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Wenjing Zhang* (wenjing.zhang@ttu.edu), **Lindi Wahl** and **Pei Yu**. *Recurrent Viral Infection May Need No Exogenous Trigger*.

Recurrent viral infection is characterized by short episodes of high viral reproduction separated by long periods of relative quiescence. This recurrent pattern is observed in many persistent infections, including the “viral blips” observed during chronic HIV infection. Previous works model viral blips by incorporating either stochastic components or forcing terms as immune stimulation. We present an established 4-d HIV antioxidant-therapy model which exhibits viral blips, take advantage of dynamical systems theory and bifurcation theory to reinvestigate the 4-d model, and show that an increasing, saturating infectivity function contributes to the recurrent behavior. A hypothesis for the existence of viral blips in a deterministic in-host infection model is proposed and employed to derive the simplest (2-d) blips-generating infection model. The corresponding paper, titled *Viral Blips May Not Need a Trigger: How Transient Viremia Can Arise in Deterministic In-Host Models*, was published in *SIAM Review* in 2014. (Received September 15, 2016)