Curcumin as a therapeutic candidate for multiple sclerosis: Molecular mechanisms and targets



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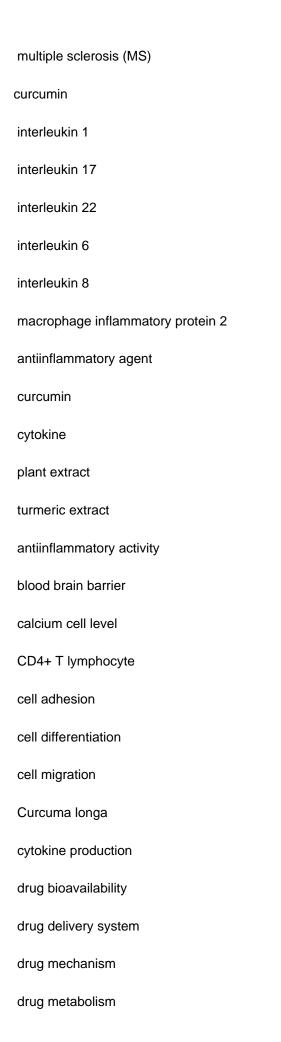
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Multiple sclerosis (MS) is a disease that has shown a considerable increase in prevalence in recent centuries. Current knowledge about its etiology is incomplete, and therefore it cannot be managed optimally utilizing targeted therapeutic regimens at each stage of the disease. MS progresses in different stages, beginning with a cascade of inflammation. The pivotal spark to initiate this cascade seems to be the migration of Th17 into the central nervous system across the blood?brain barrier (BBB) through the disrupted tight junctions. Coupling of interleukin (IL)-17 and IL-22 to their receptors in the BBB layer facilitates this migration. Subsequently, axon degeneration and the various manifestations of nerve?muscle disorders appear. Curcumin, a major component of turmeric, is derived from Curcuma longa, which belongs to the Zingiberaceae family. Numerous properties of curcumin have been identified recently, some of which can be effective in the treatment of MS, particularly the anti-inflammatory properties via inhibition of secretion of proinflammatory cytokines. In this paper, we will review the various properties and key effects of curcumin for the treatment of MS. © 2018 Wiley Periodicals, Inc.

curcumin

immune system

inflammation



Humans
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Curcumin

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