

## **Anti-inflammatory Effects of *Kochiae Fructus* Extract on LPS-stimulated Raw 264.7 Cells**

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*Kochiae Fructus* is a medicinal plant used as medicine of the urinary organs, skin disease and inflammation. In this study, anti-inflammatory activity of *Kochiae Fructus* extract and its possible mechanisms of action were examined. The anti-inflammatory activity was investigated by inhibition of lipopolysaccharide (LPS) induced nitric oxide (NO), pro-inflammatory cytokine production and matrix metalloprotease-9 (MMP-9) in murine macrophage-like cell line Raw 264.7 cells. The measurement of the induced pro-inflammatory cytokine levels were carried out by ELISA. The phosphorylation of ERK1/2, JNK and MAPK and the nuclear expression of nuclear factor NF- $\kappa$ B p65 were investigated by Wesern blot analysis. The extract suppressed the phosphorylation of ERK1/2, JNK, and p38 MAPK, and the nuclear translocation of NF- $\kappa$ B p65 in activated cells. As a result, we suggest that the extract of *Kochiae Fructus* decreased the production of pro-inflammatory cytokines (TNF- $\alpha$ , IL-6), nitric oxide, MMP-9 in LPS-induced Raw264.7 cells. *Kochiae Fructus* has possibility to be used as therapeutic benefits against inflammatory diseases.

**Key words:** *Kochiae Fructus*, Inflammation, LPS