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Modeling the transmission dynamics of dengue in the presence of Wolbachia with delay differential euquations

Dengue is a serious concern in many parts of the world and dengue prevention relies primarily on vector control but the failure of traditional methods has promoted the development of novel entomological approaches, such as the intracellular bacterium Wolbachia to control mosquito populations, which has gained significant interest as a potential agent of dengue control in the last decade. Here, a system of delayed differential equations is developed to illustrate the efficiency of Wolbachia intervention.