol- fed in rats . [2]

C. Anti-Imflamatory Effect

Ginger supresses prostaglandin production through inhibition of COX-1 and COX-2.[3]

D. Anti-Cancer Effect

An ethanolic ginger extract applied topically to mouse skin provide a extremely important protective against the increase the skin tumors.[4]

E. Immunomodulator Effect

Ginger is one of the most effective natural immunomodulator . The powdered ginger rhizome is capable to improved non specificimmuno response in rainbow truots .[5]

F. Anti-Microbials Effect

Gingerol and limited compound have been examined for anti- microbial activities. 10 – gingerol has been stated as active inhibitor of *Mycobacterium avium*and *Mycobacterium tuberculosis.* [11]

G.GIT Effect

Ginger has been notes as being beneficially in preventing post operative nausea and vomiting in humans , without significant on result on gastric emptying.[6]

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 1, September 2022
Impact Factor: 6.252

H. Cardiovascular Effects

Ginger exerts many direct and indirect effects on blood pressure and heart rate . In vitro studies show that gingerols and the related shogaols exhibit cardio depressant activity at low doses and cardiotonic properties at higher doses .[9,12]

I. Anti – Arthritic Effect

An important study on osteoarthritis patient on knee has exposed that , extremely purified and standardized ginger extract had major effect on reducing symptoms on osteoarthritis of knee .[7]

J. Neuroprotective Activity

Neuroprotective effect is relatively attributable to an opposed action of ginger root extract to on monosodium glutamate, glutamate effect , so the monoamines content was increased.[8]1

V. CONCLUSION

Fresh, but not dried zinger is effective against HRSV induced plague information on airway epithelium by blocking viral attachment and internationalisation. Medicinal plants are a source of great economic value all over the world. Zingiberofficinale is an important plant because of their numerous medicinal, ethnomedicinal and nutritional values used in traditional medicine . Ginger is one of well- known medicinal herbs that are used both by traditional healers and in some modern treatments modilities . [1]

REFERENCES

[1]. Adel PRS, Prakash J, Chemical composition and antioxidant properties of ginger root (Zingiberofficinale), Journal of Medicinal Plants Research, 2010, 424).2674-2679.23.

[2]. ThomsonM,Al-Qattankk,Al- SawanSM,Alnaqeeb MA, khan I ,Ali M.The use of ginger (zingiberofficinaleRosc.) ASA potential anti-inflammatory and antithrombotic agent ,2002;67(6):475-478

[3]. YadavS.SharmaPk ,AlamMA.Ginger medicinal use and benefits .Europian Journal of pharmaceutical and medicinal Research ,2016;3[7]:127-135.

[4]. KatiyarSK,AgarwalR,MukhtarH.Inhibition of tumor promotion in SENCAR mouse skin by ethanol extract of zingiberofficinale rhizome. Cancer Research .1986,56:1023-1030

[5]. .HaghighiM,RohaniMS.The effect of powdered ginger (zingiberofficinale)on the haematological and immunological parameters of rainbow trout oncorhynchusmykiss.Journal of medicinal plant and herbal therapy research 2013;1:8-12

[6]. PhillipsS.HutchinsonS,RuggierR.zingiberofficinale does not affect gastric emptying rate A. randomised, placebo-controlled ,crossover trial .Anaesthesia,1993a:48:393-395

[7]. AlthimanRD,MarcusaenKC.Effect of a ginger extract on kee pain in patients with osteoarthritis . Arthritis and Rheumatism 2001:44:2531-2538

[8]. WaggasAM.Neuroprotective evaluation of extract of ginger (zingiberofficinale)root in monosodium glutamate induce toxicity in different brain areas male albino rats , Pakistan Journal of Biological science 2009:12(3):201-212

[9]. Afzal M,Al-HadidiD,MenonM,PesekJ,DhamiMs, Ginger :an ethnomedical ,chemical and pharmacological review Drug metabolism and Drug Interacts 2001:18[3-4],159-190

[10]. H.xiong,"comparative study of components in ginger extracts by different extraction method,"Xihuauniversity,Sichuan ,China 2006,M.S.dissertation.

[11]. 11.Sabulal B, Dan M, Kurup R, Pradeep NS, Valsamma RK, George V. Caryophyllous-rich rhizome oil of Zingibernimmonii from South India: Chemical characterization and antimicrobial activity. Phytochemistry. 2006;67(22):2469-73.p

[12]. WangCc,ChenLG,Lee LT ,Yang LL.Effect of 6-gingerol ,an antioxidant from ginger,on inducing apoptosis in human leukemia .HL -60 cells.In Vivo .2003:17(6):641-645

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 1, September 2022
Impact Factor: 6.252

[13]. Z. K. Lin and Y. F. Hua, "Study on chemical Constituents of ginger essential oil in Sichuan," Organic Chemistry, vol. 6, pp. 444 448, 1987.

[14]. JoladSD, Lantz RC, Sol yom AM. Chen GJ. Bates RB, TimmermannBN,Freshorganically Grown ginger (Zingiberofficinale): composition And effects on LPS-induced PGE2 production. Phytochemistry. 2004, 65, 1937-1954.24.

[15]. Zanjabeel (ginger): a culinary spice with itsPotential therapeutic applications. International ResearchJournal of Pharmaceutical and Applied Sciences (IRJPAS).2015:5(1):1-6.