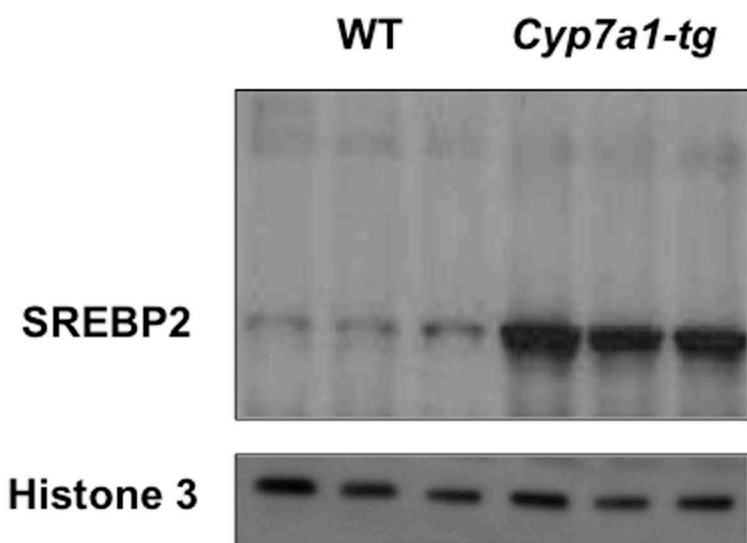
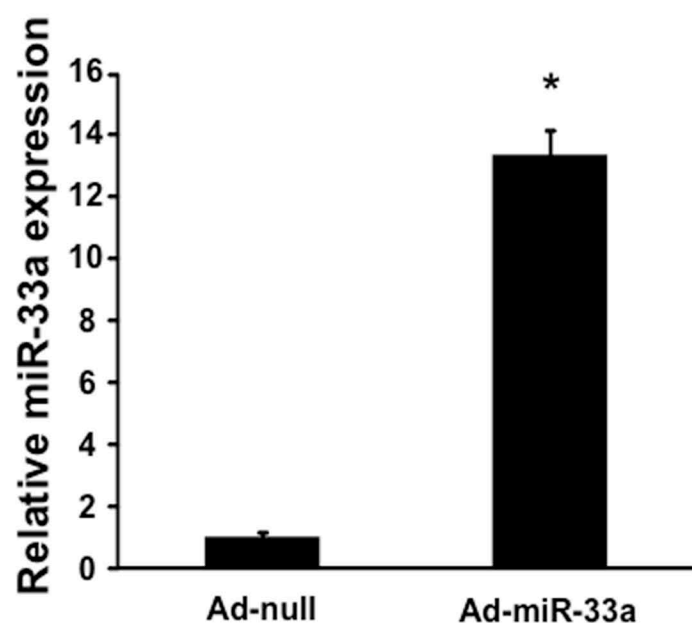


WT+chow WT+WD
Vs. Vs.
Tg+chow Tg+WD

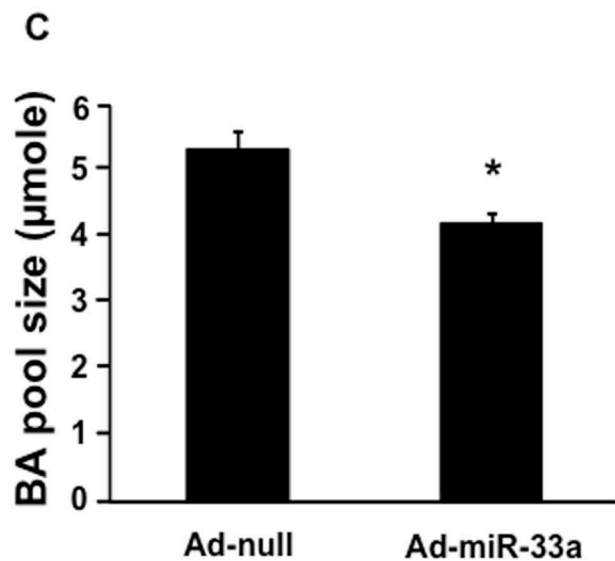
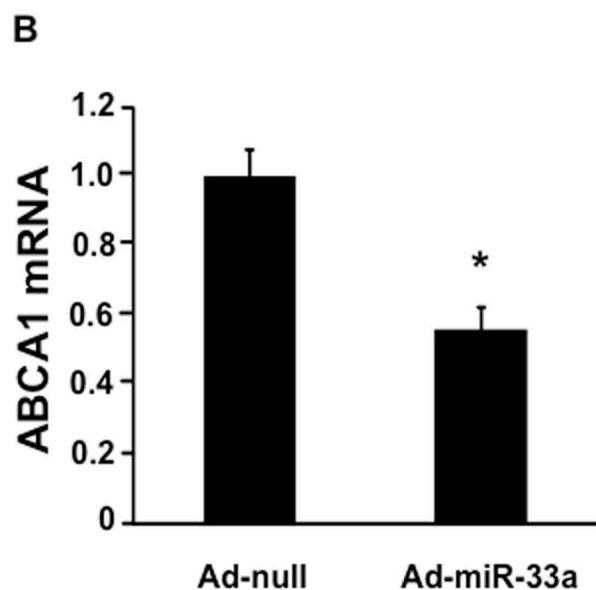
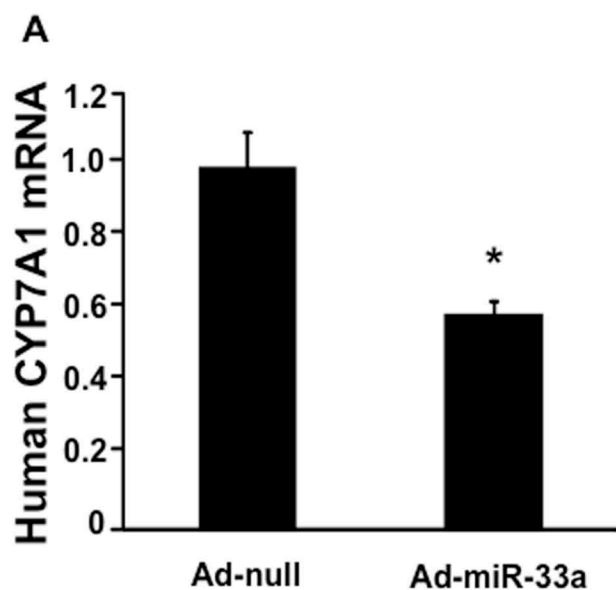
Supplemental Figure 1. Venn diagram of significantly differentially regulated genes identified by microarray. Microarray experiments and analysis are described in Materials and Methods. WT, wild type mice; Tg, *Cyp7a1*-tg mice; WD, Western diet.



Supplemental Figure 2. Mature form of SREBP2 protein is increased in the liver of *Cyp7a1-tg* mice. SREBP2 protein levels were detected in wild type and *Cyp7a1-tg* mouse liver tissue lysate by Western blot. Histone 3 was measured as a loading control.



Supplemental Figure 3. Ad-miR33 delivery increased hepatic miR-33 level. Wild type C57BL6J mice were administered adenovirus expressing miR-33a (Ad-miR-33a) or control adenovirus (Ad-null) via tail vein injection and were sacrificed after 7 days. Hepatic miR-33a levels were measured by real-time PCR. Results are expressed as mean \pm SE. A "*" indicates statistical significance vs. Ad-null controls, n=4.



Supplemental Figure 4. MiR-33a inhibits human CYP7A1 and bile acid pool size in “humanized” CYP7A1 mice. “Humanized” CYP7A1 mice were administered adenovirus expressing miR-33a (Ad-miR-33a) or control adenovirus (Ad-null) via tail vein injection and were sacrificed after 7 days. Hepatic mRNA expressions of (A) human CYP7A1 and (B) ABCA1 were measured by real-time PCR. (C) Total bile acid pool size. Results are expressed as mean \pm SE. A “*” indicates statistical significance vs. Ad-null controls, n=4-5.