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Majoon-e-Dabeed-ul-Ward protects lung cells against ethanol-induced cell death and activates Nrf2/ho-1 signaling pathway

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Majoon-e-Dabeed-ul-Ward (MD) is a hepatoprotective Unani formulation with strong antioxidative effects. The purpose of the work was to investigate the effect of *Majoon-e-Dabeed-ul-Ward* (MD) on ethanol (EtOH) induced cell death and its probable role in activating Nrf2/HO-1 pathway. Cytoprotective role of MD in preventing ethanol induced cell death in liver cells was determined by MTT assay. Protein expression levels of Nrf2 and Heme oxygenase was determined by immunoblotting using antibodies against the target protein and their mRNA expression was studied by RT-PCR. Our results showed that MD treatment increases cell viability in EtOH induced liver cells. Nrf2 expression level (both at mRNA and protein) was increased by MD treatment. It was further found that Nrf2 in turn increases expression of Heme oxygenase-1 (HO-1): an antioxidant phase II enzyme. Our findings suggest that MD exerts cytoprotective effect in EtOH induced liver cell and causes activation of Nrf2/HO-1 signaling pathway.

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