

Supplemental Figure I

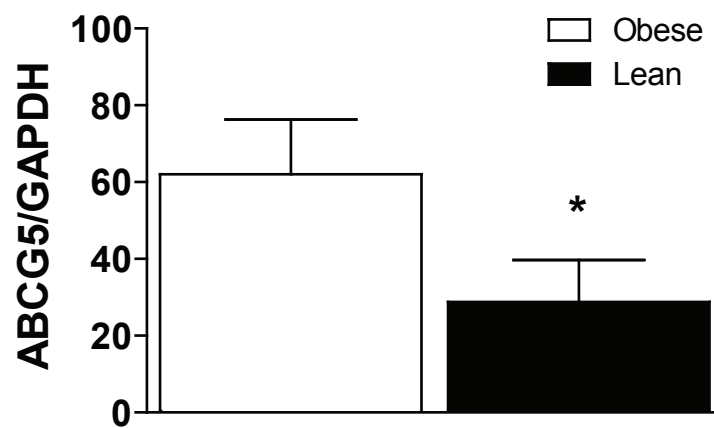


Fig SI. Relative abundance of ABCG5 mRNA in lean and obese mice injected with AdG5G8 adenovirus in liver. *denotes significant difference at $p < 0.05$ by unpaired t-test.

Supplemental Figure II

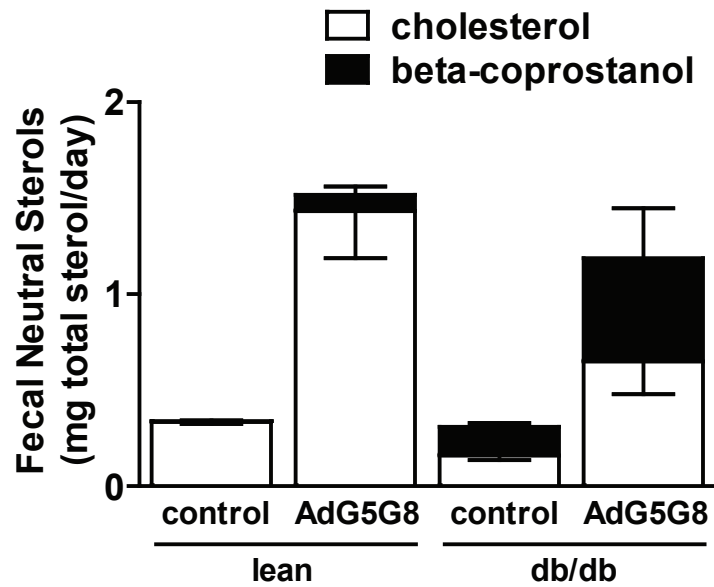


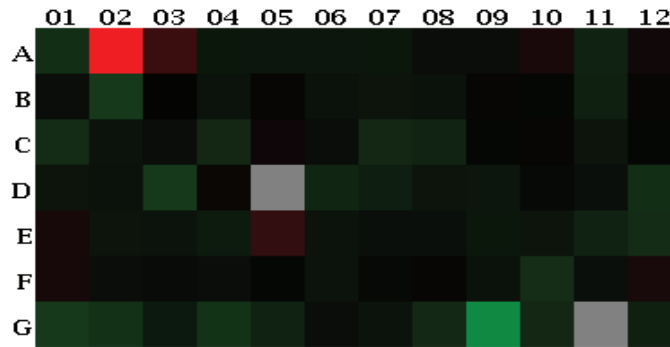
Fig SII. Total fecal neutral sterol output in mice per day. Values are one third of total output over three days. Error bars are SEM for cholesterol (below) and coprostanol (above) component mean.

Supplemental Figure III.

A

Layout	1	2	3	4	5	6	7	8	9	10	11	12
A	Acaca	Acox1	Cfd	Adra1d	Aebp1	Akt1	Akt2	Akt3	Araf	Bcl2l1	Braf	Cap1
	-3.12	372.22	4.69	-1.57	-1.52	-1.53	-1.62	-1.21	-1.2	1.87	-2.14	1.47
	OKAY	OKAY	A	B	OKAY	OKAY	OKAY	OKAY	OKAY	OKAY	OKAY	OKAY
B	Cbl	Cebpa	Cebpb	Dok1	Dok2	Dok3	Dusp14	Eif2b1	Eif4ebp1	Ercc1	Fbp1	Fos
	-1.21	-3.89	1.01	-1.41	1.1	-1.34	-1.44	-1.34	1.13	-1.04	-2.01	1.14
	OKAY	OKAY	OKAY	OKAY	OKAY	OKAY	OKAY	OKAY	OKAY	OKAY	OKAY	OKAY
C	Mtor	Frs2	Frs3	G6pc	G6pc2	Gab1	Gck	Gpd1	Grb2	Grb10	Gsk3b	Hk2
	-2.81	-1.4	-1.2	-2.5	1.35	-1.18	-2.57	-2.25	-1.06	1.17	-1.43	-1.04
	OKAY	OKAY	OKAY	OKAY	OKAY	OKAY	OKAY	OKAY	OKAY	OKAY	OKAY	OKAY
D	Hras1	Igf1r	Igf2	Igfbp1	Ins1	Ins13	Irs1	Irs2	Jun	Kras	Ldlr	Lep
	-1.47	-1.3	-3.86	1.22	-1.84	-2.31	-1.93	-1.47	-1.51	-1.1	-1.27	-2.99
	OKAY	OKAY	A	OKAY	C	B	OKAY	OKAY	OKAY	OKAY	OKAY	B
E	Map2k1	Mapk1	Nck1	Nos2	Npy	Pck2	Pdpk1	Pik3ca	Pik3cb	Pik3r1	Pik3r2	Pklr
	1.68	-1.42	-1.39	-1.72	3.78	-1.38	-1.27	-1.26	-1.6	-1.45	-2.11	-2.73
	OKAY	OKAY	OKAY	OKAY	A	OKAY	OKAY	OKAY	OKAY	OKAY	OKAY	OKAY
F	Pparg	Ppp1ca	Prkcc	Prkci	Prkcz	Prl	Ptpn1	Ptprf	Raf1	Retn	Rps6ka1	Rras
	1.67	-1.23	-1.16	-1.19	-1.06	-1.38	-1.12	1.1	-1.33	-2.95	-1.25	1.78
	OKAY	OKAY	OKAY	OKAY	OKAY	B	OKAY	OKAY	OKAY	B	OKAY	OKAY
G	Rras2	Serpine1	Shc1	Slc27a4	Slc2a1	Sorbs1	Sos1	Srebf1	Tg	Klf10	Ucp1	Vegfa
	-3.86	-3.18	-1.64	-3.41	-2.08	-1.21	-1.37	-2.68	-24.08	-2.57	-1.84	-2.01
	OKAY	OKAY	OKAY	OKAY	OKAY	OKAY	OKAY	OKAY	B	OKAY	C	OKAY

B



C

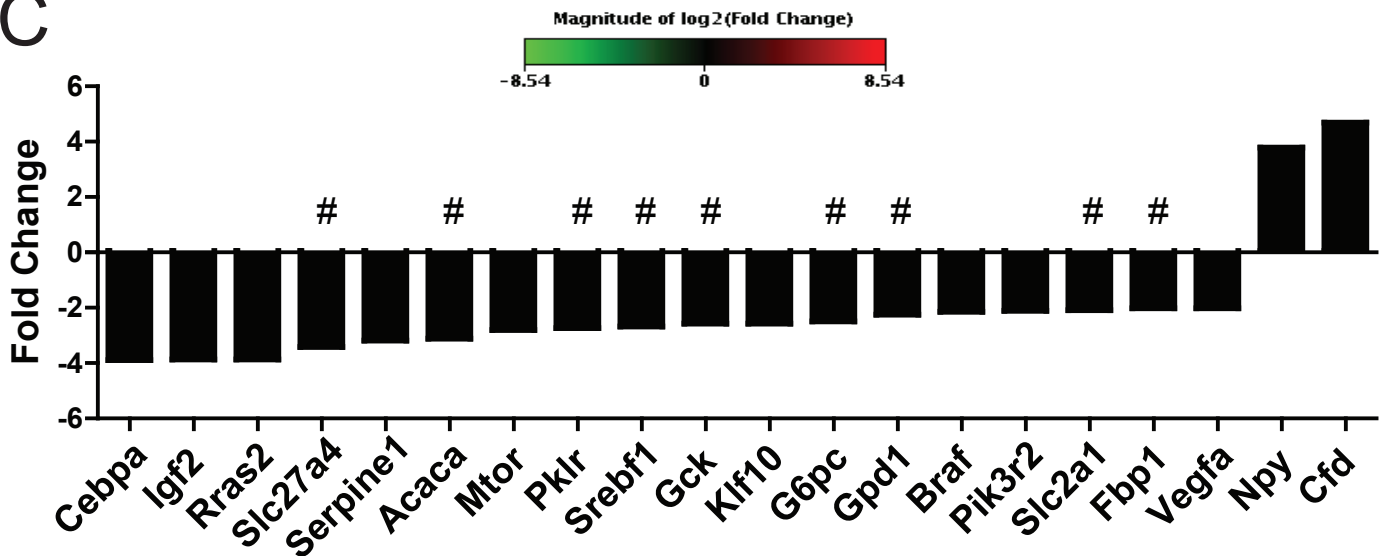


Figure SIII. AdG5G8 suppresses insulin signaling genes in obese mice. Total RNA was pooled from three db/db mice administered control virus or AdG5G8 and analyzed by PCR array. A) PCR Array layout with gene symbol, fold change and flags indicated. B) Heat Map of gene expression data. C) Genes with greater than a two-fold difference in abundance in AdG5G8 compared to controls are plotted by fold-change. # above bars indicates confirmation of significant difference by rtPCR in individual mice. Acox1 upregulation could not be confirmed by rtPCR.

Supplemental Figure IV

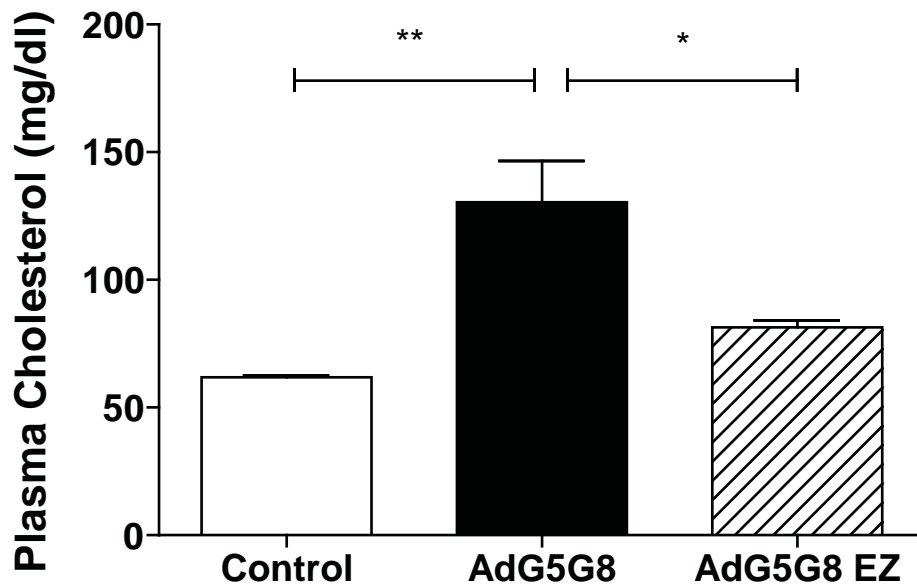


Fig SIV. Ezetimibe (EZ) blocks AdG5G8 induced hypercholesterolemia. Lean, C57BL6/J mice were injected with control virus or AdG5G8. Plasma cholesterol was determined 72 hr following viral administration. The AdG5G8 EZ group was pretreated with EZ (0.005% w/w in chow diet) for 3 days prior to viral administration and maintained on this diet until termination of the experiment. Data are mean \pm SEM (n=4) and were analyzed by 1-way ANOVA followed by Bonferroni post-hoc tests * $p < 0.05$, ** $p < 0.01$

Supplemental Figure V

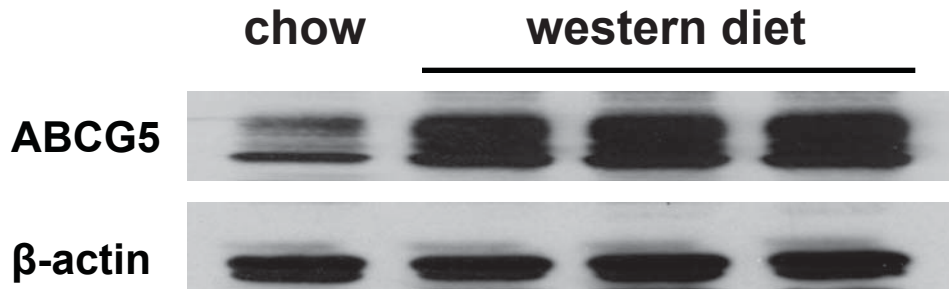


Fig SV. Hepatic membrane proteins (50 μ g) from LDL receptor deficient mice maintained on a chow or western diet for 16 weeks were isolated and subjected to SDS-PAGE and immunoblot analysis for G5. β -actin was used as a loading control.

Supplemental Figure VI

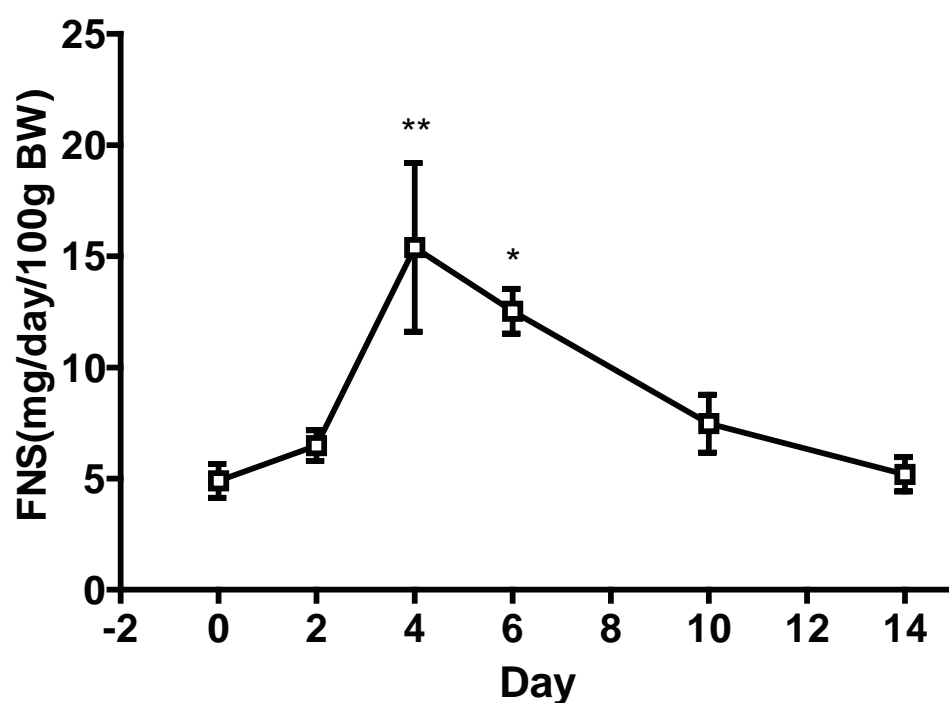


Fig SVI. C57 mice were individually housed in clean cages and feces collected for 48 hr (Day 0). AdG5G8 was administered on Day 0 and feces collected on day 2, 4, 6, 10 and 14. Feces were dried, lipids extracted and analyzed by GC/MS. Daily fecal output was calculated and normalized to body weight. Data are mean \pm SEM (n=3) and were analyzed by 1-Way repeated measures ANOVA. Dunnett's multiple comparison tests were used to determine differences from pretreatment fecal neutral sterol output (Day 0).