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# TWO-STRAIN DENGUE MODEL WITH A CONSTANT RECRUITMENT RATE

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**ABSTRACT**

In this talk, we examine a two–strain dengue model that captures the interactions between human and mosquito populations. The model incorporates vertical transmission of the virus from adult mosquitoes to their offspring and possibility of reinfection with another dengue strain. We assume that the recruitment rate for susceptible larval mosquitoes is constant which allows us to show the local stability of the disease-free and endemic equilibria, the existence of different two–strain stationary states and global stability of disease–free equilibrium. Additionally, we present numerical simulations to support our findings.