SIgN Immunology Seminar

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Natural Killer cells, Innate Lymphoid cells and Immunity

Host
Dr Francesca Zolezzi
Singapore Immunology Network, A*Star

Date
Friday,
19 July 2013

Time
11am – 12pm

Venue
SIgN Seminar Room
Immunos Building
Level 4
Biopolis

The Natural Killer (NK) cell detection system includes a variety of cell surface activating and inhibitory receptors, the engagement of which regulates NK cell activities. Thus, the integration of antagonistic pathways upon interaction with neighboring cells governs the dynamic equilibrium regulating NK cell activation and dictates whether or not NK cells are activated to kill target cells. Among NK cell activating receptors, NK cell express the Natural Cytotoxicity Receptors (NCR), which have been shown since more than a decade to be involved in the activation of NK cells by tumor cells. The NCR family includes NKp46, NKp44 and NKp30. We will present data that document the regulation of expression of the NKp30 ligand B7-H6. We will also illustrate how the precise understanding of NK cell tuning is pivotal for the development of innovative therapeutic strategies based on the manipulation of NK cell immunity. Finally, we will review the features of the emerging family of Innate Lymphoid Cells (ILCs) to which NK cells belong.