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1 – Escola Superior Agrária de Santarém, Instituto Politécnico de Santarém, Apartado 310 ; 2001-904 SANTARÉM, PORTUGAL

## **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*