

Diallyl Trisulfide Protects the Rat Liver from CCl₄-Induced Injury and Fibrogenesis by Attenuating Oxidative Stress

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Abstract : Various studies have shown that diallyl trisulfide (DATS) can protect the liver injury, and DATS has a strong antioxidant property. The aim of this study is to evaluate the in vivo role of DATS in protecting the liver against injury and fibrogenesis and further explores the underlying mechanisms. Our results demonstrated that DATS protected the liver from CCl₄-caused injury by suppressing the elevation of ALT and AST activities, and by improving the histological architecture of the liver. Treatment with DATS or colchicine improved the liver fibrosis by sirius red staining and immunofluorescence. In addition, immunohistochemistry, western blot, and RT-PCR analyses indicated that DATS inhibited HSC activation. Furthermore, DATS attenuated oxidative stress by increasing glutathione and reducing lipid peroxides and malondialdehyde. These findings suggest that the protective effect of DATS on CCl₄-caused liver injury and liver fibrogenesis was, at least partially, attributed to its antioxidant activity.

Keywords : liver fibrogenesis, liver injury, oxidative stress, DATS

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