Electronic Supplementary Material (ESI) for Molecular Omics.

Supplementary information

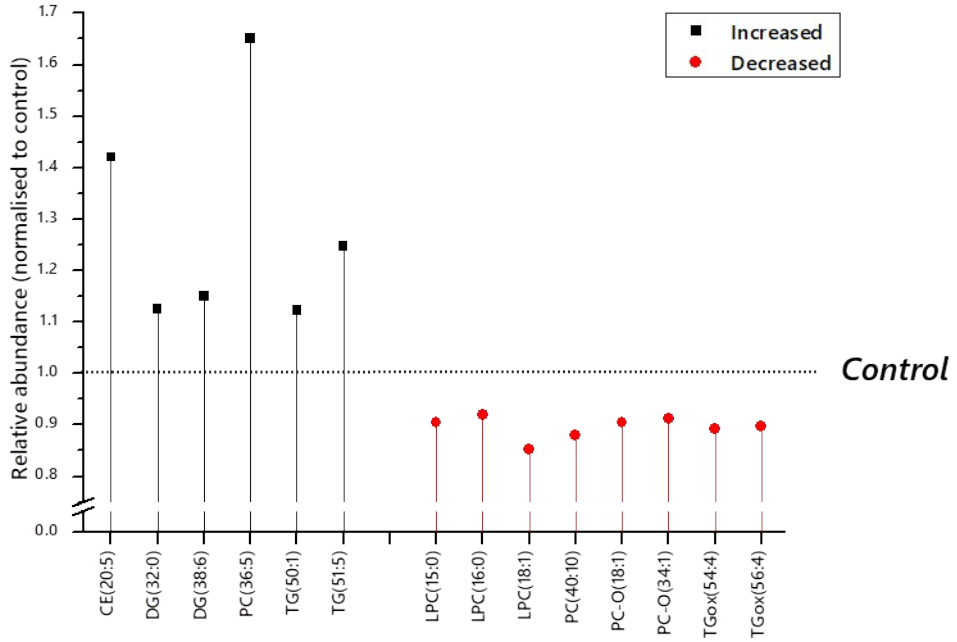

Fig. S1. Normalised relative abundance of lipids identified as candidate biomarkers in the circulation of obese pregnant women at ~17w gestation. Candidate biomarkers discovery consisted of a sparse Partial Least Squares Discriminant Analysis followed by student's T-test (Bonferroni corrected) The control group, against which the values shown were normalised, were an obese but otherwise typically healthy group (meta-data in Table 1).

Lipid Class	Isoform
Cholesteryl ester	CE(18:0-d_6)
Ceramide	C16-d_{31} Ceramide
Fatty acid	C15:0-d_{29} FA
Fatty acid	C17:0-d_{33} FA
Fatty acid	C20:0-d_{39} FA
lyso-Phosphatidylcholine	*lyso*-PC(C14:0)-d_{42}
Phosphatidic acid	PA(C16:0-d_{31}/C18:1), Na^+ salt
Phosphatidylcholine	PC(C16:0-d_{31}/C18:1)
Phosphatidylethanolamine	PE(C16:0-d_{31}/C18:1)
Phosphatidylglycerol	PG(C16:0-d_{31}/C18:1), Na^+ salt
Phosphatidylinositol	PI(C16:0-d_{31}/C18:1), NH_4^+ salt
Phosphatidylserine	PS(C16:0-d_{62}), Na^+ salt
Sphingomyelin	SM(C16:0-d_{31})
Triglyceride	TG(45:0-d_{29})
Triglyceride	TG(48:0-d_{31})
Triglyceride	TG(54:0-d_{35})

Table S1. List of internal standards used for lipid profiling in the present study.

Candidate biomarker	Not diagnosed	Diagnosed	*p*-Value
CE(20:5)	5.159	7.328	0.0015
DG(32:0)	3.760	4.228	0.0004
DG(38:6)	4.055	4.663	0.0013
LPC(15:0)	3.530	3.193	0.0016
LPC(16:0)	5.985	5.508	0.0002
LPC(18:1)	6.309	5.382	3.46E-08
PC(36:5)	2.520	4.161	0.0003
PC(40:10)	2.870	2.527	0.0015
PC-O(18:1)	3.558	3.218	0.0005
PC-O(34:1)	5.238	4.784	0.0006
TG(50:1)	3.692	4.143	0.0005
TG(51:5)	2.820	3.519	0.0015
TGox(54:4)	3.139	2.801	1.77E-05
TGox(56:4)	3.122	2.802	0.0002

Table S2. Candidate biomarkers identified using a combination of supervised multi-variate analysis followed by student's T-Test. Values were normalised against that of the control (healthy/non-diagnosed) group. Bonferroni corrected p value threshold was 0·0021, based on 565 independent variables. Relative abundance of lipids in participants diagnosed with GDM shown in Fig. S1.