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Sergei S. Pilyugin* (pilyugin@ufl.edu), Department of Mathematics, University of Florida, Gainesville, FL 32611, and **Cameron J Browne** (cameron.j.browne@vanderbilt.edu), Department of Mathematics, Vanderbilt University, Nashville, TN 37240. *Within-host virus model with multidrug therapy: optimizing the treatment.*

In this talk, I will review the basic mathematical properties of within-host viral models starting with the classical model proposed by De Boer, Kirschner, and Perelson. I will discuss the general dynamics of the model, and some of the model modifications accounting for alternative routes of viral transmission. Then I will discuss the effect of antiviral treatments both time-independent and time-periodic and investigate the question of optimal timing for administering different components of periodic multidrug therapy. (Received February 02, 2015)