Abstract

The antihyperglycaemic effect of eight standard flavonoids, previously identified in the ethanol extract of the claimed antidiabetic plant *Genista tenera*, was evaluated on streptozotocin (STZ)-induced diabetic Wistar rats. The aglycones apigenin, chrysoeriol and genistein, the monoglucosides apigenin 7-O-glucoside, luteolin 7-O-glucoside and genistein 7-O-glucoside and the diglycosides rutin and luteolin 7,3′-di-O-glucoside were administered i.p. for 7 days (4 mg/kg b.w./day). The protective effect of these compounds over liver and kidneys of STZ-diabetic models was also evaluated by the determination of seric AST, ALT and urea levels. After 7 days of treatment, apigenin, chrysoeriol and genistein significantly lowered the blood glucose levels of diabetic animals; this effect was more pronounced (P < 0.01) in the oral glucose tolerance test. Glucose tolerance was also significantly improved in the rutin (P < 0.01) and in the genistein 7-O-glucoside (P < 0.05) treated groups. In addition, almost all the tested compounds effectively protected the liver and kidneys against STZ-induced damage in rats.

Keywords:

flavonoids; antihyperglycaemic effect; liver protection; kidney protection; *Genista tenera*