

## **Phytosterols and Sterolins are Potent Immuno-modulators and Prevent Autoimmune Disorders**

Rice bran is rich in phytosterols and sterolins. These natural non-toxic compounds are potent immuno-modulators and help prevent autoimmune disorders.

Home

Up

Contact Us

## Study 3

### Phytolink - Your information source for Phytochemicals.

**Beta-sitosterol and beta-sitosterol glucoside stimulate human peripheral blood lymphocyte proliferation: Implications for their use as an immunomodulatory vitamin combination.**

**Author: Bouic, P.J.D.; Etebeth, S.; Liebenberg, R.W.; Albrecht, C.F.; Pegel, K.; Van Jaarsveld, P.P.**

**Source: International Journal of Immunopharmacology, vol. 18, no. 12, pp. 693-700, Dec. 1996**

This study reports on a series of in vivo and in vitro studies which clearly demonstrate that the plant sterols and sterolins (B-Sitosterol and its Glucoside, B-Sitosterolin) have immunomodulatory properties. The first experiment performed in vitro demonstrated that sterols and sterolins had a significant proliferative effect on human T-cells. The effect was observed in extremely low concentrations of sterol/sterolins on the order of 1 fentogram which represents only 150 molecules of sterol and 10 molecules of sterolin. The best response was obtained when a 100:1 sterol/sterolin mixture was given. The same study was repeated on a small number of human subjects (8) indicating a T-cell proliferative response from 20% to 920% after 4 weeks on the sterol/sterolin mixture. No increase was observed for the 2 subjects receiving placebos. The peak activity of the sterol/sterolin mixture occurred at 6 hours in the in vitro experiments, indicating an effect in the initial stages of T-cell proliferation and activation of membrane antigens. Another in vitro experiment showed significant increase in the cytokines (immune communication molecule) interleukin-2 and gamma-interferon on the order between 17% and 41%. Another in vitro experiment showed increase in Natural Killer Cell activity for the lysis of experimental cancer cells with the sterol/sterolin mixture. Although sterols and sterolins are poorly absorbed and are not synthesized in the human body, daily intake is required to maintain an optimal immune response. These experiments prove that a 100:1 sterol/sterolin mixture is a potent immunomodulator with important implications for the treatment and restoration of immune dysfunctions.