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Yuncheng You* (you@mail.usf.edu), 4202 East Fowler Avenue, Tampa, FL 33620. *Stochastic Viral Dynamics with Beddington-DeAngelis Response.*

Stochastic viral dynamics modeled by stochastic differential equations with Beddington-DeAngelis functional response and driven by white noise will be presented. The stochastic positive invariance and the existence of stationary distribution are proved. Through estimation of the pathwise and asymptotic moment upper bounds, the moment Lyapunov exponent is shown to be nonpositive when the noise intensities are relatively small. Then the persistence and extinction will be discussed. (Received July 11, 2017)