Supplemental Data Table 1

	FATTY ACID												
PHOSPHOLIPID													
	14:0	**16:0**	**16:1**	**18:0**	**18:1**	**18:2**	**18:3**	**20:3**	**20:4**	**20:5**	**22:4**	**22:5**	**22:6**
129 LFD	0.0	21.9$^{\#}$	0.8$^{\#,+}$	13.3$^{\#}$	6.2$^{\#}$	19.2$^{\#,+}$	0.0	1.7^{+}	15.0$^{\#,+}$	1.8$^{\#}$	0.0	0.8$^{\#,+}$	19.2$^{\#,+}$
129 HFD	0.0	19.6*	0.1	18.2	14.2*	16.3*	0.3	1.8*	21.6	0.0	0.5	0.1*	7.5*
B6 LFD	0.0	21.1**	1.8**	12.9**	7.9**	17.6**	0.3	3.0	16.1**	2.2**	0.1	0.9	16.1**
B6 HFD	0.0	16.6	0.0	19.0	19.3	12.0	0.0	3.0	22.8	0.0	0.0	1.0	6.4
TRIGLYCERIDE													
	14:0	**16:0**	**16:1**	**18:0**	**18:1**	**18:2**	**18:3**	**20:3**	**20:4**	**20:5**	**22:4**	**22:5**	**22:6**
129 LFD	0.1	22.8$^{\#,+}$	1.4^{+}	2.8	22.5$^{\#,+}$	35.8$^{\#,+}$	1.3	0.4	0.6	1.0	0.0	1.4	9.8$^{\#,+}$
129 HFD	0.2	27.3	1.5*	4.0*	48.2	17.0*	0.4*	0.2	1.0	0.0	0.1	0.0	0.0*
B6 LFD	0.4	26.9	6.7**	1.7**	38.4**	18.7**	1.1	0.4	1.0	0.6	0.0	1.1**	3.0**
B6 HFD	0.5	25.7	8.9	0.2	50.6	10.8	1.2	0.6	0.7	0.2	0.2	0.0	0.3
CHOLESTEROL ESTERS													
	14:0	**16:0**	**16:1**	**18:0**	**18:1**	**18:2**	**18:3**	**20:3**	**20:4**	**20:5**	**22:4**	**22:5**	**22:6**
129 LFD	0.0	24.1	4.1^{+}	0.0$^{\#,+}$	35.5$^{\#,+}$	36.3$^{\#,+}$	0.0	0.0	0.0$^{\#}$	0.0	0.0	0.0	0.0
129 HFD	0.0	20.9	3.8*	6.9	42.0	22.9*	0.0	0.0	3.5*	0.0	0.0	0.0	0.0
B6 LFD	0.0	27.9**	10.9	7.4	31.3**	19.1**	0.0	0.0	3.3	0.0	0.0	0.0	0.0
B6 HFD	0.0	22.0	10.2	9.4	48.1	10.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0

The effects of genetic background and diet on hepatic fatty acid composition. Liver samples from random fed 6-month old male B6 and 129 mice maintained on either high fat or low fat-diet for 18 weeks were homogenized in chloroform. Lipids were extracted, separated by thin layer chromatography, methylated, and analyzed by gas chromatography as described in Methods. Data are presented as the mean of four samples. $^{\#}p\leq0.05$ 129 LFD vs. 129 HFD; $^{+}p\leq0.05$, 129 LFD vs. B6 LFD; *$p\leq0.05$ 129 HFD vs. B6 HFD; **$p\leq0.05$ B6 LFD vs. B6 HFD.

Supplemental Data Table 2

GENE	FOLD CHANGE (B6/129) LFD	CHOW	HFD
L-specific multifunctional beta-oxdiation protein	1.50	1.45	0.58
Srebp1	**1.85**	1.37	0.96
Pyruvate carboxylase	0.18	1.43	1.09
Delta-5 desaturase	1.10	1.06	1.12
Sterol carrier protein 2, liver	0.69	1.36	1.16
Acyl-CoA synthetase	**0.52**	1.24	1.23
Enoyl coenzyme A hydratase 1, peroxisomal	**1.86**	**1.58**	1.31
Fatty acid Coenzyme A ligase, long chain 5	1.37	1.93	**1.43**
ATP citrate lyase	**2.11**	**1.87**	**1.50**
Glycerol-3-phosphate acyltransferase	**1.81**	2.33	**2.02**
Stearoyl-Coenzyme A desaturase 1	**3.72**	**10.74**	**2.40**
Malic enzyme, supernatant	**3.04**	4.77	**2.53**
Fatty acid synthase	**5.15**	**5.49**	**2.60**
Long chain fatty acyl elongase	2.36	4.80	**3.91**

The effects of a diabetogenic background on different diets. Lipogenic gene expression in random fed 6-month old male B6 and 129 mice maintained on either high fat, low fat-diet or chow diet for 18 weeks using microarray analysis. Data is represented as the fold change of mean B6 expression over mean 129 expression (n=4 microarrays, representing 7-8, mice per group,). Genes in blue and red are decreased and increased, respectively, by greater than 20%. Bold face indicates *$p \leq 0.05$ 129 vs. B6. Only genes present on the Mu74Av.2 are shown.