

1155-92-530

Libin Rong* (libinrong@ufl.edu), Department of Mathematics, University of Florida,
Gainesville, FL 32611. *Modeling the role of macrophages in HIV persistence*. Preliminary report.

HIV preferentially infects activated CD4+ T cells. Current antiretroviral therapy cannot eradicate the virus. Viral infection of other cells such as macrophages may contribute to viral persistence during antiretroviral therapy. In this talk, we will study the dynamics of macrophage infection. In addition to cell-free virus infection, macrophages can also get infected during the engulfment of infected CD4+ T cells as innate immune sentinels. I will also introduce a new HIV model that includes the infection of CD4+ T cells and macrophages via cell-free virus infection and cell-to-cell viral transmission. We will show the analysis of the model and discuss the roles of macrophages in HIV persistence during treatment. (Received January 21, 2020)