

## ***The anti-inflammatory effect of *Gryllus bimaculatus* extract***

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### ***Abstract***

Obesity is closely related with chronic ‘inflammation’ which is distinguished by the following characters: abnormal cytokine production, increased acute-phase reactants and other mediators. Evaluation of proinflammatory cytokines also occurs in chronic infections. This study was aimed to investigate assessment of fatty acid composition, and anti-inflammatory effects of *Gryllus bimaculatus* using RAW 264.7 cell. 76.14% of total fatty acid corresponded to unsaturated fatty acids, with oleic acid as the most abundant in *Gryllus bimaculatus*. There were not cytotoxicity at the level of 100, 200, 500, and 1,000 µg/mL of *Gryllus bimaculatus* water extract on the RAW 264.7 cell. Freeze dried *Gryllus bimaculatus* water extract (FDWGB) significantly decreased nitric oxide (NO) production of RAW 264.7 cell induced LPS(lipopolysaccharide) in a dose dependent manner. And also FDWGB suppressed the expression of TNF- $\alpha$ , IL-1b and interleukin-6 (IL-6) dose-dependently. Therefore these results showed that *Gryllus bimaculatus* has the potential to be an anti-inflammatory food to improve immunity.

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### ***Biography:***

Jung Soon Han has completed his PhD from Korea University and postdoctoral studies from Health Science Center of School of Medicine in Texas. I am research professor of College of Education, Research Institute of Human Ecology.