

## Activity of *Cyperus rotundus* 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 *Cyperus rotundus* 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 Ellagic acid and Pelargonidin helped to prevent Herpes.

**Introduction:** *Cyperus rotundus* is known for its medicinal activities. It is a medicinal herb traditionally used to treat various clinical conditions at home such as diarrhea, diabetes, pyresis, herpes, inflammation, malaria, and stomach and bowel disorders.

The plant is classified as follows:

Kingdom	Plantae
Division	Tracheophyta
Class	Magnoliopsida
Order	Poales
Family	Cyperaceae
Genus	<i>Cyperus</i>
Species	<i>rotundus</i>

Major phytochemicals present in the plant are:

- Ellagic acid
- Gallic acid
- Pelargonidin
- 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.