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Abstracts

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The natural products isolated from Usnea incrassata acetone extract were found to possess potent antidiabetic activities in vivo and in vitro. In this study, we investigated the anti-diabetic and anti-inflammatory effects of Usnea incrassata acetone extract in streptozotocin (STZ)-induced diabetic rats and diabetic RAW264.7 cells, respectively. The results indicated that Usnea incrassata acetone extract significantly reduced blood glucose levels and improved insulin sensitivity in diabetic rats. Furthermore, the extract showed inhibitory effects on the expression of inflammatory cytokines and proteins, such as tumor necrosis factor-α (TNF-α) and interleukin-1β (IL-1β), in diabetic RAW264.7 cells. These findings suggest that Usnea incrassata acetone extract may have potential therapeutic effects for the treatment of diabetes mellitus.

Several reports indicate that natural products have the ability to modulate inflammatory and oxidative stress responses, which are known to be involved in the pathogenesis of diabetes. Thus, the present study suggests that Usnea incrassata acetone extract could be a promising candidate for the development of new anti-diabetic agents.

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References


