Activity of Oenanthe javanica 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 Oenanthe javanica 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 Astaxanthin helped to prevent Hepatitis C.

Introduction: Oenanthe javanica is known for its medicinal activities. Oenanthe javanica, popularly known as water dropwort, has long been used in various ethnomedical systems in Asia, especially in China, Korean, and Japan, for treating various chronic and acute hepatitis, jaundice, alcohol hangovers, abdominal pain, and inflammatory conditions.

The plant is classified as follows:

Kingdom	Plantae
Division	Tracheophyta
Class	Magnoliopsida
Order	Apiales
Family	Apiaceae
Genus	Oenanthe
Species	javanica

Major phytochemicals present in the plant are:

a. Sulforaphane
b. Astaxanthin
c. Digoxin
d. Ferulic acid

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.