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Standardized Black Ginseng Extract Improving a Suppressed Immunomodulatory Effect Induced by Heat Stress

Authors : Byung Wook Yang, Jong Dae Park, Wang Soo Shin, Ji-Hyeon Song, Seo-Yun Choi, Boo-Yong Lee, Young Tae Hahm

Abstract : Korean ginseng (Panax ginseng C. A. Meyer) is frequently taken orally as a traditional herbal medicine with ginsenosides as the main pharmacological component in Asian countries, and its use is increasing worldwide. Recently, the increase in global temperature has been reported to cause various kinds of biological disorders induced by heat stress in human. The standardized black ginseng extract (SBGE; KGR-BG1) was developed in our biological screening experiment on the thermo-regulation, whose chemical characteristics were evaluated as ginsenoside Rg1, Rb1, Rg3(S), as well as Re, Rf, Rg2(S), Rh1(S), Rh2(S), and Rg5+Rk1. Heat stress responses such as body weight, food intake, water consumption have been measured when treated with Standardized Black Ginseng Extract (SBGE) in the animal experiment and also, biomarkers. SBGE treated group has been found to inhibit a decrease in body weight, a decrease in food intake and an increase in the water consumption when compared with non-treated group against environmental heat stress. These results suggest that SBGE might have a protective effect against environmental heat stress. And also, the several factors of stress response on the immune system need to be done for further studies and its evaluation is in progress.

Keywords : ginseng, ginsenoside, standardization, heat stress, immunomodulatory effect
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