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### Effects of Job's Tear(Yul-Moo) Extracts on Modulation of Immunocompetence in Mice

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Natural products are increasingly appreciated as a lead for drug discovery and development. A number of investigators have studied various activities of natural products and have found that they have not only nutritional effects but also beneficial properties to cure various diseases and maintain good health. Job's Tear(Yul-Moo) is a grass crop that have long been used in traditional medicine and a nourishing food. Job's Tear has been reported to exhibit anti-inflammatory, stomachic, antiallergic activity, and antispastic effects and has been used in China for the treatment of warts, rheumatism, and neuralgia although its mechanism remains unclear.

Previous results in our laboratory demonstrated that the methanolic extract and water extract of Job's Tear exerted an immune regulatory function on mice cells *in vitro*. The present study was performed to investigate the *ex vivo* effect of Job's Tear on immune function. Seven to eight weeks old mice(balb/c) were fed ad libitum on chow diet and water extract of Job's Tear were orally administrated every other day for 2 weeks at two different concentrations (50 and 500mg/kg b.w.). Proliferation of mice splenocytes and antibody production to sheep red blood cells(SRBC) using hemolytic plague forming cell assay were used to indicate the immune activity. Splenocytes proliferation of Job's Tear with mitogen stimulation such as Con A and LPS was enhanced at 50 mg/kg b.w. concentrations compared to those of control group. In case of antibody production to sheep red blood cells, the number of antibody-secreting cells was increased by administration of 50mg/kg b.w. concentration in mice immunized as a T-dependent antigen. From the present study, Job's Tear water extracts may be suggested to stimulate the mice immune response by enhancing the splenocytes proliferation and the number of plague forming cells.