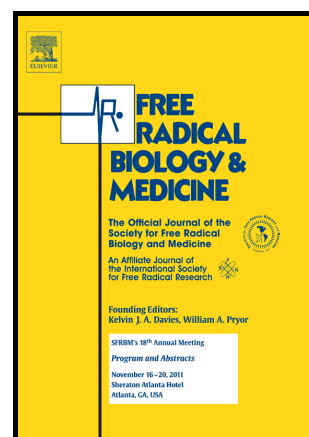


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Differential carbonylation of proteins in end-stage human fatty and nonfatty NASH

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Running Title: Differential carbonylation in human NASH

Abstract

Objective: In the liver, a contributing factor in the pathogenesis of non-alcoholic fatty liver disease is oxidative stress leading to the accumulation of highly reactive electrophilic α/β unsaturated aldehydes. The objective of this study was to determine if significant differences were evident when evaluating carbonylation in human end-stage fatty nonalcoholic steatohepatitis (fNASH) compared to end-stage nonfatty NASH (nfNASH). **Methods:** Using hepatic tissue obtained from healthy humans and patients diagnosed with end stage nfNASH or fNASH, overall carbonylation was assessed by immunohistochemistry (IHC) and LC-MS/MS followed by bioinformatics. **Results:** Picrosirius red staining revealed extensive fibrosis in both fNASH and nfNASH which corresponded with increased reactive aldehyde staining. Although significantly elevated when compared to normal hepatic tissue, no significant differences in overall carbonylation and fibrosis were evident when comparing fNASH with nfNASH.

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