Effects of Coriolus versicolor polysaccharide B on monocyte chemoattractant protein 1 gene expression in rat.

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AIM: To investigate the effect of Coriolus versicolor polysaccharide B (CVPS-B), a new water-soluble component of polysaccharides from the fungus Coriolus versicolor (Fr) L on monocyte chemoattractant protein-1 (MCP-1) gene expression in rat splenocytes. METHODS: Expression of MCP-1 mRNA in rat splenocytes was examined by reverse transcription-polymerase chain reaction (RT-PCR) with beta- actin as an internal standard. Sequencing of RT-PCR products was performed to confirm their specificity in MCP-1 gene composition. RESULTS: (1) Without pre-treatment of lipopolysaccharide (LPS), the relative MCP-1 mRNA expression ratios (MCP-1/beta-actin) for the saline control group and for CVPS-B groups in 3 different doses (10, 20, and 30 mg . kg-1 . d-1, ip, for 4 d) were 1.4 +/- 0.3, 1.6 +/- 0.4, 1.7 +/- 0.5, and 1.5 +/- 0.4, respectively ($P > 0.05$); (2) LPS (10 microg . kg-1, ip) enhanced the expression of MPC-1 mRNA by the ratio of 114 %; (3) pre-treatment with CVPS-B of 4 different doses (5, 10, 30, and 50 mg . kg-1 . d-1, ip, for 4 d) decreased the LPS induced expression of MPC-1 mRNA by the ratios of 51 %, 70 %, 84 %, and 99 %, respectively ($n = 6$). CONCLUSION: In a dose-related fashion, CVPS-B inhibited the expression of MCP-1 mRNA induced by LPS in the rat splenocytes, but did not significantly affect the expression of MPC-1 mRNA in the normal rat.