Activity of Alpinea galanga against Hepatitis C through deactivation of Hepatitis C Virus RNA-Dependent RNA polymerase (5PZL)

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Abstract: An in-silico study was performed to determine the activity of Alpinea galanga against Hepatitis C. Molecular docking using Biovia Discovery Studio was performed to identify the phytochemical responsible to deactivate Hepatitis C Virus RNA-Dependent RNA polymerase (5PZL) enzyme. It was found that Tangeretin helped to prevent Hepatitis C.

Introduction: Alpinea galanga is known for its medicinal activities. Alpinia is a plant related to ginger. The horizontal underground stem (rhizome) is used to make medicine. Alpinia is used to treat fever, muscle spasms, intestinal gas, and swelling (inflammation); to kill bacteria; and as a stimulant.

The plant is classified as follows:

Kingdom	Plantae
Division	Tracheophyta
Class	Magnoliopsida
Order	Zingiberales
Family	Zingiberaceae
Genus	Alpinea
Species	galanga

Major phytochemicals present in the plant are:

a. Cryptoxanthin
b. Tangeretin
c. Salicylic acid
d. Limonene

One of the major enzymes required for the survival of the organism causing Hepatitis C is Hepatitis C Virus RNA-Dependent RNA polymerase (5PZL) enzyme. The objective of this work is to find the phytochemical that can deactivate the enzyme, thereby preventing the physiological activity of the organism.

ISSN: 2395-6216