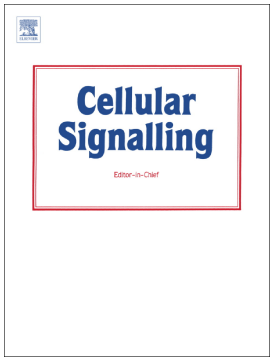

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Hepatic stellate cell interferes with NK cell regulation of fibrogenesis via curcumin induced senescence of hepatic stellate cell

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Abstract

Hepatic fibrosis, a common scarring response to various forms of chronic liver injury, is a precursor to cirrhosis and liver cancer. During liver fibrosis, hepatic stellate cells (HSCs) initially activate and proliferate, which are responsible for the secretion of extracellular matrix components. However, these cells eventually senesce and are cleared by natural killer (NK) cells. Our previous researches have shown that the natural product curcumin could promote the senescence of activated HSC. In this study, we investigated how NK cells target senescent HSC and assessed the effect of this process on liver fibrosis. We found that senescent HSC induced by curcumin are susceptible to NK cells killing, due to the increased expression of NK cell activating ligand major histocompatibility complex class I chain-related genes A (MICA) and