

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

Nabakrushna Behera¹, Gagan Kumar Panigrahi²

¹nabakrushnabehera06@gmail.com

²gagan.panigrahi@cutm.ac.in

Centurion University of Technology and Management, Odisha, India

Abstract: An in-silico study was performed to determine the activity of *Usnea complanta* 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 Daidzein and Campesterol helped to prevent Herpes.

Introduction: *Usnea complanta* is known for its medicinal activities. It can sometimes be used as a bioindicator, because it tends to only grow in those regions where the air is clean, and of high quality. It is also used to cure herpes.

The plant is classified as follows:

Kingdom	Fungi
Division	Ascomycota
Class	Lecanoromycetes
Order	Lecanorales
Family	Asteraceae
Genus	<i>Usnea</i>
Species	<i>complanta</i>

Major phytochemicals present in the plant are:

- Genistein
- Daidzein
- Tangeretin
- Campesterol

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.