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Improvement of Ethanol-induced Fatty Liver by Galactomannan Derived from *Cassia obtusifolia* L. via TLR4/ NF-κB Signal Path in Rats

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SUMMARY. **Galactomannan (GM) is one of the polysaccharides extracted from the seeds of *Cassia obtusifolia* L., a traditional Chinese medicine, and has important immunological and antioxidant activities. In order to figure out anti-inflammatory activity of GM and its underlying mechanism, we used ethanol-induced fatty liver (EFL) rat model to study the changes of TLR4 related signals. The results showed that treatment with GM significantly decreased the serum levels of ALT, AST, TBIL and endotoxin, and hepatic tissue contents of TG, dramatically down-regulated MD2 and CD14 levels, as well as the mRNA expression of TLR4, MyD88 and TRAF6, and accordingly suppressed NF-κB p65 as well as endotoxin-mediated inflammatory factors such as TNF-α and IL-6. in EFL rats. The findings indicate that GM effectively improves the EFL, and its possible mechanism is via TLR4/NF-κB signal path.**

RESUMEN. El galactomanano (GM) es uno de los polisacáridos extraídos de las semillas de *Cassia obtusifolia* L., una medicina tradicional china, que tiene importantes actividades inmunológicas y antioxidantes. Para determinar la actividad antiinflamatoria de la GM y su mecanismo subyacente, utilizamos el modelo de rata de hígado graso inducido por etanol (EFL) para estudiar los cambios de las señales relacionadas con TLR4. Los resultados mostraron que el tratamiento con GM disminuyó significativamente los niveles séricos de ALT, AST, TBIL y endotoxina y el contenido de tejido hepático de TG, reguló drásticamente los niveles de MD2 y CD14, así como la expresión de ARNm de TLR4, MyD88 y TRAF6 y, en consecuencia, suprimió el NF-κB p65, así como los factores inflamatorios mediados por endotoxinas, como el TNF-α y la IL-6 en ratas EFL. Los hallazgos indican que GM mejora efectivamente la EFL y que su posible mecanismo es a través de la ruta de señal TLR4/NF-κB.

KEY WORDS: anti-inflammation, ethanol-induced fatty liver, semen cassiae, toll-like receptor galactomannan.

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