Anti-inflammatory activity of Nanji- and Hanji-garlic in lipopolysaccharide-treated RAW 264.7 macrophage

Soon Ah Kang[1], Ji-Young Han[1], Ki-Hyo Jang[2], Jin-Sook Kim[3], Hye-Kyung Chun[3], Yoongho Lim[1]

[1]Bio/Molecular Informatics Center, Konkuk University.

[2]Dept. of Food & Nutrition, Samcheok National University.

[3]Rural Resources Development Institute NIAST, RDA.

TEL: +82-2-450-3760, FAX: +82-2-453-3761

Abstract

Garlic hasbeen used as a traditional medicine to prevent thrombosis, inflammation, and cellular oxidative stress. Many studies show that garlic protects against infection and inflammation, lowers the risk of heart disease, and has anticancer and anti-aging effects. A recent report suggested that aqueous garlic extract might exert its chemo-preventive effect by inducing inflammation. The purpose of this study was to investigate the effects of the extracts of Nanji-garlic and hanji-garlic on the anti-inflammatory activity in lipopolysaccharide-stimulated RAW 264.7 macrophage. High amount of nitric oxide (NO) from iNOS and high amount of prostagrandin E2 (PGE2) derived from COX-2 induced by many pro-inflammatory mediators including tumor necrosis factor-α (TNF-α), interleukin-1ß (IL-1ß), and lipopolysaccharide (LPS) has been implicated in the pathogenesis of sepsis and inflammation. The anti-iflammatory effect of Nanji-garlic and Hanji-garlic is associated with the induction of NO, PGE2, TNF-α, and IL-1ß in lipopolysaccharide-stimulated RAW 264.7 macrophage. These results suggest Nanji-garlic extracts inhibit the induction of NO, PGE2, TNF-a, and IL-1ß more than Hanji-garlic.

Reference

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