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[\[PDF \(1928K\)\]](#) [\[References\]](#)**Regulation of cell migration and cytokine production by HGF-like protein (HLP) / macrophage stimulating protein (MSP) in primary microglia**Yoshinori SUZUKI¹⁾, Hiroshi FUNAKOSHI¹⁾, Mitsuru MACHIDE¹⁾, Kunio MATSUMOTO¹⁾²⁾ and Toshikazu NAKAMURA¹⁾

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ABSTRACT

HGF-like protein (HLP)/macrophage stimulating protein (MSP) is the only structural relative of hepatocyte growth factor (HGF), and is involved in the regulation of peripheral macrophage activation. However, the actions of HLP in microglia, a species of macrophage in the nervous system, which is closely involved in the neural degeneration and regeneration, is not yet understood. This study found that Ron, the receptor for HLP, is expressed in primary microglia using RT-PCR, immunocytochemical staining and Western blotting, and, thus, sought to elucidate the function of HLP on the primary microglia. HLP promoted microglial migration without affecting cell survival and proliferation. Furthermore, real-time quantitative RT-PCR analysis revealed that HLP greatly increased the mRNA of inflammatory cytokines, including IL-6 and GM-CSF, and iNOS. These findings provide the first evidence that HLP has the potential to modulate inflammatory actions of microglia, which proposes novel aspects for the process of degeneration and/or regeneration of the brain.

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