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Short-term effects of *Ulmus macrocarpa* Hance extract on immune function biomarkers in healthy adults: A randomized, double-blinded, placebo-controlled trial

Ulmus macrocarpa extract has been shown to have immune-related effects in animals, but no studies have yet been performed in human. This randomized, double-blind, placebo-controlled trial was conducted to determine the effect of short-term administration of *Ulmus macrocarpa* Hance extract (UME) on immune function biomarkers and as it has safety in human subjects. 58 subjects were randomly assigned to a UME group or a placebo group. Subjects in the UME group were administered 500 mg per day of UME orally for 4 weeks. Natural killer (NK) cell activities, cytokine assays and several biomarkers of safety were examined at baseline, 1 week and 4 weeks after study commencement. In results, no difference was observed between the UME and placebo groups in terms of NK cell activities or peripheral white blood cell counts. However, mean fluorescence intensity (MFI) of tumor necrotic factor- α increased only in the UME group at 1 week ($P=0.027$). The MFI of interleukin-2 decreased less significantly in the UME group than in the placebo group at 1 week ($P=0.028$). In conclusion, administration of UME for 1 week increased serum TNF- α and sustains IL-2 in human, which suggests UME increases Th1-related immune function in the short-term in healthy people. However, additional studies are needed to confirm the results of this first-stage study and further trials are required to decide on optimal dosage and duration of administration.

Biography

Sang Yeoup Lee has completed his MD and PhD from Pusan National University School of Medicine. He has published more than 50 papers in reputed journals.

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