Supplement. Table 1. *TaqMan Primers and Probes*

Gene	Type	Sequence (5'-3')
SREBP1	Forward	CCG TGG GCT GAG GAA GGA
	Reverse	TGT GTA CTT GCC CAT GGC A
	Probe	f CGT GCC AGT GCC CGG GAT GC q
PPARa	Forward	ATG CCT TAG AAC TGG ATG ACA
	Reverse	GCA ACT TCT CAA TGT AGC CTA
	Probe	f CCT GTT TGT GGC TGC TAT AAT TTG CTG TGq
PPARg1	Forward	CTG ACG GGT TCT CGG TTG A
	Reverse	ATC AGT GGT TCA CCG CTT CT
	Probe	f CTG AGA AGT CAC GTT CTG ACA GGA Cq
CD36	Forward	GCC AAG CTA TTG CGA CAT GA
	Reverse	AGA ATC TCA ATG TCC GAG ACT
	Probe	f CAC AGA CGC AGC CTC CTT TCC ACC q
VLDLR	Forward	CCA CAG CAG TAT CAG AAG TC
	Reverse	GCC ATC ACT AAG AGC AAG AG
	Probe	f CGT CAG CTG CCT GGG CCA TCC T q
LDLR	Forward	CAG ACT GCA AGG ACA AGT CA
	Reverse	GAG CCA TCT GCA CAC TGG AA
	Probe	f TGG CCA CCT GCC GAC CTG ATG q
Glut4	Forward	GTC AAT ACG GTC TTC ACG TT
	Reverse	AGA GCC ACG GTC ATC AAG AT
	Probe	f ATG CCG GCC AGG CCC AAC AG q
Glu1	Forward	TGA CCA TCG CCC TGG CCT T
	Reverse	AGG CCA CAA AGC CAA AGA TG
	Probe	f CTG CCT TGG ATG TCC TAT CTG AGC A q
DGAT1	Forward	CTC CAT CAT GTT CCT CAA GCT
	Reverse	CTT CCC TGT AGA GAC AGC TT
	Probe	f TCC TAC CGG GAT GTC AAC CTG TGG q
LPL	Forward	AGT GTT TGT GAA ATG CCA TGA CA
	Reverse	CGG ATG CTT TCT TCT CTT GTT TG
	Probe	fCTCTGA AGA AGT CTG GCTGAC ACT GGA CAAq
Hep Lipase	Forward	GCC AGG ATG CCA GAA GAA TA
	Reverse	ACA GGC AGC AGC AAA GTT TCG AG
	Probe	f CTT CCC AGA TCC CGT CGA TGT CAA C q
FAS	Forward	AGC TGT CCC CTG ATG CCA
	Reverse	GAG AAC TCC ATG CCG AGC A
	Probe	f TCC AGG TAA ATG GGC CAG CCG AG q
Hum ApoE	Forward	GCT GTC CAA GGA GCT GCA
	Reverse	TAC TGC ACC AGG CGG CC
	Probe	f CGT CCT CCA TGT CCG CGC CCA q
IRS1	Forward	CAG TAG CAG CAT CAG CGC A
	Reverse	GGC ATG AGT ATG GTG CCC
	Probe	f ATG GCT TCC CAT AGC TGC TCC CAG A q
IRS2	Forward	ATG AAC CTG GAC TTC AGT TCT

	Reverse	ATC CAT GGA GCC TAC TGT GT
	Probe	f TCC CCC AAG CCT AGC CTA GCA CCC GC q
β-Actin	Forward	CTG CCT GAC GGC CAG GTC
	Reverse	CAA GAA GGA AGG CTG GAA AAG A
	Probe	f CAC TAT TGG CAA CGA GCG GTT CCG q

f, Reporter dye1 (FAM:6-carboxyfluorescein); q, Quencher dye (TAMRA: 6-carboxytetramethyl1-rhodamine)

Supplement. Table 2. Effects of low fat diet supplemented with ROSI on tissues weight and plasma biochemistry.

	E3		**E4**		**Two-way ANOVA**		
	0	**1.5 mg/kg**	**0**	**1.5 mg/kg**	**GENE**	**ROSI**	**GENE*ROSI**
Body weight (g)	29.2 ± 0.2	29.4 ± 0.4	28.9 ± 0.4	28.7 ± 0.4	ns	ns	ns
Visc. fat / BW ratio (%)	0.80 ± 0.05	1.13 ± 0.03	1.00 ± 0.06	1.25 ± 0.06	0.01	<0.001	ns
Subc. fat / BW ratio (%)	0.60 ± 0.02	1.03 ± 0.04	0.80 ± 0.04	1.25 ± 0.08	0.02	<0.001	ns
Liver Triglyc./ prot. (mg/g)	56 ± 6	107 ± 14	47 ± 8	104 ± 12	ns	<0.001	ns
Liver ROS (F.U.)	1.6 ± 0.3	1.9 ± 0.2	1.6 ± 0.2	1.9 ± 0.1	ns	ns	ns
Triglycerides (mg/dl)	45 ± 6	42 ± 3	42 ± 1	24 ± 6	ns	ns	ns
Cholesterol (mg/dl)	39 ±3	28 ± 1	40 ± 1	28 ± 1	ns	<0.001	ns
Glucose (mg/dl)	136 ± 20	144 ± 13	149 ± 8	173 ± 18	ns	ns	ns
Adiponectin (mg/L)	20 ± 3	39 ± 2	23 ± 3	48 ± 6	ns	<0.001	ns
ApoE (A.U.)	0.22 ± 0.02	0.20 ± 0.01	0.28 ± 0.03	0.25 ± 0.01	0.02	ns	ns

Supplemental figures

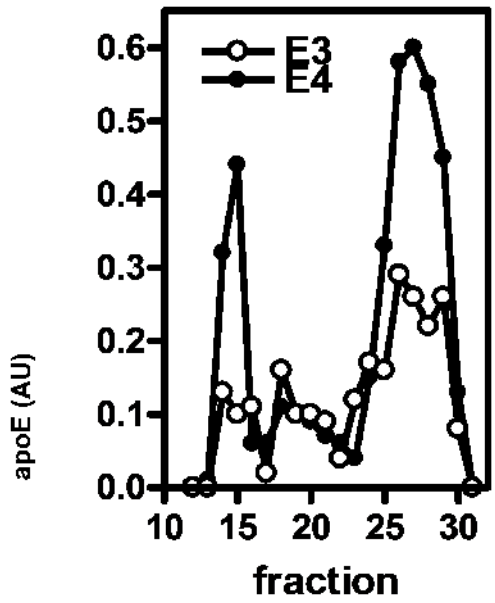

FIG. 1.

Plasma distribution of apolipoprotein E in APOE3 (○) and APOE4 (●) mice fed WD over 12 weeks followed an extra 4 weeks of with 1.5 mg/kg of body weight/day ROSI. Postprandial lipoproteins of mice fed WD were fractionated by FPLC and results are presented as arbitrary units of apoE in each fraction. Fractions 11–17 corresponded to VLDL, 17–25 to LDL and VLDL remnants and 25– 31 to HDL

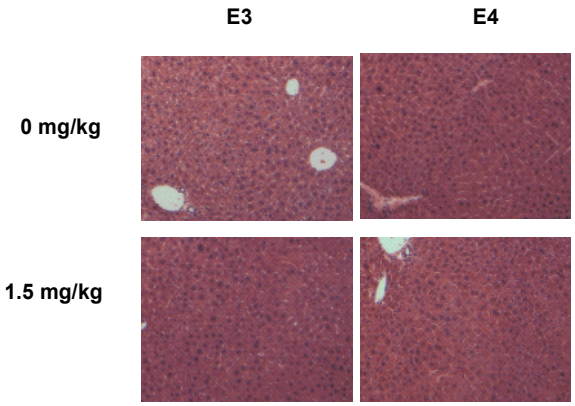

FIG. 2. Effects of low fat diet supplemented with 1.5 mg/kg of body weight/day ROSI on APOE3 and APOE4 mice. Liver histology Cross sectional areas of adipocytes from epididymal adipose tissues of APOE3 or APOE4 mice fed low fat diet without (white bars) or with 1.5 mg/kg of body weight/day (grey bars)

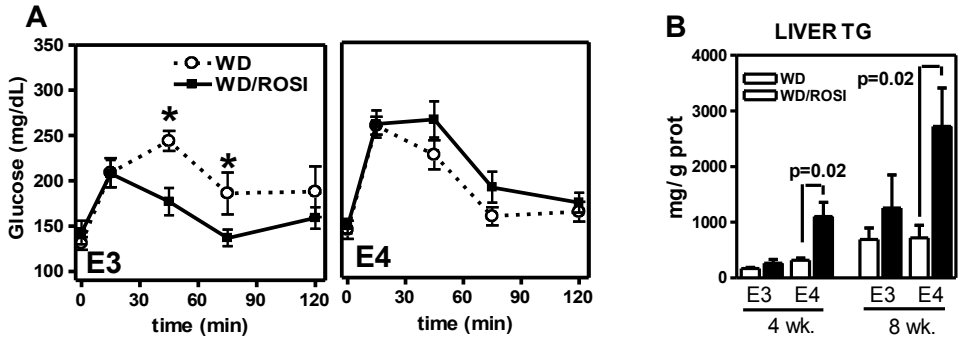

FIG. 3 Effects of feeding 8 weeks of a Western-type diet without (WD) or with 1.5 mg/kg of body weight/day rosiglitazone (WD/ROSI) on (A) glucose tolerance. (B) Liver triglycerides after 4 or 8 weeks of WD without (WD) or with 1.5 mg/kg of body weight/day rosiglitazone (WD/ROSI).

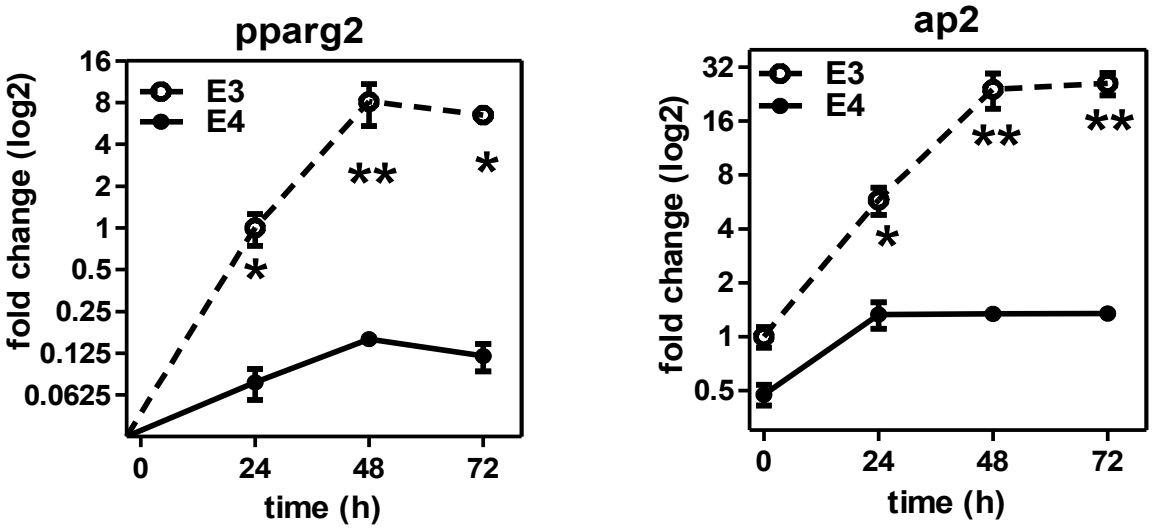

Figure 4.Adipocyte differentiation *in vitro*. Preadipocytes isolated from perigonadal tissues were differentiated into adipocytes using commercial differentiation cocktail containing a PPARγ agonist. Induction of selected genes is shown during the 72 hours post-differentiation in APOE3 (○) or APOE4 (•) preadipocytes.