

Activity of *Cyperus rotundus* against Herpes through deactivation of Herpes Simplex virus Type II Protease (1AT3)

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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 II Protease (1AT3) enzyme. It was found that 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:

- a. Ellagic acid
- b. Gallic acid
- c. Pelargonidin
- d. Limonene

One of the major enzymes required for the survival of the organism causing Herpes is Herpes Simplex virus Type II Protease (1AT3) enzyme. The objective of this work is to find the phytochemical that can deactivate the enzyme, thereby preventing the physiological activity of the organism.