CD4+ T Cells

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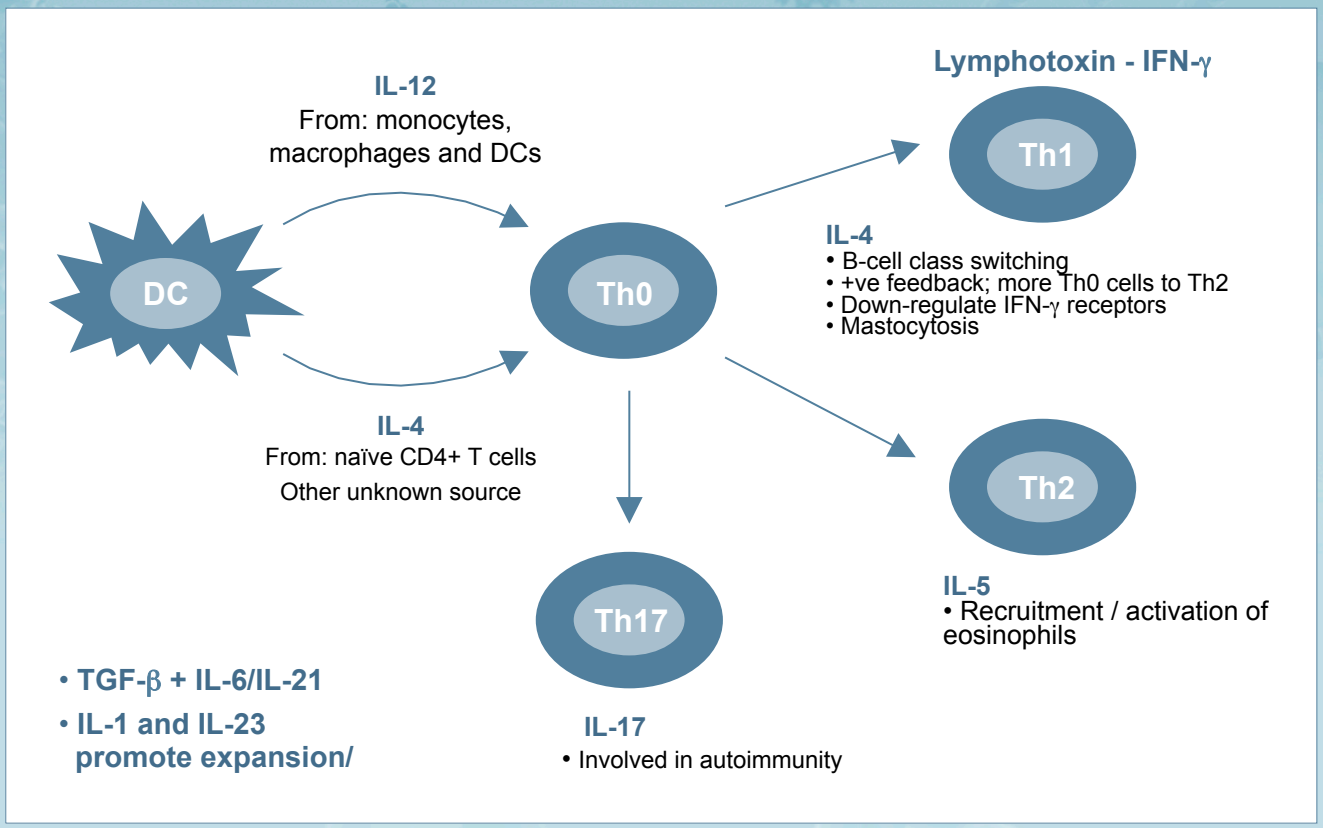
Th1/Th2 cells

Th1-polarised cells are responsible for control of intracellular pathogens such as viruses and some bacteria. **IL-12** and **IFN-γ** are important cytokines involved in Th1 responses, and the intracellular transcription factors **T-bet** and **STAT-4** are essential for Th1 cell differentiation and function. Th2 polarised cells are important in the defence against large extracellular organisms such as helminths, utilising cytokines such as **IL-4**, **IL-5** and **IL-13**, promoting eosinophilia, mastocytosis and goblet cell hyperplasia. **Gata-3** and **STAT-6** are essential for Th2 cell differentiation and function.



Allergy/Autoimmunity

If the Th1/Th2 balance is disturbed there can be severe consequences. Asthma and allergy are Th2-driven and some autoimmune diseases, such as type 1 diabetes and multiple sclerosis are Th1-driven.

Th17 cells

This is a recently discovered T helper cell subset, characterised by its production of **IL-17**. **IL-23** promotes the expansion of these cells and Th17 cells have been linked to several inflammatory conditions such as arthritis and IBD.

Treg cells

Regulatory T cells are a subpopulation of cells that maintain homeostasis and tolerance within the immune system. Subsets include inducible Tregs, $CD25^{+}CD45RB^{lo}$ Tregs etc.

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