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The Immunomodulatory Effects of Baicalein and Wogonin on Murine Splenocytes in Vitro

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Baicalein and wogonin are flavonoids derived from the *Scutellaria baicalensis* which is one of the most popular and multi-purpose herbal medicines or medicinal plants used in oriental countries. Previous studies reported that flavonoid components extracted from *S. baicalensis* have a potent antioxidant action in vivo as well as in vitro. However, little is known about immunomodulation of baicalein and wogonin in vitro. To evaluate the immunomodulatory effect of baicalein and wogonin on murine splenocyte in vitro, we investigated splenocyte blastogenesis by concanavalin A (Con A), anti-CD3, and lipopolysaccharide (LPS). There was a significant decrease in lymphocyte blastogenesis to Con A or anti-CD3 at subtoxic dose of baicalein. A significant decrease in splenocyte blastogenesis to LPS was also observed in baicalein treatment. There was also a significant decrease in lymphocyte blastogenesis to Con A or anti-CD3 at subtoxic dose of wogonin. However, there was no significant decrease in splenocyte blastogenesis to LPS in wogonin treatment. These results indicate that baicalein and wogonin might be able to modulate immune response of spleen lymphocytes in vitro.

Keyword : Baicalein, wogonin, immunomodulation, splenocytes