SUPPLEMENTAL INFORMATION:

Effect of iron on cholesterol 7-alpha-hydroxylase expression in alcohol-induced hepatic steatosis in mouse

Huan Liang^{1,2,3,#}, Hui Huang ^{1,2,#}, Pei-zhu Tan^{1,2,4,#}, Ying Liu⁵, Jun-hui Nie^{1,2}, Yi-tong Zhang⁶, Kai-li Zhang^{1,2}, Yan Diao^{1,2}, Qi He^{1,2}, Bao-yu Hou^{1,2}, Ting-ting Zhao^{1,2}, Yan-ze Li^{1,2}, Gui-xiang Lv^{1,2}, Ki-Young Lee⁷, Xu Gao^{1,2,*}, Ling-yun Zhou^{1,2,*}

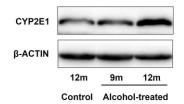
Department of Biochemistry and Molecular Biology, Harbin Medical University, Harbin, China.
Translational Medicine Center of Northern China, Harbin, China.
Department of Clinical Laboratory, Harbin Medical University Cancer Hospital, Harbin, China.
Teaching Experiment Center of Biotechnology, Harbin Medical University, Harbin, China.
Department of Gastroenterology, Heilongjiang Province Hospital, Harbin, China.
Department of Neurology, The First Affiliated Hospital of Harbin Medical University, Harbin, China.
Department of Cell Biology and Anatomy, Arnie Charbonneau Cancer Institute, Hotchkiss Brain Institute, University of Calgary Calgary, AB, Canada.

*Huan Liang, Hui Huang and Peizhu Tan contributed equally to this work.

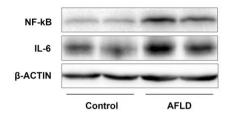
Supplemental Table S1. Changes in ROS and SOD in liver tissue and MDA and GSH levels in serum.

	9-month		12-month	
	Control	Alcohol-treated	Control	Alcohol-treated
ROS (fluorescence/mg prot)	36.32±2.78	36.02±2.94	36.43±2.11	42.01±3.78*
MDA (µM)	2.84±0.24	3.08±0.19	2.87±0.45	$3.67 \pm 0.36^*$
GSH (μM)	15.06±2.25	15.65±2.46	11.31±1.8	6.78±1.35 **
SOD (U/ mg prot)	98.81 ±4.25	99.36±8.09	98.35±5.49	90.23±3.68 [*]

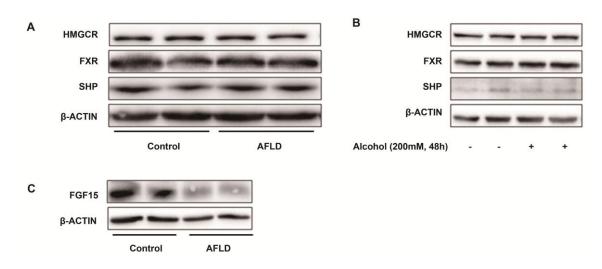
Data are shown as the means \pm SD (n \geq 6).*p<0.05 vs. control, **p<0.01 vs. control



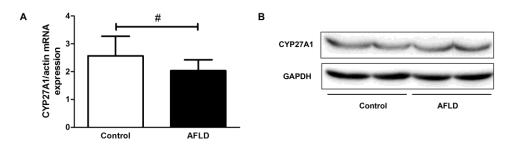
Supplemental Figure S1. CYP2E1 protein expression significantly increased in the alcohol-treated 12-month-old mouse compared to the control group. 9-month-old alcohol-treated mouse showed no significant change.



Supplemental Figure S2. The expression of inflammatory cytokines NF-*k*B and IL-6 increased significantly in alcohol-treated 12-month-old mouse.



Supplemental Figure S3. Expression of HMGCR, FXR and SHP protein. (**A**) HMGCR, FXR and SHP protein expression in hepatic were no change in alcohol-treated 12-month-old mouse compared to control mouse. (**B**) HMGCR, FXR and SHP protein expression in alcohol-treated Hepa1-6 cell were no change. (**C**) Expression of FGF15 protein in ileum was suppressed in the alcohol-treated 12-month-old mouse.



Supplemental Figure S4. Expression of CYP27A1. (**A**) Real time PCR analysis of the CYP27A1 mRNA levels. (**B**) Western blot analysis of CYP27A1 protein in alcohol-treated 12-month-old mouse showed there is no significant change in 12-month-old alcohol-treated mouse compared to control mouse.