

1146-92-480

Libin Rong* (libinrong@ufl.edu), Department of Mathematics, Gainesville, FL 32611.

Modeling HIV cell-to-cell transmission. Preliminary report.

HIV infection persists despite long-term administration of antiretroviral therapy. The mechanisms underlying HIV persistence are not fully understood. Direct viral transmission from infected to uninfected cells (cell-to-cell transmission) may be one of them. During cell-to-cell transmission, multiple virions are transmitted to an uninfected cell, making it possible that at least one virion can escape HIV drugs and establish infection. In this talk, I will develop a few mathematical models that include cell-to-cell viral transmission to study HIV dynamics under therapy. I will show the mathematical and numerical results of the models and discuss the contribution of cell-to-cell transmission to viral persistence. (Received January 28, 2019)