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RNA interference of *leptin receptor* in chicken adipocytes

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ABSTRACT. In this study, chicken adipocytes were cultured to evaluate RNA interference by the *leptin receptor* gene. A small interfering RNA of the *leptin receptor* gene was synthesized, with a suppression rate of 60% being generated ($P < 0.01$). After the knockdown of the leptin receptor, the expression levels of certain genes decreased significantly; specifically, *peroxisome proliferator-activated receptor γ*, *fatty acid synthase*, *adipose triglyceride lipase*, and *lipoprotein lipase*. In addition, a significant increase in the expression of the *adiponectin* gene was documented. These results demonstrate that the *leptin receptor* gene might contribute to lipid metabolism by influencing the expressions of the *peroxisome proliferator-activated receptor γ*, *fatty acid synthase*, *adipose triglyceride lipase*, *lipoprotein lipase*, and *adiponectin* genes.

Key words: RNA interference; Leptin receptor; Chicken; Adipocyte; Lipid metabolism

