

## Alleviation of Alcoholic Liver Injury by Mogroside V Involves in Anti-inflammatory Effect via TLR4 Pathway in Rats

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**SUMMARY.** Mogroside V (MV) is one of the main bio-active ingredient, extracted from fruit of *Siraitia grosvenorii* (Swingle) C. Jeffrey ex A.M. Lu & Z.Y. Zhang which is a traditional Chinese medicine and has the function of protecting liver in folk. In order to figure out whether or not the function is related to MV treatment and the mechanism of it, hepatoprotective effect and anti-inflammatory activity of MV, and its underlying mechanism were studied using ethanol-induced fatty liver (EFL) rat model. The results showed that MV treatment significantly decreased the serum levels of ALT, AST, TBIL and endotoxin, hepatic tissue contents of TG, dramatically down-regulated expression of TLR4 and MyD88, and accordingly suppressed levels of NF- $\kappa$ B p65, TNF- $\alpha$ , iNOS, COX-2 and IL-6 in EFL rats. The findings indicate that MV treatment effectively improves the EFL injury, and its possible mechanism involves in anti-inflammatory effect via TLR4 signal path.

**RESUMEN.** Mogrósido V (MV) es uno de los principales ingredientes bioactivos, extraído del fruto de *Siraitia grosvenorii* (Swingle) C. Jeffrey ex A.M. Lu y Z.Y. Zhang, que es una medicina tradicional china y tiene la función de proteger el hígado en las personas. Para determinar si la función está relacionada o no con el tratamiento de MV y el mecanismo del mismo, se estudió el efecto hepatoprotector y la actividad antiinflamatoria de MV y su mecanismo subyacente utilizando el modelo de rata de hígado graso inducido por etanol (EFL). Los resultados mostraron que el tratamiento con MV disminuyó significativamente los niveles séricos de ALT, AST, TBIL y endotoxina, el contenido de tejido hepático de TG, la expresión de TLR4 y MyD88 regulada negativamente, y en consecuencia suprimió los niveles de NF- $\kappa$ B p65, TNF- $\kappa$ , iNOS, COX-2 e IL-6 en ratas EFL. Los hallazgos indican que el tratamiento con MV mejora efectivamente la lesión EFL, y su posible mecanismo implica un efecto antiinflamatorio a través de la ruta de la señal TLR4.

**KEY WORDS:** anti-inflammation, ethanol-induced fatty liver, mogroside V, *Siraitia grosvenorii* (Swingle) C. Jeffrey ex A.M. Lu & Z.Y. Zhang, toll-like receptor 4.

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