Activity of Zingiber officinale against Hepatitis C through deactivation of Hepatitis C Virus protease (3M5O)

Sliktarani Dash[1], Yashaswi Nayak[2]

[1]180705180006@cutm.ac.in

[2]yashaswi.nayak@cutm.ac.in

Centurion University of Technology and Management, Odisha, India

Abstract: An in-silico study was performed to determine the activity of Zingiber officinale against Hepatitis C. Molecular docking using Biovia Discovery Studio was performed to identify the phytochemical responsible to deactivate Hepatitis C Virus protease (3M5O) enzyme. It was found that Naringin and Zingiberene helped to prevent Hepatitis C.

Introduction: Zingiber officinale is known for its medicinal activities. It is a spice consumed worldwide for culinary and medicinal purposes. The plant has a number of chemicals responsible for its medicinal properties, such as antiarthritis, antiinflammatory, antidiabetic, antibacterial, antifungal, anticancer, etc.

The plant is classified as follows:

Kingdom	Plantae
Division	Tracheophyta
Class	Magnoliopsida
Order	Zingiberales
Family	Zingiberaceae
Genus	Zingiber
Species	officinale

Major phytochemicals present in the plant are:

a. Naringin
b. Daidzein
c. Peonidin
d. Zingiberene

One of the major enzymes required for the survival of the organism causing Hepatitis C is Hepatitis C Virus protease (3M5O) enzyme. The objective of this work is to find the phytochemical that can deactivate the enzyme, thereby preventing the physiological activity of the organism.

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