

Activity of *Syzygium aromaticum* 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 *Syzygium aromaticum* 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 Digoxin and Pelargonidin helped to prevent Herpes.

Introduction: *Syzygium aromaticum* is known for its medicinal activities. Traditionally, cloves have been used for centuries in the treatment of vomiting; flatulence; nausea; liver, herpes, bowel and stomach disorders; and as a stimulant for the nerves.

The plant is classified as follows:

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|----------|-------------------|
| Kingdom | Plantae |
| Division | Tracheophyta |
| Class | Magnoliopsida |
| Order | Myrtales |
| Family | Myrtaceae |
| Genus | <i>Syzygium</i> |
| Species | <i>aromaticum</i> |

Major phytochemicals present in the plant are:

- a. Lutein
- b. Digoxin
- c. Pelargonidin
- d. Limonene

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.