

[P3-39]**Effect of Fagopyrum esculentum Moench(Buckwheat) on Mouse Immune Cell Activation**

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The medicinal botanicals with the longest tradition have shown to possess various biological activities such as enhancement of phagocytosis, cytokine induction, antibody production, induction of the mitogenic activity of splenocytes and antioxidant effects. Fagopyrum esculentum Moench(Buckwheat) has long been used as one of the traditional remedies as well as food source. We previously reported that in vitro supplementation of Fagopyrum esculentum Moench(Buckwheat) extracts enhanced the splenocytes proliferation using water extract compared to the control. In order to elucidate the immunomodulative effects of Fagopyrum esculentum Moench(Buckwheat) water extracts of the plants was orally administered into mice, and the isolated splenocytes was used as experimental model. Six to seven weeks old mice(balb/c) were fed ad libitum on chow diet and water extract of Fagopyrum esculentum Moench(Buckwheat) was orally administered every other day for two weeks at two different concentrations(50 and 500 mg/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 counting(PFC) was used to evaluate the humoral immune response to sheep red blood cells. After 48hrs of incubation with the mitogen (Con A or LPS) 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 Fagopyrum esculentum Moench(Buckwheat) extracts may enhance the immune function by regulating the splenocytes proliferation and increasing the number of plaque forming cells(PFC) in mice.