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Emerging role of IL-35 in inflammatory autoimmune diseases

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Abstract

Interleukin 35 (IL-35) is the recently identified member of the IL-12 family of cytokines and provides the possibility to be a target for new therapies for autoimmune, inflammatory diseases. It is composed of an α chain (p35) and a β chain (EBI3). IL-35 mediates signaling by binding to its receptors, activates subsequent signaling pathways, and therefore, regulates the differentiation, function of T, B cells, macrophages, dendritic cells. Recent findings have shown abnormal expression of IL-35 in inflammatory autoimmune diseases, such as systemic lupus erythematosus, rheumatoid arthritis, inflammatory bowel disease, multiple sclerosis, type 1 diabetes, psoriasis, multiple sclerosis, autoimmune hepatitis, experimental autoimmune uveitis. In addition, functional analysis suggested that IL-35 is critical in the onset and development of these diseases. Therefore, the present study will systematically review what had been occurred regarding IL-35 in inflammatory autoimmune disease. The information collected will help to understand the biologic role of IL-35 in immune cells, and give information about the therapeutic potential of IL-35 in