

Table S1. The effects of prenatal control diets on colonic mucosa and feces associated bacterial taxa.

	Mucosa	Feces	
Phyla	%	%	Paired T test
Tenericutes	43.87	1.51	0.0000001
Bacteroidetes	10.40	55.38	0.0002
Verrucomicrobia	0.01	0.27	0.0458
Genera	%	%	Paired T test
<i>Allobaculum</i>	35.16	1.04	0.001
<i>Mogibacterium</i>	0.02	0.08	0.004
<i>Parabacteroides</i>	8.81	41.29	0.0043
<i>Rfn20</i>	0.01	0.03	0.0096
<i>Prevotella</i>	1.29	11.52	0.0124
<i>Turicibacter</i>	3.44	0.45	0.0204
<i>Brevibacillus</i>	13.93	0.54	0.0242
<i>Sphingobium</i>	0.05	0	0.0288
<i>Dehalobacterium</i>	0.04	0.81	0.0299
<i>Lactobacillus</i>	5.46	0.48	0.0327
<i>Blautia</i>	4.29	13.69	0.0336
<i>Shimazuella</i>	0.04	0.00	0.0466
Species	%	%	Paired T test
<i>Mogibacterium (species unknown)</i>	0.02	0.08	0.004
<i>Parabacteroides distasonis</i>	8.81	41.29	0.0043
<i>Clostridium sordellii</i>	0.27	0.02	0.0063
<i>Rfn20 (species unknown)</i>	0.01	0.03	0.0096
<i>Prevotella falsenii</i>	0.28	2.33	0.017
<i>Prevotella copri</i>	0.26	1.90	0.0184
<i>Turicibacter (species unknown)</i>	3.44	0.45	0.0204
<i>Lactobacillus reuteri</i>	0.30	0	0.0214
<i>Clostridium celerecrescens</i>	0.24	1.20	0.0227
<i>Roseburia eubacterium rectale</i>	0.13	0.53	0.023
<i>Ruminococcus flavefaciens</i>	0.08	0.29	0.0235
<i>Brevibacillus laterosporus</i>	13.93	0.54	0.0242
<i>Allobaculum stercoricanis</i>	19.27	0.99	0.0275
<i>Sphingobium yanoikuyae</i>	0.05	0.00	0.0288
<i>Dehalobacterium (species unknown)</i>	0.04	0.81	0.0299
<i>Blautia producta</i>	4.27	13.56	0.0364
<i>Lactobacillus iners</i>	5.13	0.43	0.0404
<i>Prevotella baroniae</i>	0.05	0.30	0.0435
<i>Shimazuella (species unknown)</i>	0.04	0	0.0466
<i>Lactobacillus intestinalis</i>	0.03	0	0.0476

Significant bacterial abundance differences at the phyla, genera, and species level between the mucosal and fecal samples of the C-C group (C: control diet *in utero* and lactation). Paired T test comparisons between the two groups (see Materials and Methods). The most prominently

differing phyla between mucosal and feces was Tenericutes. A total of 12 genera and 20 species were significantly different in the mucosa as compared to the luminal content in the control group.