

SUPPLEMENTARY FIGURES FOR:

Microbiome responses to fecal microbiota transplantation in cats with chronic digestive issues

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Fig S1. Characteristics of “Responder” and “Non-Responder” FMT recipients.

After treatment, 52/68 FMT recipients experienced a reduction of their clinical signs according to their owners (“Responders”), while 16/68 participants experienced no noticeable change or a worsening of their condition (“Non-Responders”). Below is a breakdown of the percentage of Responder vs. Non-Responders according to their clinical signs, IBD diagnosis, antibiotic use, diet, and sex. Note how the antibiotic usage of one FMT recipient is unknown.

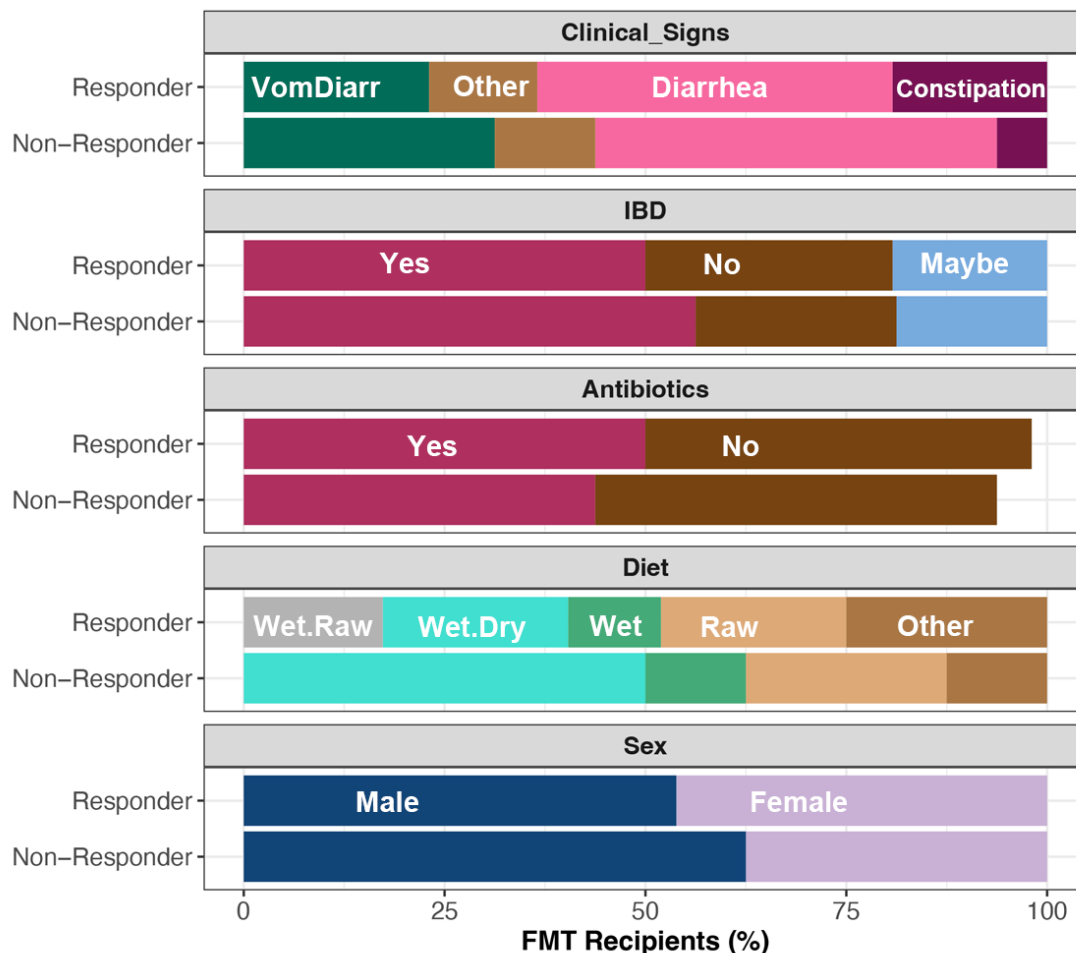


Fig S2. Fecal microbiomes of recipient animals do not cluster by timepoint (preFMT vs. postFMT). PCoA ordinations of samples from FMT recipients (N=68) based on Bray-Curtis (top) or Weighted Unifrac distances (bottom). Closeness of points indicates microbiome similarity and points are color-coded by their timepoint (preFMT vs. postFMT). Plots on the right have lines connecting samples that came from the same individual. Statistics of the accompanying PERMANOVA models are in the main manuscript text.

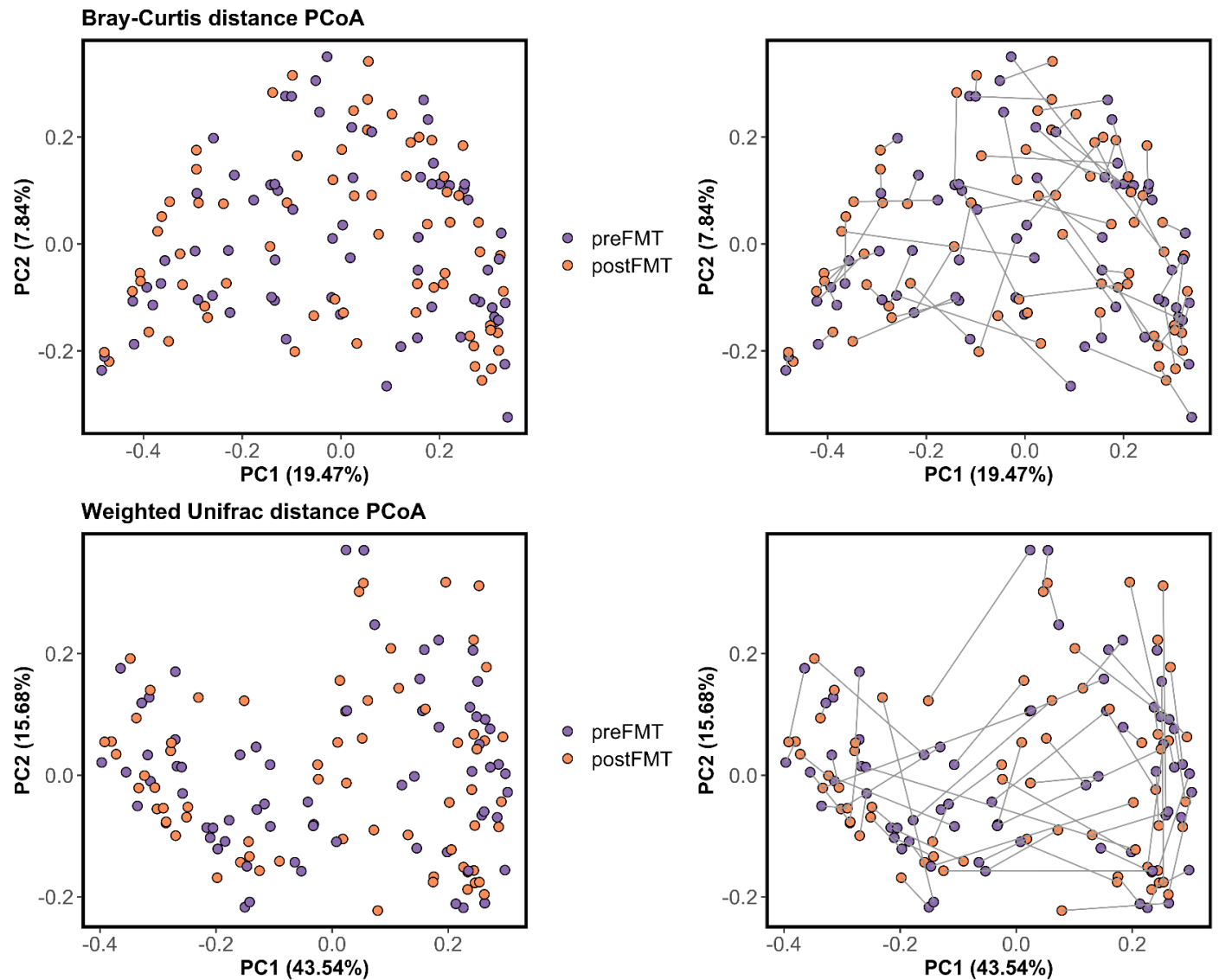


Fig S3. Posthoc testing of bacterial genera that were found to significantly correlate with host predictors according to a linear model. A-D) Posthoc testing of bacterial relative abundances ~ clinical symptoms, E-G) Posthoc testing of bacterial relative abundances ~ IBD diagnosis, and H-I) Posthoc testing of bacterial relative abundances ~ Diet category. Tukey contrasts were used.

A) GLM Δ Relative Abundance of *Blautia* ~ Clinical symptoms

Linear Hypotheses:				
	Estimate	Std. Error	z value	Pr(> z)
Constipation - Diarrhea == 0	1.183	2.081	0.569	0.9402
VomDiarr - Diarrhea == 0	-3.956	1.573	-2.514	0.0562 .
Other - Diarrhea == 0	-2.095	1.980	-1.058	0.7106
VomDiarr - Constipation == 0	-5.139	2.132	-2.411	0.0735 .
Other - Constipation == 0	-3.278	2.338	-1.402	0.4922
Other - VomDiarr == 0	1.861	2.183	0.853	0.8260

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1				
(Adjusted p values reported -- single-step method)				

B) GLM Δ Relative Abundance of *Collinsella* ~ Clinical symptoms

Linear Hypotheses:				
	Estimate	Std. Error	z value	Pr(> z)
Constipation - Diarrhea == 0	5.0508	2.6913	1.877	0.23370
VomDiarr - Diarrhea == 0	-4.6263	2.0341	-2.274	0.10157
Other - Diarrhea == 0	0.3183	2.5603	0.124	0.99930
VomDiarr - Constipation == 0	-9.6771	2.7567	-3.510	0.00227 **
Other - Constipation == 0	-4.7325	3.0230	-1.565	0.39285
Other - VomDiarr == 0	4.9446	2.8221	1.752	0.29172

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1				
(Adjusted p values reported -- single-step method)				

C) GLM Δ Relative Abundance of *Negativibacillus* ~ Clinical symptoms

Linear Hypotheses:				
	Estimate	Std. Error	z value	Pr(> z)
Constipation - Diarrhea == 0	0.0032	0.7221	0.004	1.0000
VomDiarr - Diarrhea == 0	-0.3696	0.5458	-0.677	0.9039
Other - Diarrhea == 0	1.7741	0.6870	2.583	0.0474 *
VomDiarr - Constipation == 0	-0.3728	0.7397	-0.504	0.9572
Other - Constipation == 0	1.7709	0.8111	2.183	0.1250
Other - VomDiarr == 0	2.1437	0.7572	2.831	0.0236 *

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1				
(Adjusted p values reported -- single-step method)				

D) GLM Δ Relative Abundance of Desulfovibrio ~ Clinical symptoms

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Linear Hypotheses:
              Estimate Std. Error z value Pr(>|z|)
Constipation - Diarrhea == 0  0.199837  0.393251  0.508  0.9562
VomDiarr - Diarrhea == 0    -0.002596  0.297223 -0.009  1.0000
Other - Diarrhea == 0       1.006512  0.374116  2.690  0.0350 *
VomDiarr - Constipation == 0 -0.202433  0.402808 -0.503  0.9576
Other - Constipation == 0    0.806675  0.441722  1.826  0.2560
Other - VomDiarr == 0       1.009108  0.412362  2.447  0.0671 .
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Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
(Adjusted p values reported -- single-step method)
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E) GLM Δ Relative Abundance of Parabacteroides ~ IBD

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Linear Hypotheses:
              Estimate Std. Error z value Pr(>|z|)
No - Yes == 0    -1.25593  0.53756 -2.336  0.0506 .
Maybe - Yes == 0 -1.30207  0.63749 -2.043  0.1012
Maybe - No == 0  -0.04615  0.66580 -0.069  0.9973
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Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
(Adjusted p values reported -- single-step method)
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F) GLM Δ Relative Abundance of Peptoclostridium ~ IBD

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Linear Hypotheses:
              Estimate Std. Error z value Pr(>|z|)
No - Yes == 0       4.056  1.939  2.092  0.0907 .
Maybe - Yes == 0    5.442  2.300  2.366  0.0466 *
Maybe - No == 0     1.385  2.402  0.577  0.8315
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Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
(Adjusted p values reported -- single-step method)
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G) GLM Δ Relative Abundance of Helicobacter ~ IBD

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Linear Hypotheses:
              Estimate Std. Error z value Pr(>|z|)
No - Yes == 0    -0.06153  0.30492 -0.202  0.9777
Maybe - Yes == 0  0.87139  0.36160  2.410  0.0418 *
Maybe - No == 0   0.93292  0.37766  2.470  0.0357 *
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Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
(Adjusted p values reported -- single-step method)
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H) GLM Δ Relative Abundance of *Lachnoclostridium* ~ Diet

Linear Hypotheses:				
	Estimate	Std. Error	z value	Pr(> z)
Wet - Dry == 0	-0.77228	1.02817	-0.751	0.975
Raw - Dry == 0	0.22060	0.96015	0.230	1.000
Wet.Dry - Dry == 0	-0.99521	0.87329	-1.140	0.862
Wet.Raw - Dry == 0	-0.01764	1.02012	-0.017	1.000
Other - Dry == 0	1.39623	1.00737	1.386	0.731
Raw - Wet == 0	0.99288	0.84393	1.176	0.845
Wet.Dry - Wet == 0	-0.22293	0.80415	-0.277	1.000
Wet.Raw - Wet == 0	0.75464	0.90425	0.835	0.960
Other - Wet == 0	2.16851	0.92585	2.342	0.174
Wet.Dry - Raw == 0	-1.21581	0.70543	-1.723	0.510
Wet.Raw - Raw == 0	-0.23824	0.79584	-0.299	1.000
Other - Raw == 0	1.17563	0.82951	1.417	0.712
Wet.Raw - Wet.Dry == 0	0.97757	0.83278	1.174	0.846
Other - Wet.Dry == 0	2.39144	0.79558	3.006	0.031 *
Other - Wet.Raw == 0	1.41387	0.92409	1.530	0.639

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1				
(Adjusted p values reported -- single-step method)				

I) GLM Δ Relative Abundance of *Veillonella* ~ Diet

Linear Hypotheses:				
	Estimate	Std. Error	z value	Pr(> z)
Wet - Dry == 0	-4.33467	1.38793	-3.123	0.0216 *
Raw - Dry == 0	-3.82097	1.29611	-2.948	0.0368 *
Wet.Dry - Dry == 0	-3.76094	1.17886	-3.190	0.0173 *
Wet.Raw - Dry == 0	-4.18418	1.37707	-3.038	0.0280 *
Other - Dry == 0	-4.01329	1.35984	-2.951	0.0364 *
Raw - Wet == 0	0.51370	1.13922	0.451	0.9976
Wet.Dry - Wet == 0	0.57373	1.08552	0.529	0.9949
Wet.Raw - Wet == 0	0.15049	1.22065	0.123	1.0000
Other - Wet == 0	0.32138	1.24981	0.257	0.9998
Wet.Dry - Raw == 0	0.06003	0.95226	0.063	1.0000
Wet.Raw - Raw == 0	-0.36321	1.07431	-0.338	0.9994
Other - Raw == 0	-0.19233	1.11976	-0.172	1.0000
Wet.Raw - Wet.Dry == 0	-0.42324	1.12416	-0.376	0.9990
Other - Wet.Dry == 0	-0.25235	1.07395	-0.235	0.9999
Other - Wet.Raw == 0	0.17089	1.24743	0.137	1.0000

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1				
(Adjusted p values reported -- single-step method)				