## Long term but not short term exposure to obesity related microbiota

promotes host insulin resistance

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**Supplementary Figure 1:** Stability of early changes in the microbiota during high fat feeding. Time courses are shown for changes in abundance of taxa that were significantly different between Chow, 45% HFD, and 60% HFD on day 3. Non-parametric analysis of variance for each taxon between groups was conducted using the Kruskal-Wallis test. Taxa that passed the significance threshold of p < 0.05 were analyzed using the pairwise Wilcoxonon rank sum test. Correction for multiple hypothesis testing (FDR) was calculated using the Benjamini-Hochberg method. Statistical significance was accepted at p < 0.05. For the heatmap, the relative abundance for each taxon was normalized to Day 0 within each diet group and  $log_{10}$ -transformed. The time courses for the relative abundance changes for each significant taxon (without normalization to Day 0) are shown below. Values represent the mean  $\pm$  SEM (N=7-8).

















**Supplementary Figure 1-continued** 



**Supplementary Figure 2:** Relative abundances of taxa at Day 3 versus Week 14 of high fat feeding. The same taxa are shown in Figure 3. These taxa were significantly changed (p < 0.05) in the high fat fed mice (45% or 60% HFD) compared with the Chow fed mice on either day 3 or week 14. For each time point (Day 3 or Week 14), non-parametric analysis of variance for each taxon between the diet groups was conducted using the Kruskal-Wallis test. Taxa that passed the significance threshold of p < 0.05 were analyzed using the pairwise Wilcoxonon rank sum test. Correction for multiple hypothesis testing (FDR) was calculated using the Benjamini-Hochberg method. Statistical significance was accepted at p < 0.05. The time courses for the relative abundance changes for each significant taxon (without normalization to Chow diet) are shown. Values represent the mean  $\pm$  SEM (N=12-13).



**Supplementary Figure 2 - continued** 



**Supplementary Figure 2 - continued** 



**Supplementary Figure 3:** Relative abundances of taxa during short term high fat feeding and diet removal. The same taxa are shown in Figure 4. These taxa were significantly changed (p < 0.05) in the different treatment groups compared with the Chow Day 14. Non-parametric analysis of variance for each taxon between the treatment groups (Chow day 14, Chow Day 16, 60% HFD Day 14, 60% HFD Day 16) was conducted using the Kruskal-Wallis test. Taxa that passed the significance threshold of p < 0.05 were analyzed using the pairwise Wilcoxonon rank sum test. Correction for multiple hypothesis testing (FDR) was calculated using the Benjamini-Hochberg method. Statistical significance was accepted at p < 0.05. The time courses for the relative abundance changes for each significant taxon (without normalization to Chow Day 14) are shown. Values represent the mean  $\pm$  SEM (N=8).