

Beneficial effects of Ketogenic Diet on Nonalcoholic steatohepatitis in obese mice model

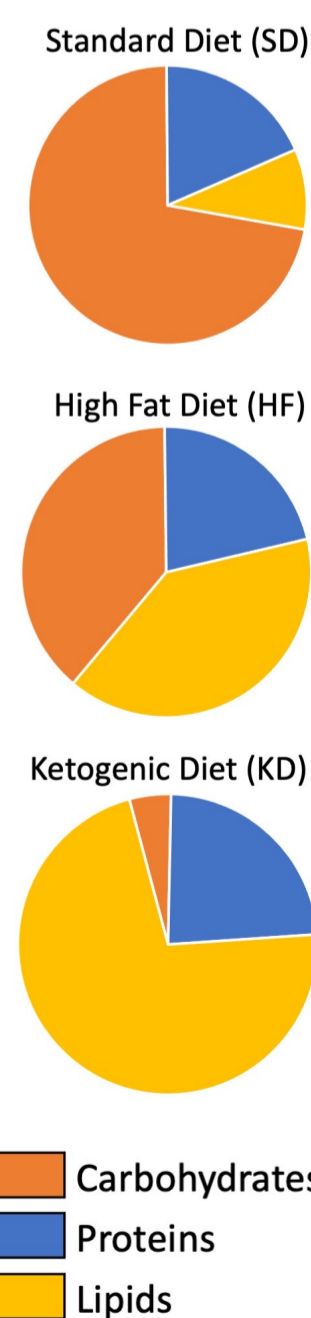
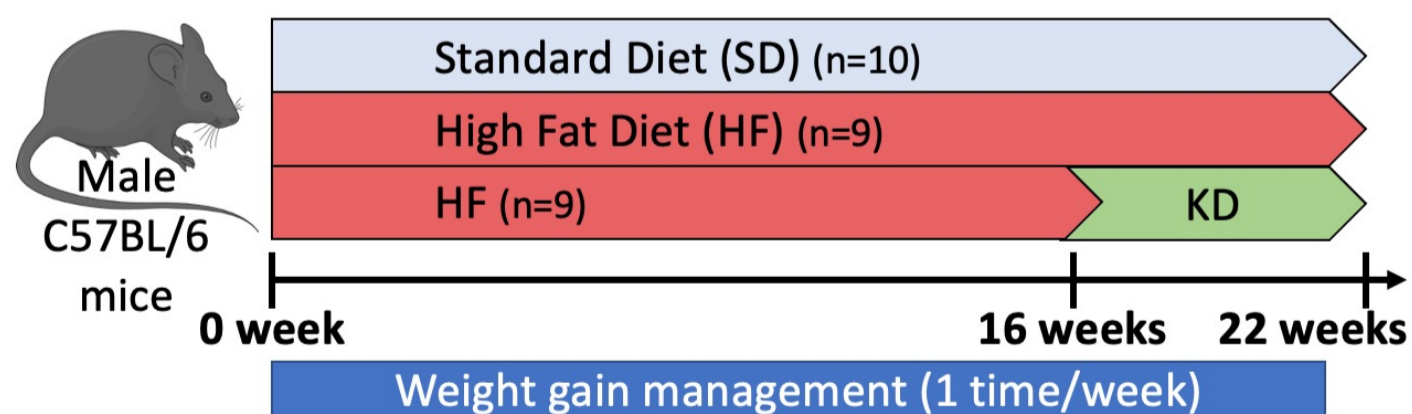
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INTRODUCTION

Obesity is associated with a low-grade inflammation, characterized by the secretion of inflammatory mediators, that contribute to non-alcoholic fatty liver disease (NAFLD) development (1). Steatosis may be complicated by hepatocellular injury and liver inflammation (steatohepatitis or NASH) (2). Ketogenic diet (KD), a high-fat and low-carbohydrate diet, seems to present anti-inflammatory properties which could reduce NAFLD development (3). However, the mechanisms involved in its beneficial effects remain unclear. This study aims to evaluate the effect of 6-week Ketogenic but isocaloric Diet on NASH development in obese mice.

MATERIEL AND METHODS



Histological analysis: Hematoxylin/Eosin staining

Gene expression: RT-qPCR. HPRT were used as housekeeping gene.

Statistical analysis: Data expressed as means ± SEM. Significance determined One-way Anova and Fisher's LSD test. X : p<0,05 ; XX : p<0,01 , XXX : p<0,001

RESULTS

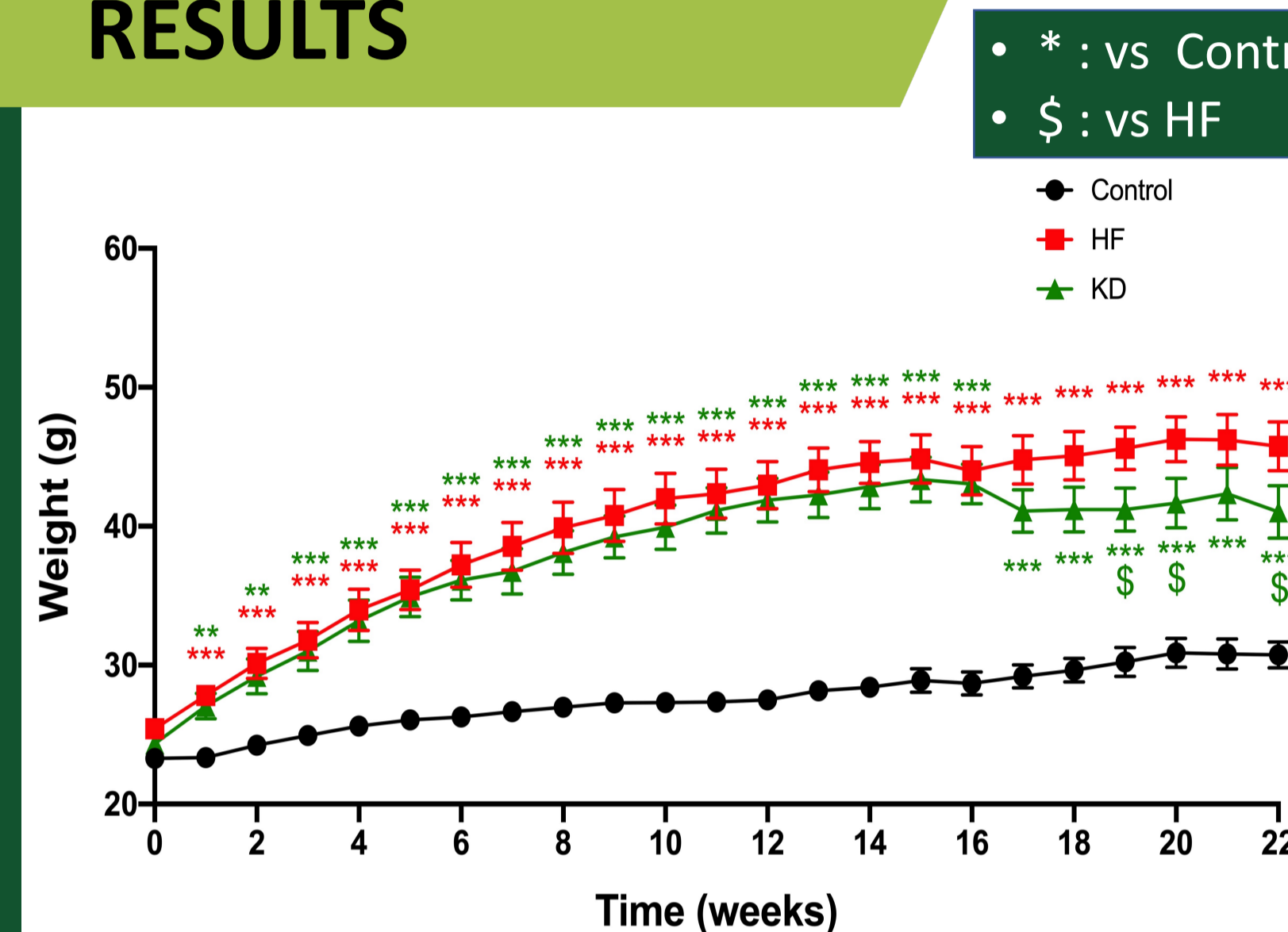


Figure 1: Effect of KD on dietary-induced obesity

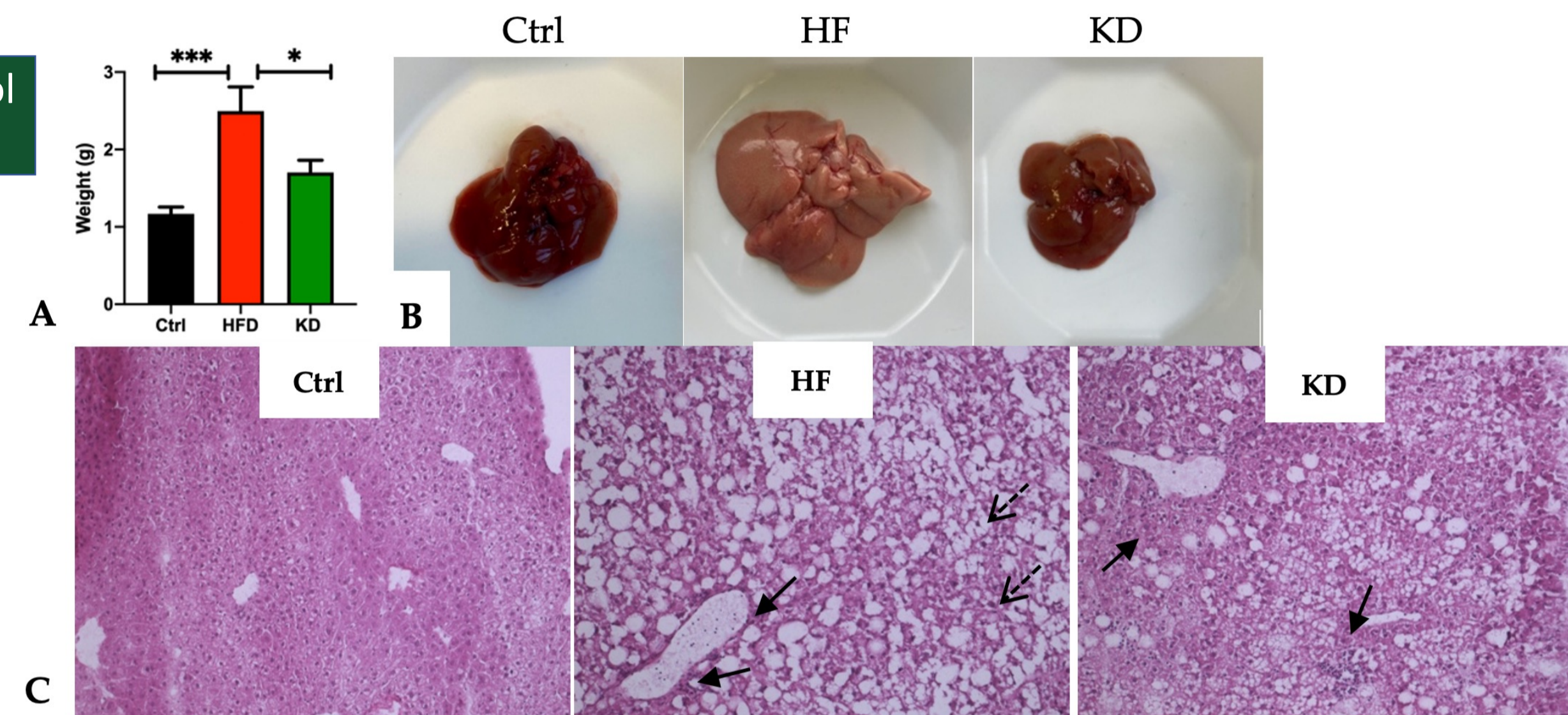


Figure 2: KD decreases liver final weight (A), prevents from hepatomegaly (B) and reduce and steatohepatitis (C). Black arrows point lobular inflammation; dotted-line arrows point hepatocellular ballooning..

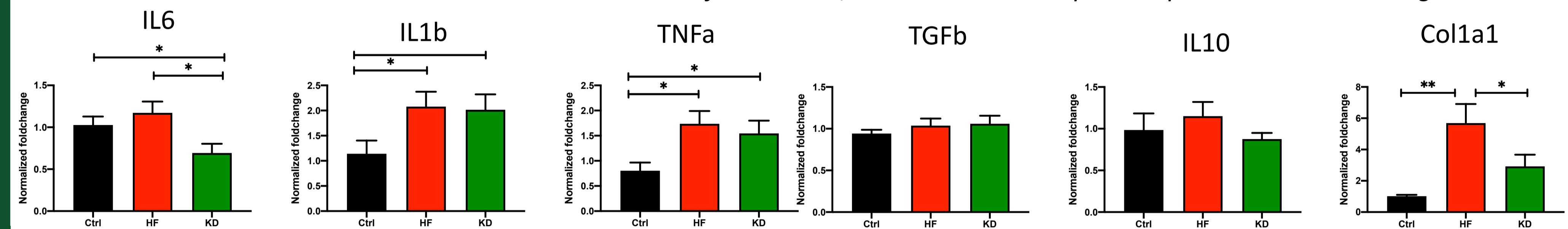
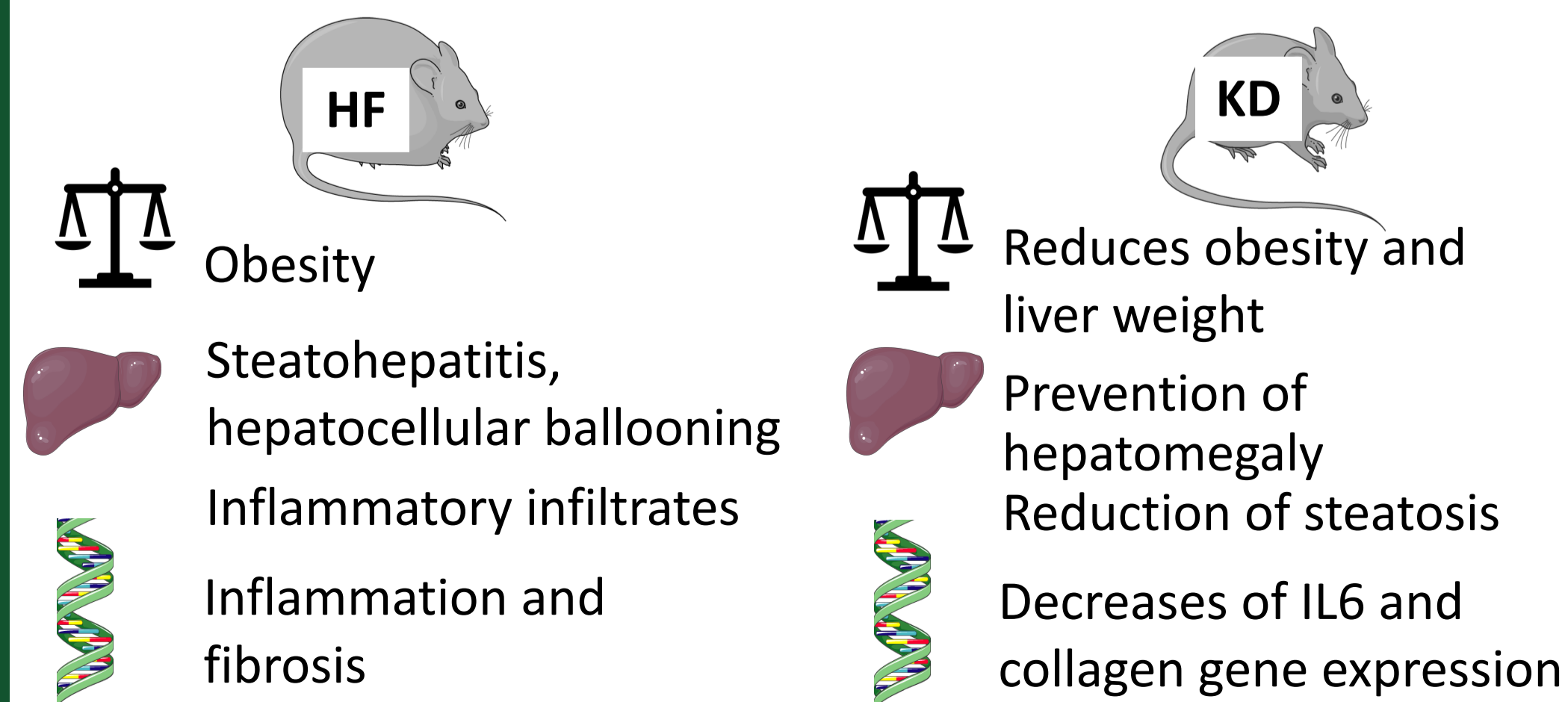


Figure 3: Effects of KD on inflammatory (IL6, IL1b, TNFa, TGFb), anti-inflammatory (IL10) and collagen (Col1a1) genes expression.

DISCUSSION



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