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Anti-inflammatory Effects of Natural Products in Alcoholic Liver Disease

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One central component in the complex network of processes leading to the development of alcoholic liver disease is the activation of immunocytes in the liver by endotoxin, which is released by intestinal bacteria. Alcohol consumption can lead to increased endotoxin levels in the blood and liver. Activated immune cells produce signaling molecules that promote inflammatory reactions which can damage liver cells. It is known that alcohol can enhance endotoxin release, therefore we hypothesize that inhibitency of these processes might help prevent or ameliorate alcoholic liver disease. We initially screened several medicinal drugs which inhibit inflammation. Salvia miltorrhiza Bunge, Magnolia obovata Thunb and Honokiol showed potent inhibitency to TNF-a, reactive oxygen species, NADPH Oxidase, superoxide anions release, mtric oxide production in a dose-dependent manner, which are important markers of inflammation. The inhibiting property of Salvia miltorrhiza Bunge, Magnolia obovata Thunb and its extracted compound Honokiol to the inflammation suggest the important possibility as a competitive candidate for alcoholic liver disease preventation.

Keyword: Salvia miltorrhıza Bunge; Alcohol; ALD; Honokiol; Magnolia obovata Thunb; inflammation