

Anti-inflammatory Activity of Licorice Varieties on Inflammatory Responses in LPS-induced RAW 264.7 Macrophages

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Licorice species (*Glycyrrhiza* species) are perennial plants belonging to the Leguminosae family. Licorice is world-widely distributed in Asia, Europe, and the Americas. The licorice species, such as *Glycyrrhiza uralensis* (*G. uralensis*) and *G. glabra*, have been widely used in traditional oriental medicine. *G. uralensis* is found in Central Asia to the northeastern part of China and *G. glabra* is distributed from southern Europe to the northwestern part of China. These licorice species are characterized by having various pharmacological activities, including anti-oxidant, anti-inflammatory, immune improvement, and anti-tumor effects. In this study, we investigated the comparative anti-inflammatory effects of four licorice varieties (*G. glabra* L., *G. uralensis* FISCH., Shinwongam, and Wongam) on LPS-induced inflammatory responses in RAW 264.7 macrophage cell line. We evaluated the cytotoxicity of licorices at various concentrations. In addition, the nitric oxide (NO) production was elucidated by the treatment of licorice.

Key words: Licorice, Wongam, RAW 264.7 cell, Anti-inflammatory effect, Nitric oxide.

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