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*A Generalized Stochastic SEIRS Epidemic Dynamic Model for Vector-borne Diseases with three Distributed Delays and Nonlinear Incidence.*

A general stochastic SEIRS triple delay epidemic dynamic model for vector-borne diseases with nonlinear incidence rate is presented. Two of the distributed delays account for the varying incubation period of the infectious agent in the vector and host, and the third distributed delay accounts for the varying immunity period to the disease. Furthermore, the disease dynamics is influenced by random environmental perturbations in the disease transmission and natural death processes. The basic reproduction number-both in the presence and absence of noise are computed. In addition, the stochastic asymptotic properties of the system- asymptotic stability of the equilibria and asymptotic behavior of the system in the neighborhood of equilibria are presented. Moreover the stability results are exhibited in several real life scenarios and the significance of the results are presented. Numerical simulation results are presented. (Received September 13, 2016)