

**Table S3. 2-way ANOVA followed by Bonferroni post-tests, related to figures 1-3 and Supplementary figure 1**

<b>Figure 1</b>	<b>B) Body weight after high fat diet</b>		<b>C) Fasting glucose</b>		<b>D) AUC, oral glucose tolerance test</b>	
Source of Variation	% of total variation	P value	% of total variation	P value	% of total variation	P value
Interaction	21,17	< 0,0001	0,06702	0,8239	0,4513	0,4689
Genotype (WT/ <i>Fxr</i> <sup>-/-</sup> )	7,349	0,0105	45,14	< 0,0001	51,07	< 0,0001
Colonization (GF/CONV-R)	37,86	< 0,0001	26,41	0,0002	30,97	< 0,0001

<b>Figure 1</b>	<b>E) AUC, Insulin tolerance test</b>		<b>I) Beta cell mass</b>	
Source of Variation	% of total variation	P value	% of total variation	P value
Interaction	2,119	0,1618	12,85	0,05
Genotype (WT/ <i>Fxr</i> <sup>-/-</sup> )	42,07	< 0,0001	3,189	0,3128
Colonization (GF/CONV-R)	13,83	0,0008	17,92	0,0228

<b>Figure 2</b>	<b>B) Crown-like structures</b>		<b>C) <i>Emr1</i> mRNA levels</b>	
Source of Variation	% of total variation	P value	% of total variation	P value
Interaction	17,99	0,0058	15,59	0,0045
Genotype (WT/ <i>Fxr</i> <sup>-/-</sup> )	3,03	0,2247	10,86	0,015
Colonization (GF/CONV-R)	32,38	0,0005	27,13	0,0004

  

<b>Figure 2</b>	<b>D) <i>Saa3</i> mRNA levels</b>		<b>E) <i>Tnfa</i> mRNA levels</b>	
Source of Variation	% of total variation	P value	% of total variation	P value
Interaction	15,22	0,0053	15,08	0,0362
Genotype (WT/ <i>Fxr</i> <sup>-/-</sup> )	8,397	0,0311	1,289	0,5209
Colonization (GF/CONV-R)	36,51	< 0,0001	14,05	0,0425

<b>Figure 3</b>	<b>A) Triglycerides</b>		<b>B) Cholesteryl esters</b>		<b>C) ALT activity</b>	
Source of Variation	% of total variation	P value	% of total variation	P value	% of total variation	P value
Interaction	16,66	0,0007	8,914	0,1122	8,914	0,1122
Genotype (WT/ <i>Fxr</i> <sup>-/-</sup> )	12,88	0,0023	11,68	0,0719	11,68	0,0719
Colonization (GF/CONV-R)	32,68	< 0,0001	19,35	0,024	19,35	0,024

<b>Figure 3</b>	<b>D) <i>Cd36</i> mRNA levels</b>		<b>E) <i>Apo-C II</i> mRNA levels</b>		<b>F) <i>Vldlr</i> mRNA levels</b>	
Source of Variation	% of total variation	P value	% of total variation	P value	% of total variation	P value
Interaction	10,76	0,0607	10,76	0,0607	6,446	0,068
Genotype (WT/ <i>Fxr</i> <sup>-/-</sup> )	0,736	0,6096	0,736	0,6096	12,83	0,0127
Colonization (GF/CONV-R)	31,08	0,0029	31,08	0,0029	27,55	0,0006

<b>Supp. Figure 1</b>	<b>A) <i>Fas</i> mRNA levels</b>		<b>B) <i>ACC1</i> mRNA levels</b>	
Source of Variation	% of total variation	P value	% of total variation	P value
Interaction	0,09757	0,883	7,928	0,115
Genotype (WT/ <i>Fxr</i> <sup>-/-</sup> )	1,053	0,6299	17,12	0,0245
Colonization (GF/CONV-R)	23,66	0,0327	7,33	0,1289

All comparisons were made with 2-way ANOVA followed with post hoc Bonferroni post-tests. \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .