

ABSTRACT.

In this work, a mathematical model for rotavirus infection incorporating delay differential equations has been formulated. Stability analysis of the model has been performed. The result shows that the Disease Free Equilibrium is globally asymptotically stable and the Endemic Equilibrium undergoes a Hopf bifurcation. Numerical analysis has been performed to validate the analysis.

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Key Words and Phrases: Rotavirus, Hopf Bifurcation, Global asymptotic stability, Endemic Equilibrium