

Supplemental Table 1 - Non-significant associations of FF FA.

Number of oocytes§	Beta	t	p	Percentage mature oocytes§	Beta	t	p
C14:0	-1.249	-1.960	0.053	C14:0	-0.669	-0.480	0.632
C16:0	0.243	1.726	0.088	C16:0	0.216	0.706	0.482
OA	-0.033	-0.093	0.926	C16:1	0.656	0.472	0.638
EA	-1.190	-1.960	0.053	C18:0	0.148	0.146	0.884
C18:2	0.144	1.438	0.154	OA	-0.549	-0.727	0.469
SFA	0.111	0.645	0.521	EA	0.008	0.006	0.995
MUFA	-0.290	-1.376	0.173	C18:2	-0.126	-0.583	0.561
PUFA	0.045	0.344	0.732	C20:2	-0.254	-0.195	0.846
				C20:3	0.401	0.298	0.767
				AA	1.163	1.156	0.251
				SFA	0.283	0.774	0.441
				MUFA	-0.128	-0.280	0.780
				PUFA	-0.115	-0.414	0.680

Percentage fertilized oocytes§	Beta	t	p	Percentage zygotes§	Beta	t	p
C14:0	0.102	0.085	0.933	C14:0	-1.467	-1.085	0.281
C16:0	-0.157	-0.593	0.555	C16:0	0.173	0.579	0.564
C16:1	0.353	0.286	0.776	C16:1	-1.073	-0.793	0.430
C18:0	1.205	1.392	0.167	C18:0	-0.086	-0.087	0.931
OA	0.018	0.028	0.978	OA	-0.879	-1.199	0.234
EA	0.314	0.273	0.786	EA	-1.406	-1.092	0.278
C18:2	0.143	0.676	0.501	C18:2	0.143	0.676	0.501
C20:2	0.463	0.411	0.682	C20:2	-0.617	-0.487	0.627
C20:3	0.880	0.753	0.453	C20:3	-0.665	-0.506	0.614
AA	-0.435	-0.440	0.661	AA	-0.435	-0.440	0.661
SFA	0.135	0.378	0.707	SFA	0.135	0.378	0.707
MUFA	0.057	0.145	0.885	MUFA	-0.600	-1.362	0.177
PUFA	0.013	0.053	0.958	PUFA	0.146	0.539	0.592

	CP1 outcome¶	% total FA	t	p		CPC outcome¶	% total FA	t	p
C14:0	positive	2.77±1.36	0.488	0.627	C14:0	positive	2.76±1.35	0.821	0.414
	negative	2.64±1.10				negative	2.53±0.97		
C16:0	positive	27.34±5.05	1.804	0.075	C16:0	positive	22.82±5.75	1.430	0.156
	negative	29.52±6.16				negative	29.69±5.31		
C16:1	positive	3.23±1.26	0.12	0.904	C16:1	positive	3.33±1.30	1.623	0.108
	negative	3.20±1.24				negative	2.87±1.04		
C18:0	positive	6.41±1.77	0.212	0.833	C18:0	positive	6.51±1.84	1.316	0.192
	negative	6.33±1.66				negative	5.99±1.38		
OA	positive	12.78±2.27	0.756	0.452	OA	positive	13.00±2.23	0.351	0.726
	negative	13.17±2.50				negative	12.80±2.78		
EA	positive	3.51±1.33	0.458	0.648	EA	positive	3.58±1.37	0.701	0.485
	negative	3.38±1.27				negative	4.19±6.39		
C18:2	positive	31.98±9.03	1.187	0.239	C18:2	positive	31.01±8.52	0.228	0.820
	negative	29.94±6.47				negative	30.59±8.01		
C20:2	positive	2.69±1.43	0.905	0.368	C20:2	positive	2.61±1.49	0.639	0.525
	negative	2.43±1.21				negative	2.41±0.89		
C20:3	positive	3.43±1.37	0.176	0.861	C20:3	positive	3.51±1.40	0.805	0.423
	negative	3.38±1.19				negative	4.20±6.35		
AA	positive	5.85±1.75	0.39	0.698	AA	positive	5.87±1.77	0.161	0.872
	negative	6.00±1.78				negative	5.93±1.80		
SFA	positive	36.53±4.42	1.957	0.054	SFA	positive	37.09±4.74	1.006	0.317
	negative	38.50±4.91				negative	38.20±4.72		
MUFA	positive	19.52±3.80	0.2725	0.78591	MUFA	positive	19.90±3.87	1.282	0.203
	negative	19.75±3.92				negative	18.75±3.85		
PUFA	positive	43.95±6.57	1.63747	0.10527	PUFA	positive	43.00±6.44	0.029	0.977
	negative	41.75±5.76				negative	43.04±6.20		

Birth weight§	Beta	t	p
C14:0	41.947	0.661	0.512
C16:0	-4.488	-0.294	0.771
C16:1	31.888	0.492	0.625
C18:0	-9.491	-0.202	0.841
OA	-29.574	-0.764	0.449
EA	52.824	0.842	0.405
C18:2	-2.283	-0.231	0.818
C20:2	20.977	0.360	0.721
C20:3	54.717	0.827	0.413
AA	42.360	0.852	0.399
SFA	-4.082	-0.232	0.818
MUFA	0.640	0.028	0.977
PUFA	1.927	0.151	0.880

§Multiple regression analysis with the indicated dependent variable, and FA as independent variable, adjusted for age and BMI. n=88.

¶t-test.

*CP1: positive n=47, negative n=41; CPC: positive n=58, negative n=30.

Supplemental Table 2 - Non-significant associations of serum FA.

Number of oocytes§	Beta	t	p	Percentage mature oocytes§	Beta	t	p		
C14:0	-1.174	-1.200	0.234	C14:0	-1.460	-0.693	0.490		
C16:0	0.329	1.213	0.229	C16:1	-0.248	-0.149	0.882		
C16:1	-1.065	-1.380	0.171	C18:0	0.102	0.116	0.908		
C18:0	-0.539	-1.332	0.187	OA	0.422	1.235	0.220		
OA	0.269	1.698	0.093	EA	1.442	1.284	0.203		
EA	0.573	1.089	0.279	C18:2	-0.069	-0.211	0.833		
C18:2	-0.073	-0.479	0.633	C20:2	0.474	0.309	0.758		
C20:2	-0.394	-0.551	0.583	C20:3	0.439	0.235	0.814		
C20:3	-1.318	-1.535	0.129	AA	0.182	0.255	0.799		
AA	-0.472	-1.434	0.155	C20:5	-1.454	-0.888	0.377		
C20:5	-0.424	-0.552	0.582	MUFA	0.612	1.702	0.092		
SFA	-0.003	-0.012	0.991	PUFA	-0.085	-0.207	0.837		
MUFA	0.311	1.856	0.067						
Percentage fertilized oocytes§	Beta	t	p	Percentage zygotes§	Beta	t	p		
C14:0	1.782	0.754	0.453	C14:0	1.582	0.603	0.548		
C16:0	-0.147	-0.223	0.824	C16:0	-0.596	-0.819	0.415		
C16:1	0.812	0.433	0.666	C16:1	2.673	1.296	0.198		
C18:0	1.123	1.152	0.253	C18:0	1.213	1.120	0.266		
OA	-0.052	-0.133	0.894	OA	0.194	0.451	0.653		
EA	-0.687	-0.540	0.590	C18:2	-0.603	-1.508	0.135		
C18:2	-0.178	-0.487	0.628	C20:2	3.489	1.863	0.066		
C20:2	-0.051	-0.030	0.976	C20:3	3.227	1.406	0.163		
C20:3	2.207	1.061	0.292	AA	0.399	0.450	0.654		
AA	-0.027	-0.033	0.973	C20:5	1.618	0.792	0.431		
C20:5	0.967	0.524	0.602	SFA	0.079	0.102	0.919		
SFA	0.554	0.798	0.427	MUFA	0.227	0.499	0.619		
MUFA	-0.090	-0.220	0.826	PUFA	-0.325	-0.632	0.529		
PUFA	-0.130	-0.280	0.780						
	CP1 outcome¶	% total FA	t	p		CPC outcome¶	% total FA	t	p
C14:0	positive	2.07±0.77	1.071	0.287	C14:0	positive	2.03±0.84	0.500	0.618
	negative	1.90±0.70				negative	1.96±0.79		
C16:0	positive	23.95±2.46	1.147	0.254	C16:0	positive	23.97±2.43	0.887	0.377
	negative	24.67±3.29				negative	24.50±3.42		
C16:1	positive	3.09±0.95	0.692	0.491	C16:1	positive	3.06±0.97	1.008	0.317
	negative	3.24±0.98				negative	3.32±1.10		
C18:0	positive	6.14±1.82	0.330	0.742	C18:0	positive	6.07±1.88	0.867	0.388
	negative	6.28±1.81				negative	6.44±2.06		
C18:2	positive	31.20±4.88	0.477	0.634	C18:2	positive	31.23±4.83	0.306	0.760
	negative	31.73±5.56				negative	31.45±0.84		
C20:2	positive	1.42±1.19	0.279	0.781	C20:2	positive	1.42±1.19	0.339	0.736
	negative	1.36±1.06				negative	1.36±1.06		
C20:3	positive	2.75±0.96	0.606	0.546	C20:3	positive	2.76±0.96	0.531	0.597
	negative	2.88±0.90				negative	2.88±0.90		
AA	positive	6.42±2.84	1.012	0.314	AA	positive	6.42±2.64	1.022	0.310
	negative	6.95±2.19				negative	6.95±2.19		
C20:5	positive	1.80±1.18	0.042	0.966	C20:5	positive	1.80±1.18	0.010	0.992
	negative	1.81±0.89				negative	1.81±0.89		
SFA	positive	32.18±2.18	1.125	0.264	SFA	positive	32.07±2.27	1.393	0.167
	negative	32.84±3.29				negative	32.90±3.26		
MUFA	positive	24.05±3.29	1.384	0.170	MUFA	positive	24.30±3.70	1.755	0.083
	negative	22.69±5.65				negative	22.66±5.58		
PUFA	positive	43.78±3.57	0.769	0.444	PUFA	positive	43.63±3.69	1.019	0.311
	negative	44.47±4.74				negative	44.44±4.68		
Birth weight§	Beta	t	p						
C14:0	-64.884	-0.637	0.528						
C16:0	25.215	0.633	0.530						
C16:1	-58.818	-0.706	0.485						
C18:0	-42.492	-0.938	0.354						
OA	9.751	0.437	0.665						
EA	-40.724	-0.592	0.557						
C18:2	3.004	0.205	0.838						
C20:2	19.638	0.255	0.800						
C20:3	-76.642	-0.867	0.391						
AA	-2.542	-0.064	0.949						
C20:5	12.825	0.162	0.872						
SFA	-15.370	-0.406	0.687						
MUFA	1.184	0.055	0.956						
PUFA	3.535	0.170	0.866						

§Multiple regression analysis with the indicated dependent variable, and FA as independent variable, adjusted for age and BMI. n=88.

¶t-test.

*CP1: positive n=47, negative n=41; CPC: positive n=58, negative n=30.

Italics: borderline (p<0.10) statistical significance.

Supplemental Table 3 - Non-significant associations of peripheral blood DNA methylation.

	Beta	t	p
Number of oocytes§	0.023	0.233	0.816
Percentage mature oocytes§	0.123	0.493	0.623
Percentage zygotes§	-0.040	-0.197	0.844
CP1 outcome¶°	mdC(%)	t	p
positive	11.66±7.97	0.772	0.442
negative	10.24±8.08		
CPC outcome¶°	mdC(%)	t	p
positive	12.36±7.85	1.208	0.23
negative	10.10±8.44		
Birth weight§	Beta	t	p
	2.228	0.211	0.834

§Multiple regression analysis with the indicated dependent variable and DNA methylation (% mdC) as independent variable, adjusted for age and BMI. n=88

¶t-test.

°CP1: positive n=47, negative n=41; CPC: positive n=58, negative n=30.

Supplemental Table 4 - Non-significant associations of BMI.

	Beta	t	p
Number of oocytes§	0.285	1.646	0.104
Percentage mature oocytes§	-0.186	-0.502	0.617
Percentage fertilized oocytes§	-0.258	-0.621	0.536
Percentage zygotes§	-0.500	-1.084	0.281
FF FA§	Beta	t	p
C14:0	-0.002	-0.069	0.945
C16:0	0.040	0.301	0.764
C16:1	0.017	0.586	0.559
C18:0	0.002	0.055	0.956
EA	0.004	0.122	0.903
C18:2	-0.128	-0.685	0.495
C20:2	0.004	0.116	0.908
C20:3	0.023	0.761	0.449
SFA	0.040	0.364	0.717
<i>MUFA</i>	<i>0.161</i>	<i>1.817</i>	<i>0.073</i>
PUFA	-0.201	-1.387	0.169
Serum FA§	Beta	t	p
C14:0	-0.005	-0.250	0.803
C16:0	0.042	0.613	0.541
C16:1	0.013	0.544	0.588
C18:0	0.014	0.314	0.755
OA	0.023	0.199	0.843
EA	0.015	0.411	0.682
C18:2	0.005	0.038	0.970
C20:2	-0.026	-0.995	0.323
C20:3	0.018	0.831	0.408
AA	-0.078	-1.383	0.170
C20:5	-0.021	-0.865	0.390
SFA	0.052	0.798	0.427
MUFA	0.051	0.462	0.645
PUFA	-0.103	-1.053	0.295
DNA m§	Beta	t	p
	0.120	0.623	0.535
Birth weight§	Beta	t	p
	-6.425	-0.295	0.769

§Multiple regression analysis with the indicated dependent variable and DNA methylation (% mdC) as independent variable, adjusted for age. n=88

¶t-test.

Italics: borderline significance (p<0.1).

Supplemental Table 5 - Non-significant associations of percentage body fat.

Fertility parameters§	Beta	t	p
Number of oocytes	0.129	1.226	0.224
Percentage mature oocytes	0.154	0.686	0.495
Percentage fertilized oocytes	-0.222	-0.884	0.379
Percentage zygotes	-0.254	-0.907	0.367
Serum FA§	Beta	t	p
C14:0	-0.008	-0.682	0.497
C16:0	0.056	1.235	0.220
C16:1	0.010	0.739	0.462
C18:0	0.009	0.332	0.741
OA	0.036	0.511	0.610
EA	0.015	0.711	0.479
C20:2	-0.021	-1.368	0.175
C20:3	0.009	0.726	0.470
AA	-0.037	-1.124	0.264
C20:5	-0.011	-0.801	0.425
SFA	0.066	1.382	0.171
MUFA	0.069	1.015	0.313
PUFA	0.120	1.699	0.093
FF FA§	Beta	t	p
C14:0	0.013	0.740	0.461
C16:0	-0.039	-0.483	0.630
C16:1	0.031	1.767	0.081
C18:0	0.023	0.960	0.340
EA	0.023	1.262	0.210
C18:2	-0.141	-1.253	0.214
C20:2	0.015	0.782	0.436
C20:3	0.029	1.620	0.109
AA	-0.030	-1.199	0.234
SFA	-0.002	-0.036	0.971
PUFA	-0.127	-1.444	0.152
DNAm§	Beta	t	p
	-0.019	-0.161	0.872
CP1 outcome¶°	Percentage body fat	t	p
positive	33.8±7.14	1.130	0.262
negative	36.3±7.97		
CPC outcome¶¶	Percentage body fat	t	p
positive	34.58±7.67	0.667	0.507
negative	35.75±7.37		
Birth weight§	Beta	t	p
	8.171	0.739	0.464

§Multiple regression analysis with the indicated dependent variable and percentage body fat as independent variable, adjusted for age. n=88.

¶t-test.

°CP1: positive n=47, negative n=41; CPC: positive n=58, negative n=30.

Supplemental Table 6 - Non-significant associations of infant birth weight with FF and serum FA.

FF FA§	Beta	t	p
C14:0	13.645	0.140	0.890
C16:0	1.711	0.031	0.975
C16:1	-158.884	-0.824	0.415
C18:0	-9.491	-0.202	0.841
OA	363.211	1.450	0.157
<i>EA</i>	<i>1160.727</i>	<i>1.888</i>	<i>0.068</i>
C18:2	-2.618	-0.006	0.995
C20:2	-61.177	-0.134	0.894
C20:3	197.290	0.958	0.344
AA	47.724	0.107	0.916
SFA	44.792	1.063	0.296
MUFA	-389.083	-1.494	0.145
PUFA	23.103	0.056	0.955
Serum FA§	Beta	t	p
C14:0	-297.123	-0.451	0.657
C16:0	2.016	0.020	0.984
C16:1	409.706	0.775	0.448
C18:0	-55.559	-0.299	0.768
OA	26.728	0.448	0.659
EA	20.906	0.160	0.875
C18:2	11.390	0.327	0.747
C20:2	244.742	1.191	0.248
C20:3	-549.122	-0.804	0.431
AA	59.465	0.496	0.626
C20:5	255.214	1.263	0.222
SFA	-1.498	-0.037	0.971
MUFA	3.933	0.116	0.908
PUFA	17.221	0.829	0.415

§Multiple regression analysis with infant birth weight as dependent variable and FA as independent variable adjusted for age and BMI. FF FA, n=44; serum FA, n=32.
Italics: borderline ($p < 0.1$) statistical significance.