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Oxidative stress modulation in hepatitis C virus infected cells

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#### Abstract

12  
 Hepatitis C virus (HCV) replication is associated with the endoplasmic reticulum (ER), where the virus can induce cellular stress. Oxidative cell damage plays an important role in HCV physiopathology. Oxidative stress is triggered when the concentration of oxygen species in the extracellular or intracellular environment exceeds antioxidant defenses. Cells are protected and modulate oxidative stress through the interplay of intracellular antioxidant agents, mainly glutathione system (GSH) and thioredoxin (Trx); and antioxidant enzyme systems such as superoxide dismutase (SOD), catalase, GSH peroxidase (GPx), and heme oxygenase-1 (HO-1). Also, the use of natural and synthetic antioxidants (vitamin C and E, N-acetylcysteine, glycyrrhizin, polyenylphosphatidyl choline, mitoquinone, quercetin, S-adenosylmethionine and silymarin) has already shown promising results as co-adjuvants in HCV therapy. Despite all the

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