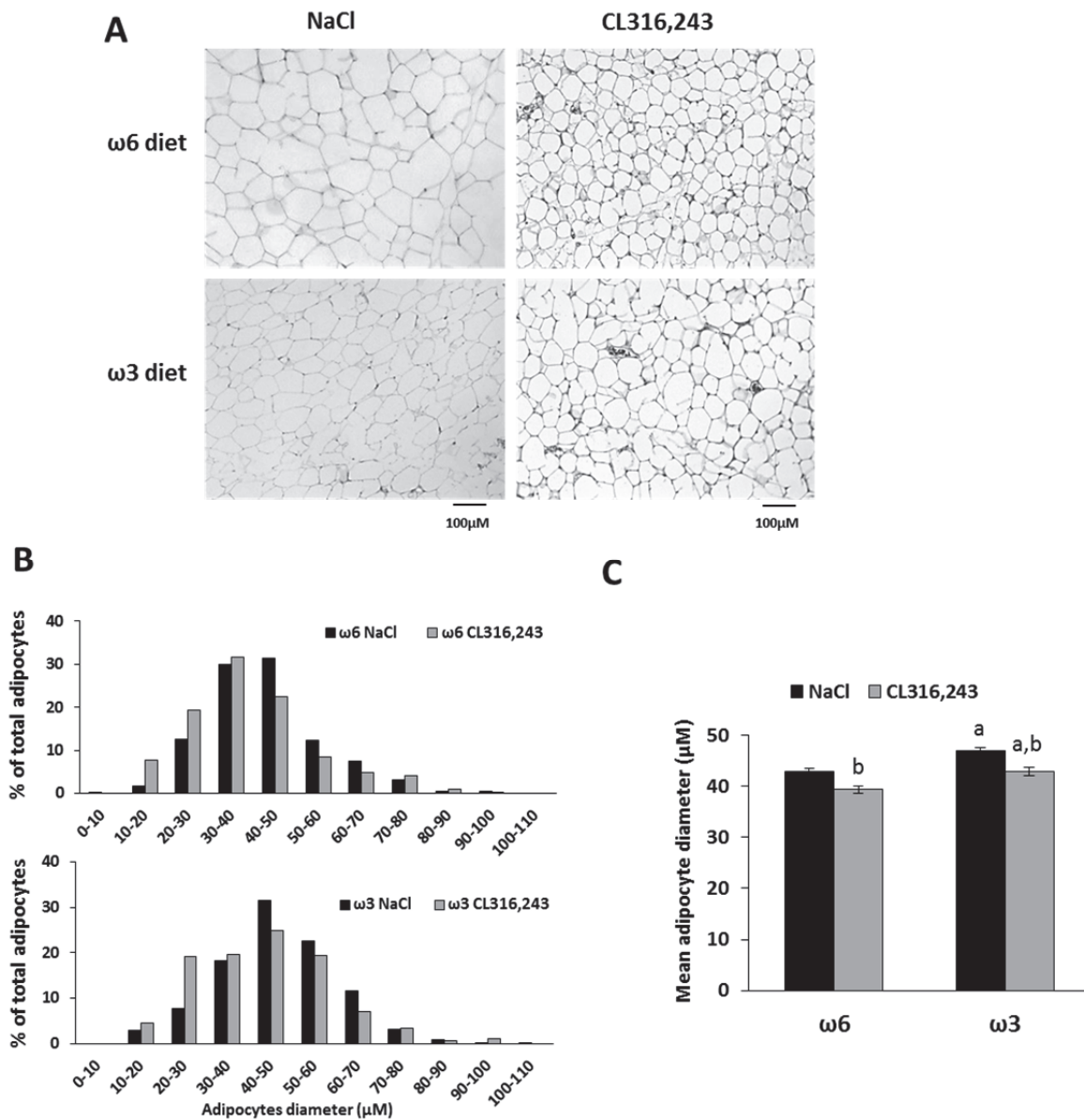
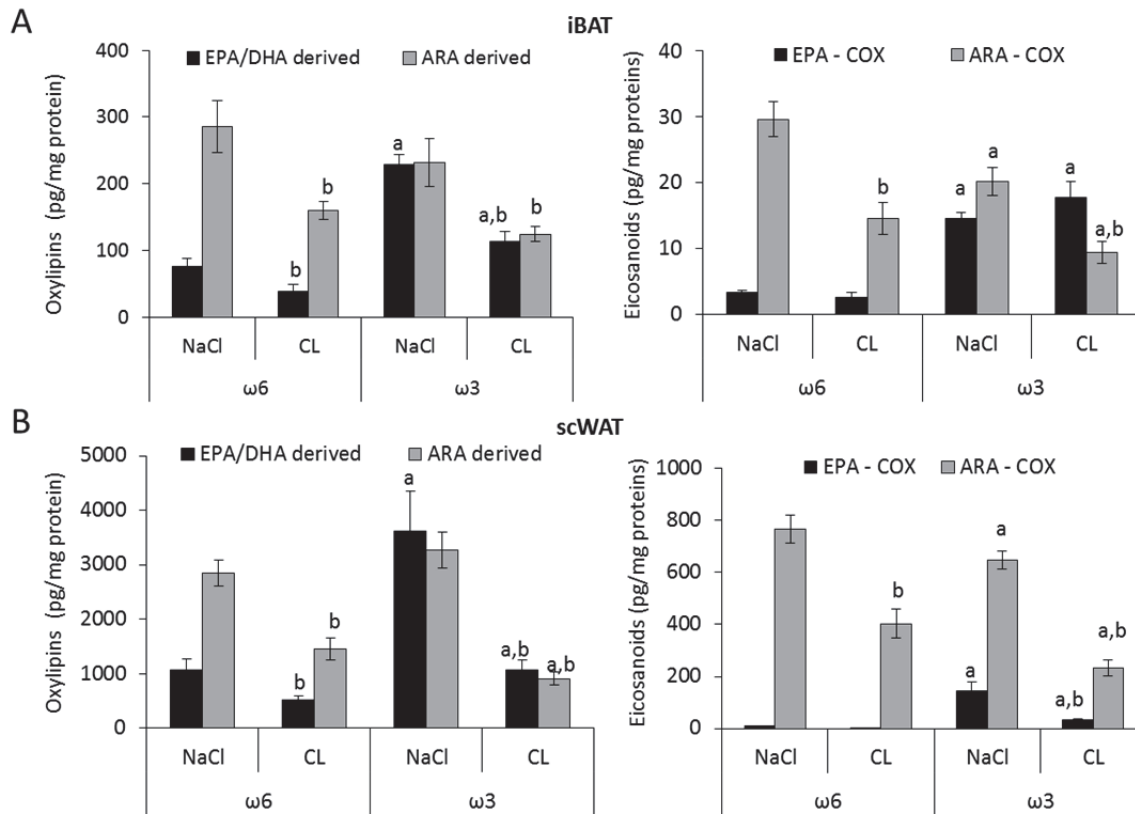


Supplemental Figures and Tables



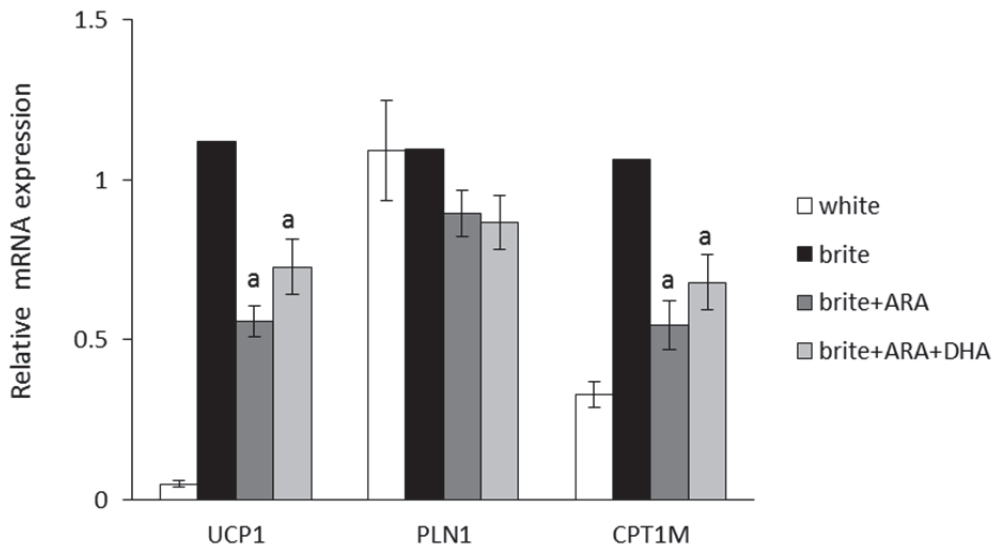
Supplemental Figure S1. Morphological analysis of epididymal white adipose tissue. A)

Histological analysis of epididymal WAT (eWAT) sections from mice fed $\omega 6$ or $\omega 3$ -diet stained with hematoxylin and eosin. B) Distribution and (C) mean diameter of adipocytes. Data are presented as % of total adipocytes or mean \pm SEM, n = 500 adipocytes from 4 mice per group. a = $p < 0.01$ $\omega 6$ vs. $\omega 3$ and b = $p < 0.01$ NaCl vs CL316,243.



Supplemental Figure S2. Abundance of ω6 and ω3 PUFA-derived oxylipins in BAT and WAT.

Oxylipin levels were measured by LC-MS/MS in iBAT and scWAT of vehicle and CL316,243-treated mice fed with ω6 and ω3 diet. Total abundance of oxylipins in (A) iBAT and (B) scWAT of ω6 diet and ω3 diet-fed mice in response to vehicle and CL316,243-treatment. Oxylipins were classified by their origin, *i.e.* derived from the metabolism of the ω3 PUFAs EPA and DHA, or from the ω6 PUFA ARA. Data are presented as mean ± SEM of 8 mice per group. a = p<0.01 ω6 vs ω3 and b = p<0.01 NaCl vs CL316,243.



Supplemental Figure S3. DHA did not compete with ARA. hMADS cells were differentiated into white or brite adipocytes. Brite hMADS adipocytes were treated with 10 μ M ARA in the presence or absence of 3.3 μ M DHA during the last 3 days of adipogenic differentiation. mRNA expressions were evaluated by RT-qPCR and expressed as fold relative to “brite” values. Data are presented as mean \pm SEM of 3 independent experiments. a = $p < 0.01$ vs brite and b = $p < 0.01$ vs brite + ARA.

Supplemental Table S1. Diet composition.

	ω6 diet	ω3 diet
Metabolizable energy [KCal/g]	3.2	
Crude protein [g/Kg]	159	
Digestible carbohydrate [g/Kg]	519	
Crude fat [g/Kg]	51	
Saturated FAs [% of total FAs]	12	
Monounsaturated FAs [% of total FAs]	26	14
Polyunsaturated FAs [% of total FAs]	62	74
Linoleic acid [g/Kg]	30	
Alpha-linolenic [g/Kg]	1	6.4
EPA [g/Kg]	0	0.8
DHA [g/Kg]	0	0.8
Σ ω6 [g/Kg]	30	
Σ ω3 [g/Kg]	1	8
ω6 / ω3 PUFA ratio	30	3.75

Supplemental Table S2. List of analyzed oxylipins

ARA-derived oxylipins			EPA/DHA-derived oxylipins		
ARA-COX	ARA-LOX	ARA-other	EPA-COX	EPA-LOX	DHA-LOX
11 β -PGF2 α	5-HETE	5,6-EET	18-HEPE	LTB5	14-HDoHE
15 Δ -PGJ2	8-HETE	8,9-EET	PGE3		17-HDoHE
6keto-PGF1 α	12-HETE	11,12-EET			Maresin 1
8iso-PGA2	15-HETE	14,15-EET			Protectin Dx
PGD2	5,6-DiHETE				Resolvin D1
PGE2	5oxoETE				Resolvin D2
PGF2 α	LTB4				
TxB2	LxA4				
	LxB4				