1056-39-1846   **Youssef M Dib*** (`dib@ulm.edu`), 700 University Ave, Monroe, LA 71203, and **Mariette Maroun**, 700 University Ave, Monroe, LA 71203. *A difference equation model to measure the length of Latency of HSV1 infections in differential cells.*

A nonlinear difference equation model for HSV1 viral infections will be provided. Differential cell are the host of this virus. Once infected, this differential cell would survive as long as it host this virus. It is assumed that both HSV1's DNA and Nuclear DNA in the differential cell depend on Thyroid Hormone liganded with its receptore. Biological relevence of this model will be presented in addition to its' sensitivity study. Coexictense results between HSV1 virus and it's neuronal cell depend not only on parameter conditions but also on initial conditions. (Received September 22, 2009)