

## Activity of Bupleurum sp. against Hepatitis C through deactivation of Hepatitis C Virus RNA-Dependent RNA polymerase (5PZL)

Sushree Mandal<sup>1</sup>, Sunita Satapathy<sup>2</sup>

<sup>1</sup>190705180122@cutm.ac.in

<sup>2</sup>sunita.satapathy@cutm.ac.in

Centurion University of Technology and Management, Odisha, India

**Abstract:** An in-silico study was performed to determine the activity of Bupleurum sp. 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 Pelletierine helped to prevent Hepatitis C.

**Introduction:** Bupleurum sp. is known for its medicinal activities. Bupleurum is used for respiratory infections, including the flu (influenza), swine flu, the common cold, bronchitis, and pneumonia; and symptoms of these infections, including fever and cough.

The plant is classified as follows:

Kingdom	Plantae
Division	Tracheophyta
Class	Magnoliopsida
Order	Apiales
Family	Apiaceae
Genus	Bupleurum
Species	scorzonerifolium

Major phytochemicals present in the plant are:

- Tangeretin
- Tannic acid
- Pelletierine
- Digoxin

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.