Supporting Information

The Effects of Omega-3 Fatty Acid Deficiency During Gestation on Oxidative Fatty Acid Degradation During Maturity in a Mouse Model of Alzheimer's Disease

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Table S1. Numerical data for figure 2a. Values represent DHA concentrations mmoles/gm wet tissue.

	ARA			DHA		
	ave	**s.e.m**	**n**	**ave**	**s.e.m**	**n**
NN	64	16	8	60	8	8
LN	59	7	7	48	4	7
LL	62	10	6	28	4	6

Table S2. Numerical data for figure 2b. Values represent the Western blot band intensities digitized with Image J software. Only the results within rows are quantitatively comparable, since they were run on the same gel.

	WT			TG			TG/WT	
	ave	**s.e.m**	**n**	**ave**	**s.e.m**	**n**	**ratio**	**s.e.m**
NN	21,523	780	5	15,005	2,406	5	0.7	0.05
LN	12,790	1,355	7	13,098	3,047	5	1.1	0.10
LL	17,077	3,298	5	12,983	3,298	6	1.1	0.20

Table S3. Numerical data for figure 3. Values represent the percentage of total radioactivity in the Pr and Sp fractions of the BD_{MU}, and the W and M fractions of the BD_L, for 3 brain regions (Cb – cerebellum, Cx – cortex, and Hc – hippocampus), and the three diet groups.

Pr							
	Diet	**WT**			**TG**		
		ave	**s.e.m**	**n**	**ave**	**s.e.m**	**n**
Cb	NN	7.4	1.6	12	4.9	2.7	4
	LN	12.9	3.9	12	27.5	10.9	6
	LL	6.8	4.9	5	10.5	3.7	8
Cx	NN	13.9	3.5	11	14.4	5.2	5
	LN	12.6	7.0	7	15.6	6.5	8
	LL	5.9	3.9	7	8.7	3.6	8
Hc	NN	7.0	1.6	13	9.2	4.0	5
	LN	8.4	2.7	11	2.9	1.0	8
	LL	6.7	2.0	6	9.3	4.6	9
Sp							
	Diet	**WT**			**TG**		
		ave	**s.e.m**	**n**	**ave**	**s.e.m**	**N**
Cb	NN	18.4	4.3	12	21.5	5.4	4
	LN	34.8	7.1	12	23.3	4.9	6
	LL	34.2	7.4	5	35.1	8.5	8
Cx	NN	25.9	6.9	11	29.8	3.4	5
	LN	34.0	9.4	7	25.8	8.4	8
	LL	26.5	6.8	7	21.2	5.7	8
Hc	NN	21.5	5.0	13	42.0	13.1	5
	LN	33.7	6.6	11	28.9	7.3	8
	LL	18.4	3.9	6	19.0	3.2	9
W							
	Diet	**WT**			**TG**		
		ave	**s.e.m**	**n**	**ave**	**s.e.m**	**N**
Cb	NN	10.8	3.9	12	7.9	2.8	4
	LN	7.3	1.3	12	8.6	2.7	6
	LL	6.5	1.7	5	4.8	1.4	8
Cx	NN	12.7	3.6	12	4.3	1.3	5
	LN	5.1	1.4	7	5.4	1.3	8
	LL	6.5	1.6	7	8.5	2.9	8
Hc	NN	7.6	1.5	13	1.8	0.8	5
	LN	9.3	1.7	11	6.7	1.2	8
	LL	6.1	1.3	6	10.3	2.0	9
M							
	Diet	**WT**			**TG**		
		ave	**s.e.m**	**n**	**ave**	**s.e.m**	**N**
Cb	NN	63.5	4.9	12	65.0	3.9	4
	LN	47.2	7.2	12	50.9	10.7	6
	LL	52.6	10.7	5	48.4	9.9	8
Cx	NN	51.0	7.0	11	51.5	7.9	5
	LN	51.8	10.3	7	53.1	8.6	8
	LL	61.2	5.9	7	61.8	8.3	8
Hc	NN	64.0	4.8	13	47.1	13.6	4
	LN	49.3	6.3	11	61.5	6.5	8
	LL	68.7	3.8	6	61.6	2.9	9

Table S4. Numerical data for figure 4. Values represent the percentage of total radioactivity in each fraction.

Fraction I							
	Diet	**WT**			**TG**		
		ave	**s.e.m**	**N**	**ave**	**s.e.m**	**n**
Cb	NN	29.0	6.8	12	45.6	9.9	5
	LN	27.0	8.3	9	7.0	3.0	7
	LL	25.0	15.7	6	0.3	0.3	6
Cx	NN	28.9	5.5	9	54.3	3.8	5
	LN	12.0	8.2	4	5.7	2.5	6
	LL	0.2	0.1	5	2.9	1.5	7
Hc	NN	32.8	9.2	12	48.4	10.3	5
	LN	1.5	1.3	7	6.4	3.8	7
	LL	7.9	6.5	6	4.3	2.4	7
Fraction II							
	Diet	**WT**			**TG**		
		ave	**s.e.m**	**N**	**ave**	**s.e.m**	**N**
Cb	NN	0.3	0.4	12	1.5	0.5	5
	LN	0.4	0.4	9	1.0	1.0	7
	LL	5.2	2.9	6	0.7	0.4	6
Cx	NN	1.3	0.6	9	1.8	1.0	5
	LN	0	0	4	2.1	1.1	6
	LL	2.6	1.4	5	0.55	0.5	7
Hc	NN	0.7	0.3	12	4.0	1.5	5
	LN	0.1	0.1	7	6.9	4.7	7
	LL	0.5	0.4	6	4.3	2.4	7
Fraction III							
	Diet	**WT**			**TG**		
		ave	**s.e.m**	**N**	**ave**	**s.e.m**	**N**
Cb	NN	0.4	0.2	12	0.4	0.3	5
	LN	1.7	1.3	9	0.1	0.1	7
	LL	0	0	6	0.2	0.2	6
Cx	NN	0.3	0.1	9	0.8	0.5	5
	LN	0	0	4	0.9	0.4	6
	LL	0.4	0.3	5	0.8	0.7	7
Hc	NN	0.1	0.1	12	0	0	5
	LN	0	0	7	0.5	0.3	7
	LL	0	0	6	2.7	2.4	7
Fraction IV							
	Diet	**WT**			**TG**		
		ave	**s.e.m**	**N**	**Ave**	**s.e.m**	**N**
Cb	NN	0.7	0.4	12	0.8	0.7	5
	LN	0.7	0.6	9	0.9	0.6	7
	LL	0.6	0.5	6	0.1	0.1	6
Cx	NN	0.7	0.5	9	0.9	0.3	5
	LN	0.9	0.9	4	4.3	1.7	6
	LL	2.3	1.2	5	1.3	0.8	7
Hc	NN	1.3	0.8	12	1.6	0.8	5
	LN	1.4	1.2	7	1.0	0.7	7
	LL	1.0	0	6	0.8	0.5	7

Table S4 (continued)

Fraction V							
	Diet	**WT**			**TG**		
		ave	**s.e.m**	**n**	**ave**	**s.e.m**	**n**
Cb	NN	55.0	7.1	12	38.0	6.9	5
	LN	54.8	8.6	9	77.9	4.7	7
	LL	51.1	13.7	6	79.5	2.5	6
Cx	NN	57.7	7.0	9	33.0	3.2	5
	LN	64.6	14.3	4	70.4	5.1	6
	LL	81.0	3.8	5	75.7	3.5	7
Hc	NN	56.4	8.5	12	35.2	3.9	5
	LN	81.9	4.6	7	72.1	5.2	7
	LL	80.2	3.3	6	60.8	9.3	7
Fraction VI							
	Diet	**WT**			**TG**		
		ave	**s.e.m**	**n**	**Ave**	**s.e.m**	**n**
Cb	NN	13.9	2.0	12	13.4	3.5	5
	LN	15.5	4.4	9	13.0	1.8	7
	LL	18.0	3.4	6	19.0	2.5	6
Cx	NN	11.1	2.1	9	8.7	2.7	5
	LN	22.4	6.0	4	16.4	2.0	6
	LL	13.5	4.2	5	18.7	3.3	7
Hc	NN	8.6	2.4	12	10.7	3.9	5
	LN	14.9	4.4	7	13.1	3.8	7
	LL	11.3	3.3	6	23.5	5.1	7

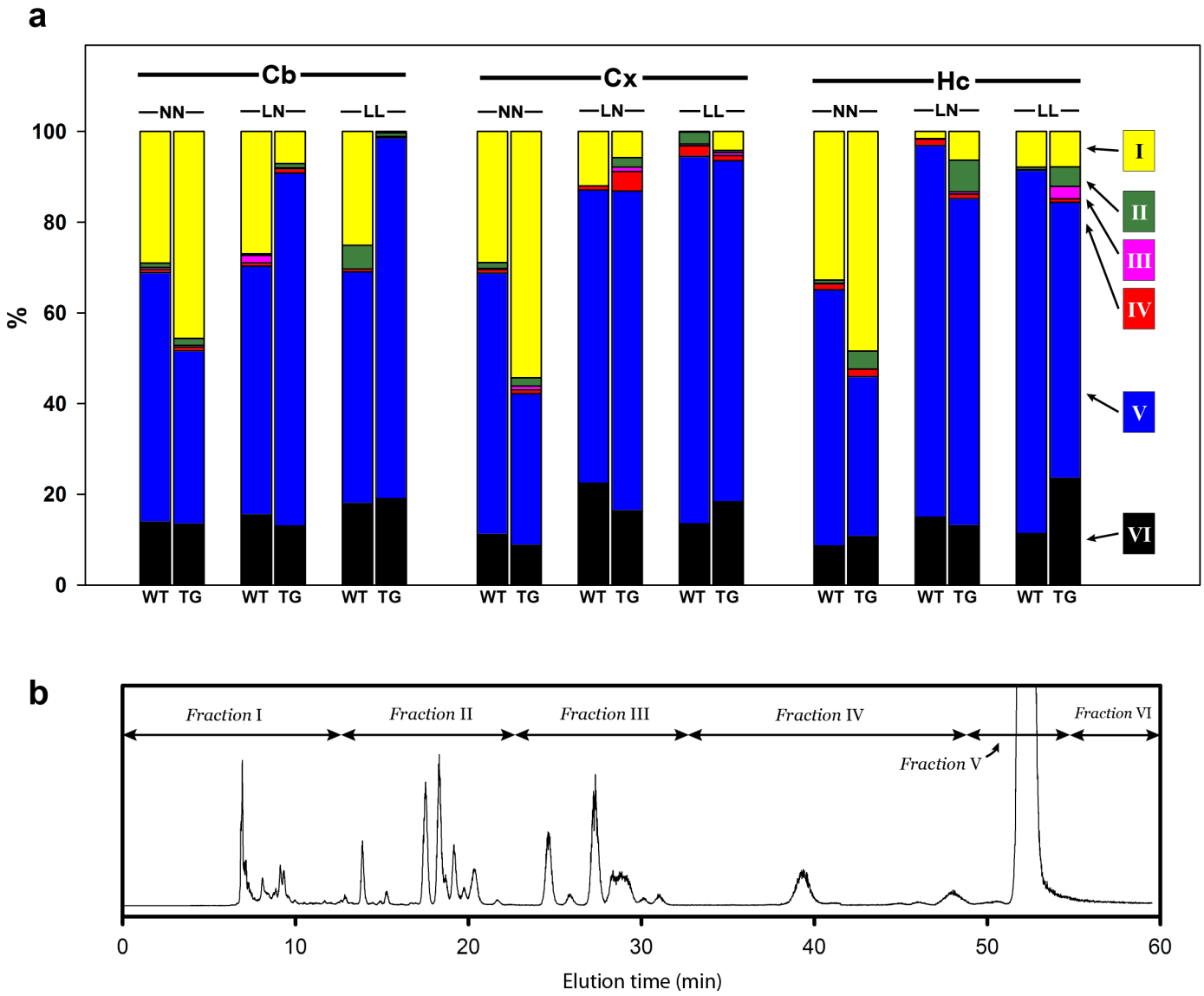

Figure S1. Alternative representation of the distribution of ARA-derived radioactivity in the M fraction. As in figure 4, M fractions were separated by HPLC into the 6 subfractions illustrated in figure 1. (A) The activity in each subfraction is expressed as a percentage of the total in all subfractions for each sample, and the overall height of each bar represents 100% of the activity. The component bars are ordered so that the most polar (earliest eluting) fraction I is on top, and the least polar (latest eluting) fraction VI is on the bottom. Unmodified ARA elutes in fraction V. (B) Total ion current chromatogram for a sample of the M fraction showing the intervals over which the six fractions were collected.