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Myricetin protects against dietinduced obesity and ameliorates oxidative stress in C57BL/6 mice

Key words: Myricetin, Obesity, Adipogenesis, Oxidative stress

Research Background

Myricetin is a naturally occurring antioxidant commonly found in various plants. However, little information is available with respect to its direct anti-obesity effects. This study was undertaken to investigate the effect of myricetin on high-fat diet (HFD) induced obesity in C57BL/6 mice.



Myricetin is presented in bayberry



The chemical structure of myricetin

Research Summary

- Myricetin reduced the body weight of HFDinduced C57BL/6 mice.
- Myricetin ameliorated obesity associated oxidative stress and inflammation.
- Myricetin down-regulated the expression of PPARγ, C/EBPα and SREBP-1c.



Research Significance

Myricetin decreased serum glucose levels, regulated lipid metabolism and provided protection against HFDinduced oxidative stress in obese mice. A further mechanistic study revealed that administration of myricetin down-regulated the expression of adipogenic (PPAR γ and C/EBP α) and lipogenic (SREBP-1c) genes in HFD-induced mice. Therefore, consumption of myricetin may help to prevent obesity and obesity-related metabolic complications.