NANYANG TECHNOLOGICAL UNIVERSITY

School of Biological Sciences

SBS Seminar Announcement

Molecular pathways for positive selection of primary autoreactive and nonautoreactive B cells

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Abstract
The intrinsic function of B cells, whether they participate in physiological responses against microbes or in pathological responses against self-tissues, depends on the specificity of the antibody they express. The majority of the millions of B cells we make every day are autoreactive (i.e., they bind a self-antigen) and the presence of these cells in the circulating pool is associated with autoimmune diseases and malignant tumors. However, the presence of cross-reactive and slightly autoreactive B cells appears to aid also antibody responses toward certain infections. My lab investigates the molecular pathways that govern the entry of newly generated B cells into the mature pool in healthy and autoimmune conditions and, therefore, set the individual primary B cell and antibody repertoire. We have identified pathways that promote the positive selection of nonautoreactive B cells into the periphery and that can also drive the selection of autoreactive B cells. We propose and investigate a novel model of B cell selection that contrasts that of Burnet based on negative selection and operates instead based on positive selection circuits.

Thursday, 26 Sep 2013 11.00am to 12.00pm SBS Classroom 7 (SBS-B1n-17)

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