Restoration of the Circadian Rhythm by FGF in Prevention of Non-Alcoholic Fatty Liver Disease

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Non-alcoholic fatty liver disease (NAFLD) is a growing epidemic that affects 30-40% of the general population. There is accumulating evidence suggesting that hepatic circadian disruption is linked with NAFLD development, which has been prevented by FGF in mouse models. This study explores the mechanism behind FGF prevention of NAFLD. RNA was isolated from wildtype, FGF transgenic and FGF knockout mice liver tissues and mRNA expression levels were evaluated using RT-qPCR. The effects of FGF on cellular circadian rhythm were also evaluated on circadian reporter cell lines using a bioluminescence assay. Collectively, these results will determine whether FGF rescues cellular circadian rhythm to prevent NAFLD development. Supported by the SOT Intern Program and NIH R25ES020721 and P30ES005022.