

Asymptotic properties for an infection-load structured epidemiological model with exponential growth

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Abstract

We consider an infection load-structured epidemiological model with exponential growth that translates the dynamic of transmission of some prion pathologies. The incorporated infection load leads to the formulation of a nonlinear partial differential equation of transport type, coupled with an ordinary differential equation. We exhibit epidemiological thresholds of the model, such as the basic reproduction number R_0 , in order to study some asymptotic properties of the solution.