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Global Dynamics of A Time-Delayed Reaction and Diffusion Malaria Model

In this talk, I will report our recent research on a vector-bias malaria model with incubation period and diffusion. We first prove the global stability of the disease-free or endemic equilibrium for the spatially homogeneous time-delayed system. Then we establish the threshold dynamics for the spatially heterogeneous system in terms of the basic reproduction ratio. We also obtain a set of sufficient conditions for the global attractivity of the positive steady state. This talk is based on my joint work with Zhiting Xu.