
Insulinotropic Effect of Herbal Drugs

GLP-1 secretagogue activity of medicinal plants has less side-effects and low cost as compared to GLP-1 agonists of synthetic origin. *Berberis vulgaris*, *Magnifera indica*, *Glycine max*, *Cinnamomum zeylanicum*, *Pinus koraiensis* and *Prunus Africana* have showed potential GLP-1 secretory activity *in vitro* and *in vivo* assay system [1].

Barbery

Root and rhizome (500 mg/kg) of the *Berberis vulgaris* (Berberine) have shown significant effect on insulin secretion; stimulate glycolysis, increase glucose transporter-4 (GLUT-4) and GLP-1 in rat model [8]. Berberine also inhibits dipeptidyl peptidase-4, which usually enhance antihyperglycemic activity.

Bitter melon

Fruit (5000 mg/kg) of the *Momordica chirantia* (Karavilagenin E) orally administered as single dose for 30 minutes and showed higher serum GLP-1 and lower glucose level in WES mice model [9].

Cinnamom tree

Bark (3 gm) of the *Cinnamomum zeylanicum* (Cinnamon)-have shown reduce post prandial serum insulin and increased GLP-1 concentration without significantly affecting blood glucose in human [10].

Korean pine

Seeds (50 mg/dose of each FFA) of *Pinus koraiensis* in human female subjects showed that GLP-1 was higher after 60 minutes of administration [11].

