

**Gut segments outweigh the diet in shaping the intestinal microbiome
composition in grass carp *Ctenopharyngodon idellus***

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Table S1. The top 10 genera in four groups

Other 1: *Enterobacteriaceae*; other 2: *Lachnospiraceae*

M group, all midgut samples; H group, all hindgut samples; FF group, all samples fed on formula fed; SG group, all samples fed on Sudan grass

Top 10 genera	M group	H group	FF group	SG group
1	<i>Cetobacterium</i>	<i>Bacteroides</i>	<i>Cetobacterium</i>	<i>Bacteroides</i>
2	<i>Streptococcus</i>	<i>Cetobacterium</i>	<i>Bacteroides</i>	<i>Streptococcus</i>
3	<i>Halomonas</i>	Other 2	u114	<i>Cetobacterium</i>
4	Other 1	u114	<i>Paenibacillus</i>	Other 1
5	<i>Anoxybacillus</i>	<i>Paludibacter</i>	<i>Desulfobulbus</i>	<i>Halomonas</i>
6	<i>Desulfobulbus</i>	<i>Paenibacillus</i>	<i>Halomonas</i>	<i>Anoxybacillus</i>
7	<i>Shewanella</i>	<i>Fusobacterium</i>	<i>Dechloromonas</i>	<i>Paludibacter</i>
8	<i>Acinetobacter</i>	<i>Leptotrichia</i>	Other 1	<i>Shewanella</i>
9	<i>Agrobacterium</i>	<i>Bacillus</i>	<i>Bacillus</i>	<i>Acinetobacter</i>
10	<i>Dechloromonas</i>	Other 1	<i>Methylocaldum</i>	<i>Leptotrichia</i>

Figure legends

Figure S1. Principal coordinate analysis (PCoA) based on weighted UniFrac distance illustrating community dissimilarities over M-FF group and M-SG groups.

Figure S2. Principal coordinate analysis (PCoA) based on weighted UniFrac distance illustrating community dissimilarities over H-FF group and H-SG groups.

Figure S3. Venn diagram showing the numbers of shared OTUs among different groups.

Figure S4. Heat map showing five oxygen-independent pathways across midgut and hindgut predicted by PICRUSt.







