

## Regulation of IL-10 Expression by Dendritic Cells, Macrophages and T cells and Implications for Regulation of the Immune Response to Pathogens

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Interleukin (IL)-10, a cytokine with anti-inflammatory properties, is well known to play a key role in infection by limiting the immune response to the pathogen and therefore prevent damage to the host. In the absence of IL-10, the immune response mounted against infectious pathogens can be over exuberant, leading to a better clearance of the pathogen, however this is accompanied by immunopathology, which is detrimental to the host. IL-10 is expressed by many cell types of the innate and adaptive immune response, suggesting that this cytokine may play a role at different stages and possibly different anatomical locations to inhibit inflammatory pathologies. In recent years, an increasing interest on the regulation of IL-10 gene expression has revealed some of the molecular mechanisms involved, at the level of chromatin remodelling, signal transduction and transcription factors. I will discuss our recent findings on the events that regulate the expression of IL-10, in dendritic cells, macrophages and T cells, and discuss the implications of IL-10 function in the regulation of the immune response to infectious pathogens. This is important for the design of new strategies for therapeutic intervention in dampening inflammatory pathologies or conversely enhancing immune responses to infectious pathogens.

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