

## Effects of lovastatin on hepatic expression of the low-density lipoprotein receptor in nephrotic rats

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**ABSTRACT.** To investigate the effect of the HMG-CoA reductase inhibitor lovastatin on the expression of the receptor for hepatic low-density lipoprotein (LDL) in a rat model with kidney disease, and to identify the mechanisms in statin treatment of nephrotic syndrome with hyperlipidemia, a rat model with nephrotic syndrome was established. Thirty male Sprague-Dawley rats were treated with lovastatin for 2 weeks using gavage. The expression of protein and mRNA of the LDL receptor in the rat liver was detected with Western blot and RT-PCR, respectively, and blood-biochemical indices were also recorded for each group. Compared with the untreated control group, lovastatin treatment significantly decreased the levels of serum total cholesterol, LDL cholesterol, triglycerides, and urinary protein. In addition, lovastatin treatment significantly increased the levels of serum albumin and hepatic LDL receptor proteins, but had no effect on the expression of hepatic LDL receptor mRNA. Treatment with lovastatin markedly increased the expression of the hepatic LDL receptor in rats with nephrotic syndrome, which was accompanied by significantly improved hyperlipidemia.

**Key words:** Nephrotic syndrome; Lovastatin; LDL receptor