S14-1 Search for Anti-obese and Antidiabetic Constituetns from Several Medicinal Foods

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During the course of our characterization studies on bioactive constituents from medicinal foods, we characterized anti-hyperlipidemic constituents the flowers of *Bellis perennis* and antidiabetic constituents from the flowers of *Poacynum hendersonii*.

Bellis perennis **:** The methanolic extract from the flowers of *B. perennis* was found to suppress serum triglyceride elevation in olive oil-treated mice. Through the bioassay-guided separation, several acylated oleanane-type triterpene saponins were isolated as active constituents. However, desacyl-saponins did not show anti-hyperlipidemic activity, so that the acyl moiety seems to be essential for the activity.

Poacynum hendersonii **:** The methanolic extract from the flowers of *P. hendersonii* promoted adipogenesis of 3T3-L1 cells. It is well established the PPARγ agonist such as thiazolidinedione compounds promote the adipogenesis of 3T3-L1 cells, and so the cells have been used for the development of antidiabetic compounds. Among the isolates, several flavonoid constituents were found to show the activity.

On the other hand, flavonoids are well known polyphenolic constituents of various medicinal foods. In order to clarify the new biofunctional activity of flavonoids and related compounds, we examined lipid accumulation inhibitory and lipid metabolism promoting activities in HepG2 cells and suggested several structural requirements.