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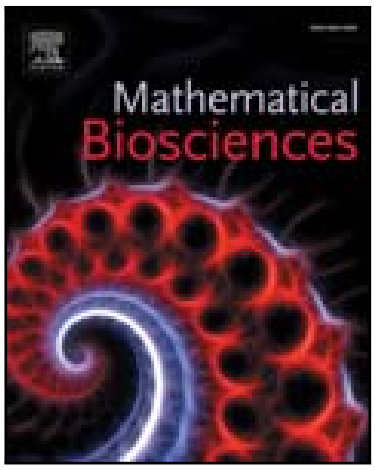

The effect of incidence function in backward bifurcation for malaria model with temporary immunity

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Highlights

- Malaria model with standard incidence rate exhibits the backward bifurcation.
- Backward bifurcation does not occur in malaria model with nonlinear incidence rate.
- Global stability analysis is based on constructing a Lyapunov function.
- Sensitivity analysis of model parameters is helpful to design control strategies.

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