

**Supplementary Table S1.** Immunoglobulin composition on maternal plasma (MP) regarding the maternal enterotype.

Immunoglobulins	Enterotype I, n = 10		Enterotype II, n = 9	
	mg/L	%	mg/L	%
<b>Total</b>	13207.95 ± 2350.97	-	9683.06 ± 812.32	-
<b>IgM</b>	3968.92 ± 1105.15	27.84 ± 4.56	2728.42 ± 322.15	27.87 ± 1.90
<b>IgG</b>	8800.27 ± 1685.73	68.46 ± 4.55	6530.36 ± 535.74	67.70 ± 2.05
<b>IgG1</b>	7007.03 ± 1686.61	75.03 ± 3.40	4750.65 ± 496.19	71.71 ± 2.78
<b>IgG2</b>	812.50 ± 106.30	11.29 ± 2.13	797.94 ± 127.92	12.32 ± 1.45
<b>IgG3</b>	850.29 ± 109.88	11.82 ± 1.99	856.04 ± 100.30	14.04 ± 2.03
<b>IgG4</b>	130.44 ± 21.77	1.86 ± 0.44	125.73 ± 27.46	1.92 ± 0.30
<b>Th1</b>	8669.83 ± 1686.47	98.14 ± 0.44	6404.64 ± 522.75	98.08 ± 0.30
<b>Th2</b>	130.44 ± 21.77	1.86 ± 0.44	125.73 ± 27.46	1.92 ± 0.30
<b>Th1/Th2</b>	84.78 ± 19.36	-	62.53 ± 10.29	-
<b>IgA</b>	437.98 ± 49.81	3.69 ± 0.33	423.48 ± 36.77	4.43 ± 0.28
<b>IgE</b>	0.78 ± 0.07	0.0069 ± 0.0009	0.79 ± 0.12	0.0083 ± 0.0011

Data shown are immunoglobulin concentrations expressed as mean ± SEM and relative frequencies (%). Mann-Whitney U test was used to determine significant differences. \* $p < 0.05$ . MP, maternal plasma; UCP, umbilical cord plasma. IgG1, IgG2 and IgG3 (Igs-associated Th1 response); IgG4 (Ig-associated Th2 response).

**Supplementary table S2.** Cytokine composition on maternal plasma (MP) regarding the maternal enterotype.

Cytokines	Enterotype I, n = 9		Enterotype II, n = 9	
	pg/mL	%det	pg/mL	%det
GM-CSF	4.56 ± 2.46	33.33 (3/9)	0.00 ± 0.00	0.00 (0/0)
IFN- $\gamma$	13.31 ± 4.20	100 (9/9)	15.11 ± 3.26	100 (9/9)
IL-1 $\beta$	0.23 ± 0.22	11.11 (1/9)	0.00 ± 0.00	0.00 (0/9)
IL-2	2.26 ± 1.24	33.33 (3/9)	1.43 ± 1.00	22.22 (2/9)
IL-4	28.54 ± 24.14	22.22 (2/9)	0.00 ± 0.00	0.00 (0/9)
IL-5	0.74 ± 0.68	33.33 (3/9)	0.75 ± 0.72	44.44 (4/9)
IL-6	8.26 ± 5.08	44.44 (4/9)	1.56 ± 1.36	33.33 (3/9)
IL-9	4.75 ± 3.06	44.44 (4/9)	1.43 ± 1.30	22.22 (2/9)
IL-10	0.02 ± 0.02	11.11 (1/9)	0.00 ± 0.00	0.00 (0/9)
IL-12	0.18 ± 0.07	55.56 (5/9)	0.31 ± 0.21	55.56 (5/9)
IL-13	4.09 ± 1.92	44.44 (4/9)	2.20 ± 2.20	11.11 (1/9)
IL-17	2.59 ± 2.45	11.11 (1/9)	0.00 ± 0.00	0.00 (0/9)
IL-18	30.01 ± 5.57	100 (9/9)	37.62 ± 4.24	100 (9/9)
IL-21	4.28 ± 1.91	44.44 (4/9)	3.84 ± 1.65	55.56 (5/9)
IL-22	2.20 ± 2.09	11.11 (1/9)	1.77 ± 1.18	22.22 (2/9)
IL-23	22.65 ± 10.00	77.78 (7/9)	23.62 ± 9.96	88.89 (8/9)
IL-27	32.38 ± 26.52	22.22 (2/9)	0.58 ± 0.58	11.11 (1/9)
TNF- $\alpha$	0.05 ± 0.05	11.11 (1/9)	0.02 ± 0.02	11.11 (1/9)

Data shown are cytokine concentrations (pg/mL) expressed as mean  $\pm$  S.E.M. and detectability frequencies (%det). Mann-Whitney U test was used to determine significant differences between plasma samples. Chi-square test compared detectability. \*  $p < 0.05$ . MP, maternal plasma; UCP, umbilical cord plasma; GM-CSF, Granulocyte Macrophage Colony-Stimulating Factor; IFN, Interferon; IL, Interleukin; TNF, tumor necrosis factor.

**Supplementary Table S3.** Adipokine composition on maternal plasma (MP) and umbilical cord plasma (UCP) regarding the maternal enterotype.

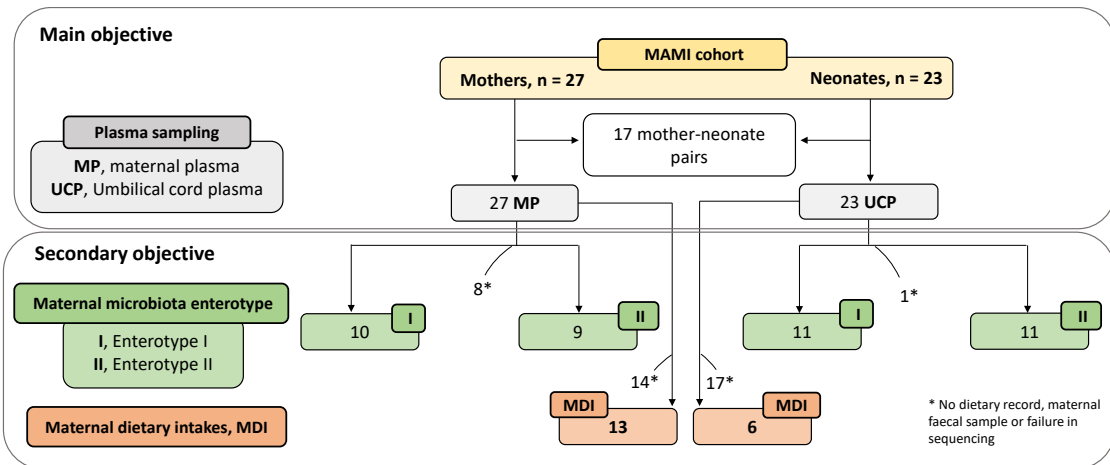
<b>MP</b>	<b>Enterotype I, n = 10</b> (ng/mL)	<b>Enterotype II, n = 9</b> (ng/mL)
<b>Leptin</b>	21.94 ± 6.71	31.40 ± 7.90
<b>Adiponectin</b>	11047.38 ± 1138.75	15605.91 ± 1461.99 *
<b>Ratio L/A</b>	2.00E-03 ± 5.81E-04	2.38E-03 ± 8.39E-04

<b>UCP</b>	<b>Enterotype I, n = 11</b> (ng/mL)	<b>Enterotype II, n = 11</b> (ng/mL)
<b>Leptin</b>	9.40 ± 1.66	6.88 ± 1.59
<b>Adiponectin</b>	26124.67 ± 3656.35	34568.60 ± 5153.06
<b>Ratio L/A</b>	4.49E-04 ± 1.09E-04	2.14E-04 ± 4.11E-05

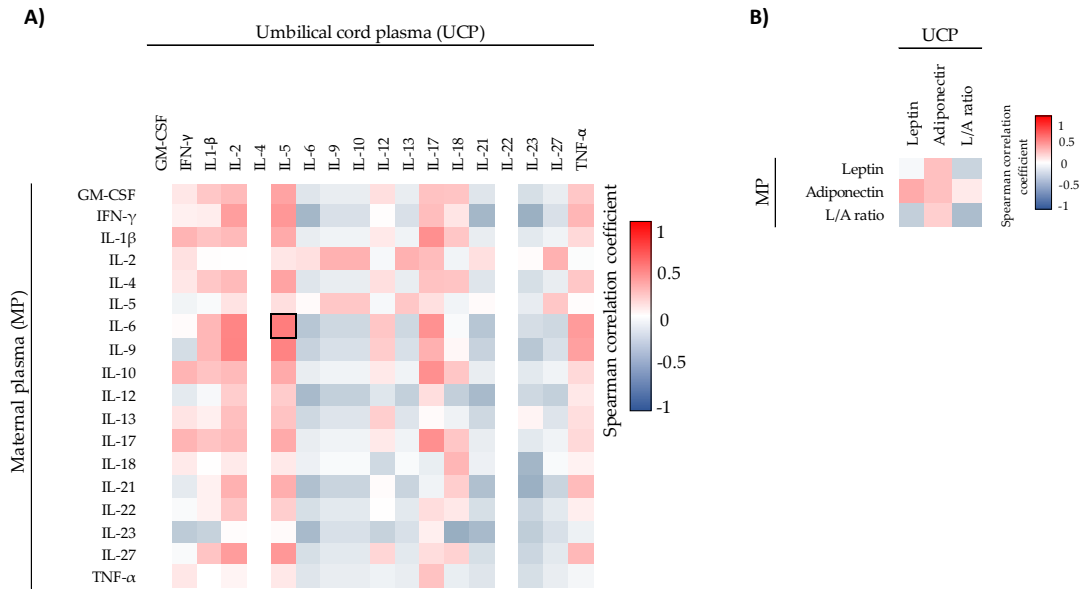
Data shown are adipokine concentrations (ng/mL) expressed as mean ± S.E.M. Mann-Whitney U tests were used to determine significant differences between plasma samples. \* $p < 0.05$ . L/A ratio, leptin/adiponectin ratio.

Supplementary Figure S1



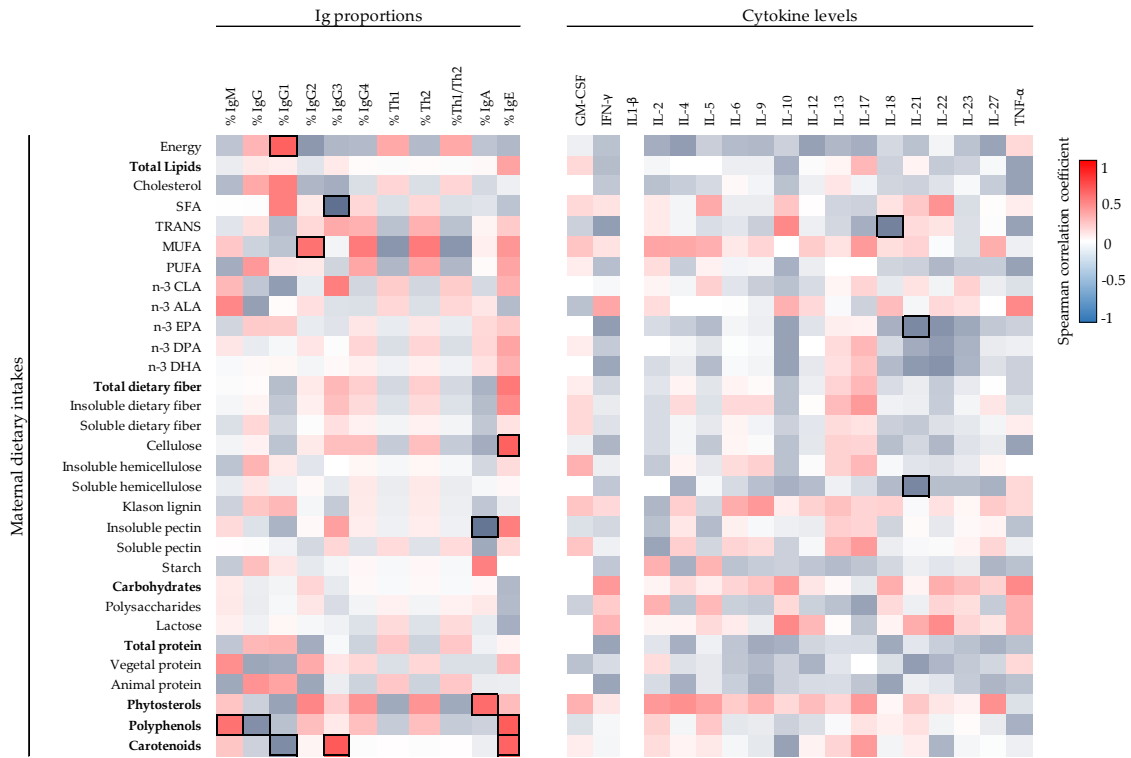
Supplementary Figure S1. Flow chart of the participants and samples available in this study.

**Supplementary Figure S2.**



**Supplementary figure S2.** Correlations between the CK (A) and adipokine (B) concentrations present in maternal plasma (MP) and umbilical cord plasma (UCP) (n = 16). The Spearman correlation coefficient is represented in the heat map following the color in the legend. Bold frames represent correlations with statistical significance ( $p < 0.05$ ). GM-CSF, Granulocyte Macrophage Colony-Stimulating Factor; IFN, Interferon; IL, Interleukin; L/A ratio, Leptin/Adiponectin ratio; TNF, tumour necrosis factor.

**Supplementary Figure S3.**



**Supplementary Figure S3.** Correlations between Ig proportions and CK levels of MP ( $n = 13$ ) with the maternal dietary intakes. The Spearman correlation coefficient is represented in the heat map following the color in the legend. Bold frames represent correlations with statistical significance ( $p < 0.05$ ). L/A ratio, Leptin/Adiponectin ratio. IgG1, IgG2 and IgG3 (Igs associated to Th1 response); IgG4 (Ig associated to Th2 response).