



# NIMBioS

National Institute for Mathematical  
and Biological Synthesis

## **“Modeling Control of Viral Infections by CD8 T Cell Responses”**

**Dr. Vitaly Ganusov  
NIMBioS Faculty  
UT Department of Microbiology**

**Tuesday, February 23, 2010  
3:30 pm, Room 403  
NIMBioS Building, 1534 White Ave.**

**Mathematical modeling is an emerging field of current immunology. In my talk, I will discuss recent advances in understanding the dynamics of CD8 T cell response to viral infections and role that CD8 T cells play in the control of virus replication. Using a novel technique of in vivo cytotoxicity, I will illustrate how the use of mathematical models can allow to estimate the killing efficacy of activated effector and resting memory CD8 T cells in vivo and can help predict the level of memory CD8 T cells required to provide sterilizing immunity against a viral infection. I will also outline other areas of research that will take place in my laboratory including the program of CD8 T cell responses to viruses and the dynamics of acute HIV infection.**

***\*Join us for refreshments in the NIMBioS Lobby at 3 pm***