## 中国科学院分子病毒与免疫重点实验室学术报告 CAS Key Laboratory of Molecular Virology & Immunology

## Guest Seminar

## Transcriptional regulation of T cell quiescence

10:00-11:30 AM, Dec.3, 2012 @ Room 402, Institut Pasteur of Shanghai

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**Host**: Prof. Dongming Zhou

Abstract: Forkhead box (FOX) proteins are a large family of transcription factors with diverse functions in development, cancer and aging. Foxp1 is a member of the 'Foxp' subfamily. Recently, using an inducible deletion model system, we have identified Foxp1 as an essential regulator for maintaining the quiescence of naive T cells during homeostasis. The finding provides direct evidence that lymphocyte quiescence is actively maintained by mechanisms that include transcriptional regulation. Much of our understanding of molecular mechanisms regulating immune responses is centered on pathways and processes that promote cell activation, division and differentiation. Now our study demonstrates that cell-intrinsic signaling pathways are required to maintain mature T cells in a quiescent state; if these pathways are disrupted, resting T cells become aberrantly activated to homeostatic cytokine signals even in lympho-replete hosts in the absence of antigen challenge. The study opens many new avenues of investigation to understand T cell quiescence, homeostasis, activation, and long-term memory.



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