

Modeling HIV cell-to-cell transmission

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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 discuss 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.

*Mini-Symposium: Disease Modelling - from Within Host to Population