

Scavenger Receptor BI Targeting for the Treatment of Infection, Sepsis and Inflammation

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Technology description

Proinflammatory bacterial cell wall components including lipopolysaccharide (LPS), lipoteichoic acid (LTA) and peptidoglycan (PGN) are major factors determining the development, progression and outcome for a number of infectious diseases. Chaperonin 60 (spn60), another bacterial component, and its human ortholog heat shock protein 60 (hsp60), also play an important role in inflammatory diseases such as arthritis and lupus erythematosus. This invention relates to the discovery that peptides with an amphipathic helical motif block cellular uptake of LPS (lipopolysaccharide) and proinflammatory responses induced by LPS, LTA (lipoteichoic acid), bacterial cpn60 (Chaperonin 60) and human hsp60 (heat shock protein 60) in vitro.

Application area

These observations suggest that agents with an amphipathic motif targeting SR-BI (scavenger receptor class B type I) could potentially be used to treat sepsis, bacterial and viral infections and inflammatory diseases where LPS, LTA, viral envelope proteins, and/or heat shock proteins contribute to pathogenesis.

Institution

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