

**【P3-27】****Effect of *Sorghum bicolor* L. Moench(*Sorghum, Su-Su*) on Mouse Immune Cell Activation**

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*Sorghum bicolor* L. Moench(*Sorghum, Su-Su*) is a major cereal food crop used in many parts of the world. It is used as a human food resource and folk medicine in Asia and Africa. The stem of *Sorghum* has been used as a digestive and antidiarrheal agent. *Sorghum* hybrids contain high levels of diverse phenolic compounds that may provide health benefits. High levels of polyflavanols, anthocyanins, phenolic acids, and other antioxidant compounds have been reported in *Sorghum*. Also *Sorghum* have shown to possess various biological activities such as antimutagenic, anticarcinogenic effect and HMG-CoA reductase inhibitory activity.

We previously reported that in vitro water extract of *Sorghum* supplementation enhanced the splenocytes proliferation compared to the control group. In order to elucidate the ex-vivo immunomodulative effects of *Sorghum*, six to seven weeks old mice(balb/c) were fed ad libitum on chow diet and water extract of *Sorghum* was orally administrated every other day for four weeks at two different concentrations(50 and 500mg/kg b.w.). After preparing the single cell suspension, the proliferation of splenocyte was determined by MTT(3-[4,5-dimethylthiazol-2-y]-2,5-diphenyl tetrazolium bromide) assay. The plaque forming cells(PFC) were counted to evaluate the humoral immune response to sheep red blood cells. After 48hrs of incubation with the mitogen(Con A) stimulation, the mouse splenocyte proliferation was increased at both concentrations than that of control group and the numbers of plaque forming cells(PFC) were also elevated. The result of this study may suggest that supplementation of *Sorghum* extracts may enhance the immune function by regulating the splenocytes proliferation and increasing the number of plaque forming cells(PFC) in mice.