

ABSTRACT

The flavonoid contents of intact tubers and cell culture media were determined and physiological activities of *Pueraria mirifica* extracts were investigated. The total flavonoid contents from cell culture media (PMC) were higher than from tubers (PMT). Results from *in vivo* estrogenic activity assays indicated that PMT had a strong estrogenic activity in ovariectomized rats. The same amount of PMC exhibited a weak activity. *In vitro* osteoclast suppression investigations indicated that both PMT and PMC extracts exhibited anti-osteoclastogenic activities with low toxicities in a standard test cell line. Determination of the antioxidant potential using the DPPH assay revealed that the IC₅₀ value for PMT was lower than for PMC. *P. mirifica* cell cultures produce more flavonoids and exhibit a mild estrogenic and more antioxidant activities than tubers.