

**Supplementary Table III. Lipids in serum regulated by the gut microbiota.** ChoE=cholesteryl ester, DG= diglyceride, LysoPC=Lysophosphatidylcholine, PC=phosphatidylcholines, PE= phosphatidylethanolamine, TG=triglyceride, Cer=ceramide and SM=sphingomyelin.

<b>Name</b>	<b>FDR (p-value)</b>	<b>Fold change</b>
<i>Lipids increased by the gut microbiota during lard diet</i>		
Cer(d18:1/22:6)	9.9E-03	1.20
LysoPC(20:0)	5.8E-06	2.52
LysoPC(22:3)	2.0E-05	2.71
LysoPE(22:0)	2.1E-03	1.23
PC(36:2e)	2.0E-02	1.19
PC(36:5)	2.3E-02	1.41
PC(38:1)	1.4E-02	1.40
PC(38:2)	2.8E-05	1.85
PC(40:2)	4.0E-04	1.77
PC(40:3)	1.1E-03	2.18
PC(40:4)	1.1E-04	1.67
PC(42:4)	1.3E-03	1.63
PC(42:5)	1.3E-03	1.75
PC(42:6)	6.1E-05	2.87
PC(42:6e)	3.5E-04	1.37
PC(42:9)	2.9E-02	1.19
PC(44:6)	1.5E-03	2.60
PE(40:2)	4.3E-03	1.21
PE(40:4e)	2.9E-02	1.15
PE(44:6)	4.6E-03	1.62
SM(d18:1/21:0)	4.3E-02	1.54
TG(46:6)	8.9E-03	1.34
TG(58:3)	5.0E-02	1.82
TG(58:4)	1.5E-02	2.11

TG(58:5)	3.9E-02	1.54
TG(60:7)	1.5E-03	1.92
TG(60:8)	3.5E-02	1.43
<b><i>Lipids reduced by the gut microbiota during lard diet</i></b>		
ChoE(20:4)	4.3E-02	-1.23
ChoE(22:5)	4.3E-02	-1.58
ChoE(22:6)	4.8E-02	-1.45
PC(32:1)	4.3E-02	-1.39
PC(32:1e)	4.1E-02	-1.08
PC(34:4)	2.9E-02	-1.56
PC(36:4)	2.9E-02	-1.12
PC(36:4e)	3.4E-02	-1.24
PC(36:5e)	2.9E-02	-1.62
PC(38:4)	1.6E-02	-1.26
PC(38:5)	3.6E-02	-1.21
PC(38:7)	3.5E-02	-1.63
PE(38:1e)	2.8E-02	-1.29
PE(38:4)	4.1E-02	-1.31
PE(38:7e)	3.5E-02	-1.26
PE(40:4)	4.5E-03	-1.56
PE(40:5)	4.7E-02	-1.31
SM(d18:1/14:0)	1.4E-02	-1.34
SM(d18:1/15:0)	3.3E-04	-1.35
SM(d18:1/16:0)	2.1E-02	-1.14
SM(d18:1/18:0)	9.0E-03	-1.46
SM(d18:1/20:0)	4.0E-02	-1.24
SM(d18:1/23:0)	2.2E-02	-1.19
TG(54:5)	4.3E-02	-1.72
<b><i>Lipids increased by the gut microbiota during fish-oil diet</i></b>		
PC(42:6e)	1.1E-05	1.91

PC(42:7e)	1.7E-03	2.19
PC(44:6)	6.9E-03	1.95
<i>Lipids reduced by the gut microbiota during fish-oil diet</i>		
SM(d18:1/14:0)	1.6E-03	-1.60
SM(d18:1/15:0)	9.7E-03	-1.36
SM(d18:1/16:0)	2.3E-02	-1.19
SM(d18:1/20:0)	9.6E-03	-1.52