

Activity of *Swertia chirata* against Herpes through deactivation of Herpes Simplex virus type 1 DNA polymerase (2GV9)

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Abstract: An in-silico study was performed to determine the activity of *Swertia chirata* against Herpes. Molecular docking using Biovia Discovery Studio was performed to identify the phytochemical responsible to deactivate Herpes Simplex virus type 1 DNA polymerase (2GV9) enzyme. It was found that -12.08 helped to prevent Herpes.

Introduction: *Swertia chirata* is known for its medicinal activities. People use the parts that grow above the ground to make medicine. *Chirata* is used for fever, constipation, herpes, upset stomach, loss of appetite, intestinal worms, skin diseases, and cancer.

The plant is classified as follows:

Kingdom	Plantae
Division	Tracheophyta
Class	Magnoliopsida
Order	Gentianales
Family	Gentianaceae
Genus	<i>Swertia</i>
Species	<i>chirayita</i>

Major phytochemicals present in the plant are:

- a. Theobromine
- b. Limonene
- c. Naringin
- d. Limonene

One of the major enzymes required for the survival of the organism causing Herpes is Herpes Simplex virus type 1 DNA polymerase (2GV9) enzyme. The objective of this work is to find the phytochemical that can deactivate the enzyme, thereby preventing the physiological activity of the organism.