

Activity of *Wrightia tinctoria* against Hepatitis C through deactivation of Hepatitis C Virus RNA-Dependent RNA polymerase (5PZL)

Itilagna Sahoo¹, Srimay Pradhan²

¹190705180138@cutm.ac.in

²srimay.pradhan@cutm.ac.in

Centurion University of Technology and Management, Odisha, India

Abstract: An in-silico study was performed to determine the activity of *Wrightia tinctoria* 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 Campesterol helped to prevent Hepatitis C.

Introduction: *Wrightia tinctoria* is known for its medicinal activities. It is the most commonly prescribed Siddha herbal medication for skin diseases, in specific psoriasis. The “777 oil” made from the fresh leaves of the plant exhibits various analgesic, anti-inflammatory, and antipyretic activities and it is a highly cited medication for the treatment of psoriasis.

The plant is classified as follows:

Kingdom	Plantae
Division	Tracheophyta
Class	Magnoliopsida
Order	Gentianales
Family	Apocynaceae
Genus	<i>Wrightia</i>
Species	<i>tinctoria</i>

Major phytochemicals present in the plant are:

- Campesterol
- Malvidin
- Myricetin
- Pelargonidin

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.