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Mechanisms of T-cell activation versus tolerance

This lecture is designed to provide a background of recent advances in our understanding of immunological tolerance. The result of T-cell activation depends on the stage of T-cell development, strength of signal via the T-cell receptor (TCR) and context. Context is influenced by the environment and results in the receipt of additional signals via co-stimulatory, cytokine and other receptors. These signals combine to dictate the fate of the T-cell, i.e. is it to be deleted or rendered anergic/suppressive or is it to differentiate into an effector cell and, if so, what type of cell.

The lecture will be illustrated with results from our laboratory focusing on the influence of signal strength and the role of negative co-stimulatory molecules on both thymic and peripheral tolerance.

References

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