Novel signalling pathways in T-cell immunity and immunotherapy

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Abstract
Professor Rudd's research focuses on deciphering the signal transduction pathways in T-cells, and the way by which these pathways control various aspects of T-cell function. His laboratory was the first to discover the CD4 and CD8-p56lck complexes, the initiators of the phosphorylation and activation cascade in T-cells. His more recent focus has been to uncover the pathway that regulates 'inside-out' pathway for T-cell adhesion and the movement of T-cells in lymph nodes, a pathway involving phospho-tyrosine substrates, adhesion- and degranulation-promoting adapter protein (ADAP) and src kinase-associated phosphoprotein (SKAP1). SKAP1 accounts for the inside out pathway that controls the T-cell ‘stop-signal’ for an interaction with antigen-representing cells. A second area of interest concerns the mechanisms by which co-receptors such as CD28 and CTLA-4 and the intracellular pathways that control PD-1 expression and their relevance to cancer immunotherapy and infection.

Selected Publications


