

SUPPLEMENTAL MATERIALS

SUPPLEMENTAL TABLES

Supplemental Table I. *Free HETE and HODE content of Western Diet (WD).* Random samples of WD were treated the same as the intestinal contents as described in METHODS and the levels of 5-HETE, 15-HETE, 9-HODE and 13-HODE were determined by LC-ESI-MS/MS. The values shown are Mean \pm SD.

	HETE or HODE in WD (ng/100 mg diet)
5-HETE	0.32 \pm 0.1
15-HETE	0.047 \pm 0.014
9-HODE	21 \pm 3.3
13-HODE	19 \pm 2.7

Supplemental Table II. *The Western Diet (WD) increased plasma levels of free arachidonic acid and plasma levels of free metabolites of arachidonic and linoleic acids.* Female LDLR^{-/-} mice 11 – 12 months of age (n = 20 per group) were maintained on a chow diet or placed on WD for two weeks. Plasma was obtained from fasting mice as described in METHODS and free arachidonic acid and metabolites of arachidonic and linoleic acids were determined by LC-ESI-MS/MS as described in METHODS. The data shown are Mean \pm SD. NS = Not significant.

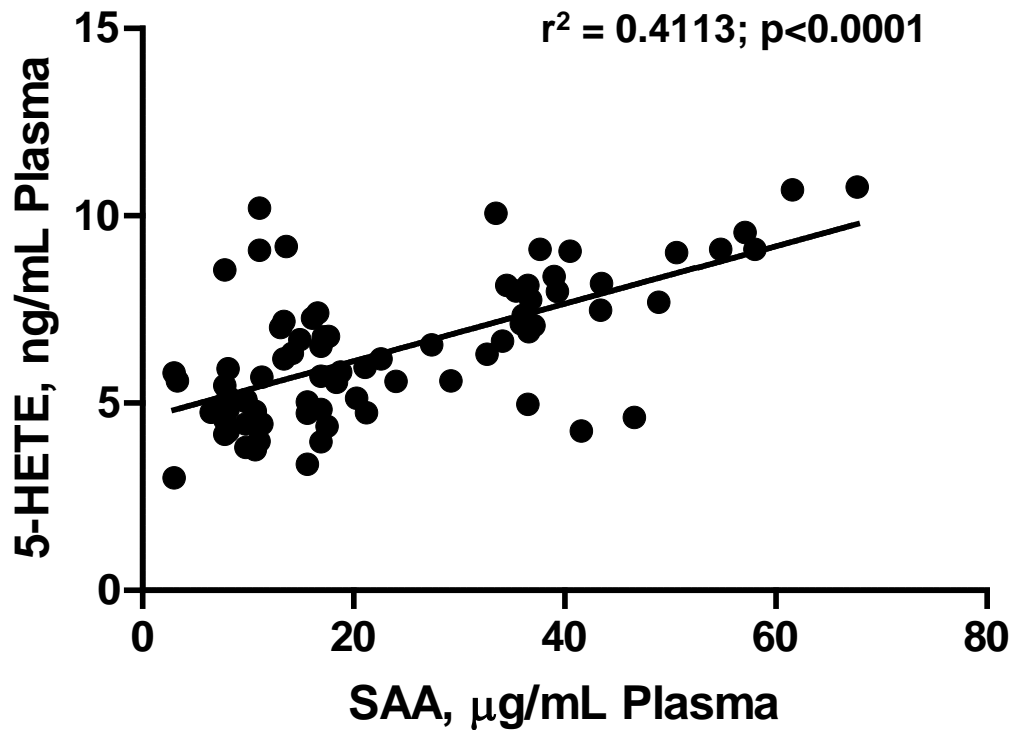
	A Chow Diet (ng/mL)	B WD (ng/mL)	P Value A vs. B
Arachidonic Acid	7351 \pm 572	9383 \pm 1916	0.0002
5-HETE	2.11 \pm 1.7	5.21 \pm 4.2	0.0050
12-HETE	157 \pm 79	391 \pm 192	<0.0001
15-HETE	4.25 \pm 1.3	6.80 \pm 2.1	<0.0001
9-HODE	6.12 \pm 2.5	9.79 \pm 3.9	0.0013
13-HODE	18.4 \pm 8.8	32.2 \pm 16	0.0021
PGD2	8.30 \pm 4.7	26.8 \pm 15	<0.0001
PGE2	8.81 \pm 4.7	12.3 \pm 7.0	0.0735
TXB2	22.1 \pm 18	33.2 \pm 27	NS

Supplemental Table III. Feeding *LDLR^{-/-}* mice 12-HETE or 15-HETE or 13-HODE administered in mouse chow without the Western Diet decreased plasma HDL-cholesterol levels, increased plasma triglyceride levels, decreased paraoxonase activity and increased plasma serum amyloid A (SAA) levels. Female *LDLR^{-/-}* mice 8 to 9 months of age (n = 20 per group) were fed laboratory rodent chow (Ralston Purina) prepared and presented to the mice as described in METHODS. The chow did or did not contain oxidized fatty acids at a concentration of 1 µg per gram diet to provide each mouse on average with 5 µg of the specified oxidized fatty acid per day. After two weeks on the diet, the mice were bled and their plasma was analyzed for lipids, paraoxonase (PON) activity and plasma serum amyloid A (SAA) as described in METHODS. The data shown are the Mean ± SD. P values are for the comparison with No Addition. NS = not significant.

	A No Addition	B + 12- HETE	P Value A vs. B	C + 15- HETE	P Value A vs. C	D + 13- HODE	P Value A vs. D
Total Cholesterol (mg/dL)	430 ± 69	412 ± 64	NS	414 ± 62	NS	409 ± 73	NS
HDL- Cholesterol (mg/dL)	81 ± 17	72 ± 6	0.0500	69 ± 17	0.0334	72 ± 10	0.0470
Triglycerides (mg/dL)	119 ± 39	154 ± 60	0.0329	149 ± 43	0.0269	148 ± 52	0.0519
PON Activity (U/mL)	79 ± 52	48 ± 31	0.0289	49 ± 32	0.0342	49 ± 32	0.0337
SAA (µg/mL)	3.2 ± 2.8	6.2 ± 4.7	0.0233	5.9 ± 4.3	0.0292	5.8 ± 4.9	0.054

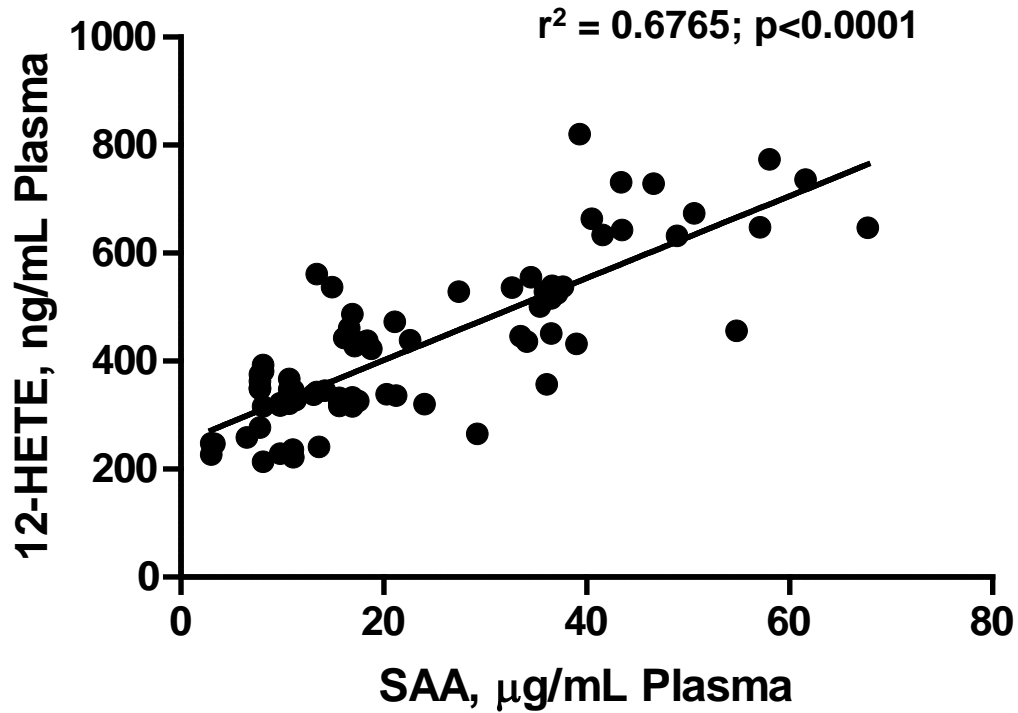
SUPPLEMENTAL FIGURES

Supplemental Figure IA.



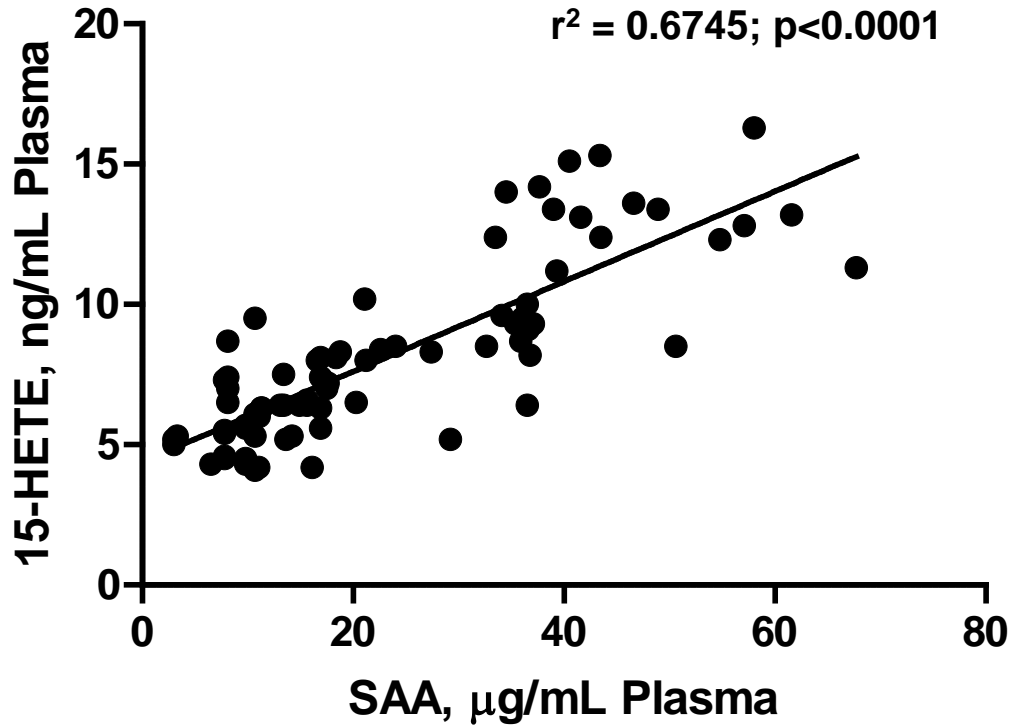
Supplemental Figure IA. Plasma levels of free 5-HETE significantly correlate with plasma SAA levels. The data from each mouse described in Table 7 were compared by linear regression analysis as described in METHODS.

Supplemental Figure IB.



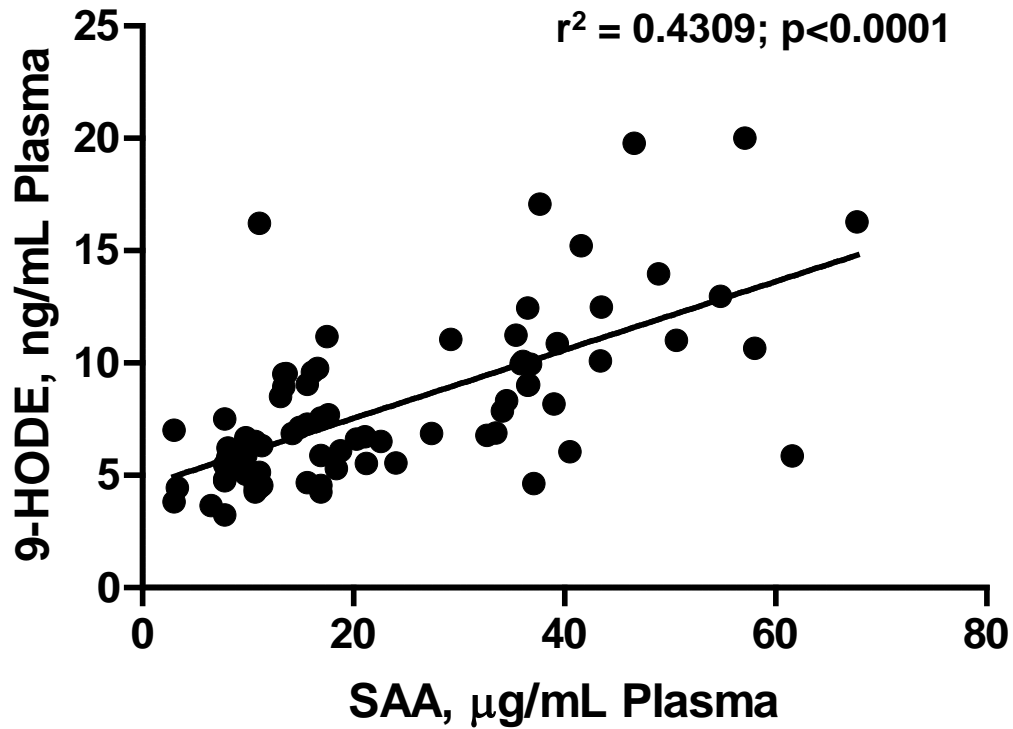
Supplemental Figure IB. Plasma levels of 12-HETE significantly correlate with plasma SAA levels. The data from each mouse described in Table 7 were compared by linear regression analysis as described in METHODS.

Supplemental Figure IC.



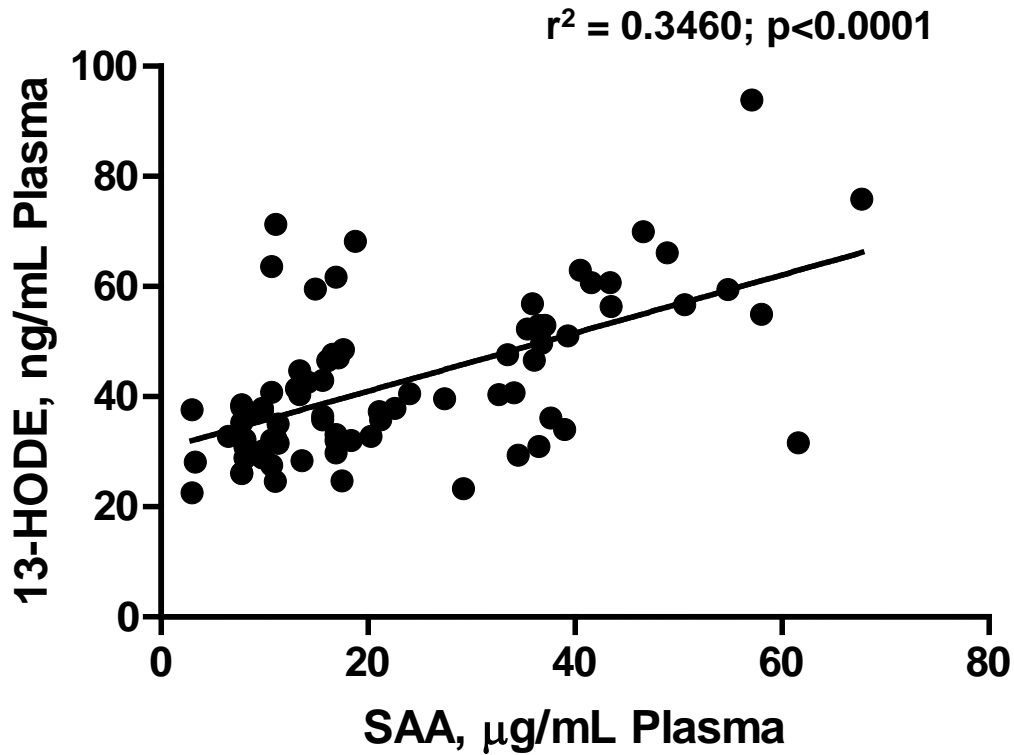
Supplemental Figure IC. Plasma levels of free 15-HETE significantly correlate with plasma SAA levels. The data from each mouse described in Table 7 were compared by linear regression analysis as described in METHODS.

Supplemental Figure ID.



Supplemental Figure ID. Plasma levels of free 9-HODE significantly correlate with plasma SAA levels. The data from each mouse described in Table 7 were compared by linear regression analysis as described in METHODS.

Supplemental Figure IE.



Supplemental Figure IE. Plasma levels of free 13-HODE significantly correlate with plasma SAA levels. The data from each mouse described in Table 7 were compared by linear regression analysis as described in METHODS.