Reversal of Apoptotic Resistance by *Lycium barbarum* Glycopeptide 3 in Aged T Cells[1]

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Objective To study whether *Lycium barbarum* glycopeptide 3 (LBGP3) affects T cell apoptosis in aged mice. **Methods** LBGP3 was purified with DEAE cellulose and Sephadex columns. Apoptotic "sub-G1 peak" was detected by flow cytometry and DNA ladder was resolved by agarose gel electrophoresis. Levels of IFN-γ and IL-10 were measured with specific kits and mRNA expression was detected by RT-PCR. Apoptosis-related proteins of FLIP, FasL, and Bcl-2 were determined by Western blotting. **Results** LBGP3 was purified from *Fructus Lycii* water extracts and identified as a 41 kD glycopeptide. Treatment with 200 μg/mL LBGP3 increased the apoptotic rate of T cells from aged mice and showed a similar DNA ladder pattern to that in young T cells. The reversal of apoptotic resistance was involved in down-regulating the expression of Bcl-2 and FLIP, and up-regulating the expression of FasL. **Conclusion** *Lycium barbarum* glycopeptide 3 reverses apoptotic resistance of aged T cells by modulating the expression of apoptosis-related molecules.

Key words: *Lycium barbarum* glycopeptide 3; Aged T cells; Cytokines; Apoptosis; Senescence

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