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Anti-inflammatory effect of pork extract on BALB/c mice by splenocyte proliferation and Th1/Th2 cell cytokine modulation

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The anti-inflammatory effects of boiled pork meat (BPM) and water extract of pork meat (WPM) on splenocyte proliferation, and T cell cytokine regulation in BALB/c mice was evaluated. The proliferation of splenocyte in high concentration WPM groups was significantly higher than the control stimulated by LPS and Con A. In the white blood cells, WPM groups had significantly higher counts of lymphocytes and lower counts of neutrophils than the control ($p < 0.05$). The Th1 (IFN- γ , TNF- α , IL-2) and Th2 (IL-4, IL-5, IL-10) cytokine levels in high-concentration WPM groups were higher than those in the control. In addition, TNF- α /IL-10 and IL-2/IL-4 secretions of splenocytes in the high concentration WPM group with LPS or Con A treatment was significantly lower than the control ($p < 0.05$). Therefore, this study suggested that WPM had anti-inflammatory effects, which may suggest that pork meat can enhance the immune system.

Biography

Aera Jang is working as an Associate Professor of Kangwon National University in Korea. She was a Visiting Researcher at Rowett Research Institute, Aberdeen, UK. She has completed her MSc and PhD at Seoul National University and worked as a Research Scientist from 2007 to 2012 at National Institute of Animal Science, RDA in Korea. She has published more than 60 papers in reputed journals and received academic awards from Korean Society for Food Science of Animal Resources (KoSFA) and has been serving as Editor of KoSFA.

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