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## Immunosuppressive activity of fresh juice of *Bambusa vulgaris* young shoots in rats

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There is a resurgent interest in validating the immunomodulatory property of functional foods with the aim of developing immunoceuticals, which are being pursued for the treatment of cancer and autoimmune diseases. Young shoots of Bambusa vulgaris (Bamboo shoots) are best known as a functional food in far eastern countries. In Sri Lankan traditional medicine, young shoots of B. vulgaris is claimed as a remedy against immune disorders. Hence, the present study was undertaken to investigate the immunomodulatory activity of fresh juice of B. vulgaris young shoot (FJBV) using rats. Wistar rats (N=6/group) were orally administered with 3 doses of FJBV -low dose (LD) 0.1mL/200g, human equivalent dose (HED) 0.5ml/200g and high dose (HD) 1 mL/200g- once daily for 2 consecutive days; distilled water served as the control. The HED was determined based on the prescribed traditional dose (30mL/day). Nonfunctional (enumeration of immune cells) and functional (phagocytic index of peritoneal macrophages) immunological parameters were determined at post-treatment using standard methodology. FJBV elicited significant immunosuppressive activity in both nonfunctional and functional immunological assays. Rat platelet counts were significantly reduced by all three doses at post-treatment (P<0.05). Bone marrow cells counts of rats were significantly reduced by both HED and HD (P<0.05) while splenocyte counts were significantly lowered by only HD (P<0.05). Conversely, no significant difference was observed for total and differential counts of white blood cells (P>0.05). Further, the phagocytic activity of rat peritoneal macrophages was significantly (P<0.05) reduced by HD and HED compared to that of the control. Therefore, it seems that fresh juice of B. vulgaris young shoots, when administered orally possesses in vivo immunosuppressive activity in rats. Thus, this study affirmed the immunomodulatory activity of fresh juice of B. vulgaris young shoots.

Keywords: immunomodulation, immunosuppression, Bambusa vulgaris, young shoot

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