Antihyperglycemic effects of paeoniflorin and 8-debenzoylpaeoniflorin glycosides from the root of Paeonia lactiflora.

Hsu FL; Lai CW and Cheng JT

Abstract
Paeoniflorin and 8-debenzoylpaeoniflorin were isolated from the dried root of Paeonia lactiflora Pall. (Ranunculaceae). They produced a significant blood sugar lowering effect in streptozotocin-treated rats and had a maximum effect at 25 min after treatment. This hypoglycemic action was also observed in normoglycemic rats only at 1 mg/kg. The antihyperglycemic activity of 8-debenzoylpaeoniflorin seems lower than that of paeoniflorin. Plasma insulin was not changed in paeoniflorin-treated normoglycemic rats indicating an insulin-independent action. Also, this glucoside reduced the elevation of blood sugar in glucose challenged rats. Increase of glucose utilization by paeoniflorin can thus be considered. There are no previous data showing the hypoglycemic activity of paeoniflorin and/or 8-debenzoylpaeoniflorin in rats.