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Mathematical modeling on T-cell mediated adaptive immunity in primary dengue infections

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Highlights

- A mathematical model of dengue virus dynamics in micro-environment during primary dengue infections is proposed.
- The model captures two major functions of T-cells (adaptive immunity) to combat the dengue virus.
- Bifurcation diagrams of steady states are drawn in different parameters planes.
- The cytokine mediated virus clearance plays a vital role in control of dengue virus.
- The antiviral treatment is incorporated for dengue infection in our model.

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