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Flavonoid derivative (Fla-CN) inhibited adipocyte differentiation via activating AMPK and up-regulating microRNA-27 in 3T3-L1 cells

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Abstract

Fla-CN (3-O-[(E)-4-(4-cyanophenyl)-2-oxobut-3-en-1-yl] kaempferol) is a semi-synthesized flavonoid derivative of tiliroside which exhibited anti-diabetic effect *in vivo*. Our previous study revealed the role of Fla-CN in anti-obesity and anti-diabetes *in vivo*, but the underlying mechanism remained to be addressed. The present study aimed to investigate the mechanism of anti-adipogenesis *in vitro*. Fla-CN markedly inhibited intracellular lipid accumulation in a dose-dependent manner, and the inhibitory effect was mainly limited to the early

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