

**Bavachin from *Psoralea corylifolia* improves insulin-dependent glucose uptake through insulin signaling and AMPK activation in 3T3-L1 adipocytes**

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The fruit of *Psoralea corylifolia* L (Fabaceae) (PC) known as “Bo-Gol-Zhee” in Korea has been used as traditional medicine. Extracts of PC have an anti-hyperglycemic effect by increasing plasma insulin levels and decreasing blood glucose and total plasma cholesterol levels in type 2 diabetic rats. In this study, we found that bavachin accumulated lipids during adipocyte differentiation. Consistently, bavachin activated gene expression of adipogenic transcriptional factors, proliferator-activated receptor (PPAR $\gamma$ ), and CCAAT/enhancer binding protein-1 (C/EBP $\beta$ ). Bavachin also increased adiponectin expression and secretion in adipocytes. Moreover, bavachin increased insulin-induced glucose uptake by differentiated adipocytes and myoblasts. In differentiated adipocytes,

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