CDB SEMINAR

Speaker: Ellen Robey

< Assoc. Prof. of Immunology, Dept. of Molecular and Cell Biology>

Title: "Dynamics of Cellular Interactions During T Cell Recognition in 3-Dimensional Tissue Visualized by Two-Photon Microscopy"

Date: Tuesday, May 13
Time: 16:00 P.M.～17:30 P.M.
Place: 7th floor Conference Room, CDB

Summary：

The adaptive immune response begins in lymph nodes when T cells recognize pathogen-derived peptides bound to MHC proteins displayed on the surface of other cells. Similarly, the development of T cells in the thymus depends upon the recognition of self-peptides bound to MHC proteins displayed on the surface of thymic support cells. We have begun to use 2-photon microscopy to examine T cell and thymocyte behavior during peptide-MHC recognition in 3-dimensional tissue environments. We find that thymocytes and T cells are extremely motile prior to peptide-MHC recognition, and that peptide-MHC recognition can result in both stable, monogamous cell-cell contacts as well as dynamic, short-lived, sequential contacts. The implications of these results for T cell signaling and development will be discussed.

Bousso, P, Bhakta, N., Lewis, R. and Robey, E (2002) Dynamics of thymocyte-stromal cell interactions visualized by 2-photon microscopy. Science, 2002 Jun 7;296(5574):1876-80

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