

Activity of *Bidens pilosa* against Herpes through deactivation of Thymidine Kinase of Herpes Simplex virus (1KIM)

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Abstract: An in-silico study was performed to determine the activity of *Bidens pilosa* against Herpes. Molecular docking using Biovia Discovery Studio was performed to identify the phytochemical responsible to deactivate Thymidine Kinase of Herpes Simplex virus (1KIM) enzyme. It was found that Carnosic acid helped to prevent Herpes.

Introduction: *Bidens pilosa* is known for its medicinal activities. Roots, leaves and seed have been reported to possess antibacterial, antidysenteric, anti-inflammatory, antimicrobial, herpes, antimalarial, diuretic, hepato-protective and hypotensive activities.

The plant is classified as follows:

Kingdom	Plantae
Division	Magnoliophyta
Class	Magnoliopsida
Order	Asterales
Family	Asteraceae
Genus	<i>Bidens</i>
Species	<i>pilosa</i>

Major phytochemicals present in the plant are:

- a. Eugenol
- b. Apigenin
- c. Luteolin
- d. Carnosic acid

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